Research Report:
Developing an Active Management System For the U.S. Stock Market

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The Problem: A Buy-and-Hold stock market strategy has proved inadequate during secular bear market periods.

If the "Tech Bubble" and the "Credit Crisis" bear markets taught investors anything since the turn of the century, it is that a long-only approach to the stock market is no longer sufficient – especially during secular bear market periods (defined as an extended period of time without price progress in the stock market indices).

Dubbed the "lost decade," the S&P 500 accumulated a loss of -24.12% from 2000 to 2009 while the Lipper Growth Fund Index fell by -35.73%. And as of December 31, 2010 – after a period of 11 years – the S&P 500 price index is still saddled with a cumulative loss of -14.4%. This means that even after the +85.9% rally that occurred from the March 9, 2009 bear market low through the end of 2010, the S&P 500 index still needs to gain 16.8% in order to return to where it stood at the beginning of the new millennium. In short, THIS is what a "secular bear market" period is all about.

The Lipper Growth Fund Index is actually in worse shape – still sporting a cumulative loss of 26.25% as of the end of 2010. The fund index, which is designed to reflect the results of the average growth fund, still needs to gain 35.1% in order to get back to the breakeven point from 12/31/1999.

It is for this reason that investors appear to have grown skeptical of the stock market in general and the buy-and-hold approach in particular. According to Ned Davis Research, domestic equity mutual funds experienced net redemptions totaling $269.8 billion during the three-year period ending 9/30/2010. Given the severe market decline that occurred in 2008, this is certainly understandable.

However, it may be surprising to learn that the trend of withdrawals from equity funds continued during the ensuing rebound in the stock market as net redemptions totaled $103.86 billion from March 2009 through September 30, 2010 – this despite the market's steady rise (the S&P 500 advanced +68.7% during the period). Our assumption is that this ongoing stream of withdrawals is due to investors changing their strategy after more than a decade of disappointment in the stock market.

Although the recent period of underperformance by the stock market and, in turn, the buy-and-hold strategy, has been unnerving, we believe it is important to recognize that this type of market has occurred in the past. Termed a "**secular bear market**," investors experienced this type of period of extended weak returns in the stock market during 1906-1921, 1929-1942, 1966-1982 and from 2000 to 11/25/2010.

Secular Bear Market Periods
Period: 1/19/1906 - 11/25/2010

Dates	Duration (In Years)	Cumulative DJIA Return
1/19/1906 – 8/24/1921	15.77 years	-15.31%
9/3/1929 – 4/28/1942	12.65 years	-75.62%
2/09/1966 – 8/12/1982	16.52 years	-22.93%
1/14/2000 – 11/25/2010?	10.86 years	-5.38%

Source: Ned Davis Research

Note: There Are Opportunities to Profit in Secular Bear Markets

It is also important to recognize that although secular bear markets tend to last something on the order of 10-15 years, history shows that there are meaningful rallies – termed "cyclical bull markets" – that occur during secular cycles. These cyclical or "mini" bull markets tend to be shorter in duration than the cyclical bull markets that occur within a secular bull market. However, the key takeaway is **there have been opportunities to profit during secular bear market environments**.

For example, since 1900 there have been four secular bear market periods during which the DJIA did not produce gains for an extended period. As we stated above, these periods include 1906-1921, 1929-1942, 1966-1982, and 2000-?? However, during these secular bear market periods, Ned Davis Research has identified a total of 18 cyclical, or what we term "mini," bull markets.

"Mini" Bull Markets Within Secular Bear Markets
Period: 9/24/1900- 11/5/2010
Index: DJIA

# Cases	Average % Cumulative Gain	Average Calendar Days
18	+64.30%	508

Source: Ned Davis Research

From a strategic investing perspective, it should be noted that as the table above illustrates, **the DJIA gained +64.3% over a period of 508 calendar days on average during the "mini bull markets"** that occurred within the context of secular bear markets**.**

Thus, it is easy to see that while a buy-and-hold approach does not fare well during a secular bear market period, a strategy designed to buy-and-sell the shorter-term cyclical trends would appear to have the potential to produce positive returns – even in a negative environment.

In summary, is our opinion that investors are no longer willing to accept the buy-and-hope mantra or remain invested in the stock market during severe market declines. And why should they? Today, there are strategies that allow investors to buy-and-sell the stock market as well as tools readily available that can profit from declines in stock prices. **Therefore, we believe investors may want to consider strategies to profit in both rising and falling markets.**

The Solution: Developing an Active Management System for the U.S. Stock Market

Heritage Capital Management focuses on managing the risks of the stock market. While there is no guarantee that we will accomplish our objective, we strive to keep exposure to market risk in harmony with the overall risk/reward environment at all times. This means we attempt to maintain a lower exposure to the stock market during severe market declines.

In general, this approach has helped the majority of our programs "lose less" (defined as our programs experiencing losses that are smaller than the losses of the S&P 500) during severe market declines. However, a "risk managed" approach also has pitfalls, which we hoped to improve upon via this research project.

One key problem we have identified over the 22+ years of our company's existence is that during bear market declines (generally defined as a decline of -20% or more in the major market indices), longer-term oriented risk-managed strategies will, by definition; hold less exposure to market risk as the decline matures. As such, when the bear period ultimately ends and the rebound begins, the returns of a risk-managed strategy tend to lag.

Because of this shortcoming, we set out to identify strategies in order to improve upon our approach to managing risk. The goal was to seek out and test trading systems that are:

(a) Able to adapt to changing market environments
(b) Shorter-term in nature
(c) Capable of producing positive returns in most all market conditions over a reasonable period of time (generally defined at 1-3 years).

An Alternative Solution: Trend-following Systems

The first potential solution we explored involved variations of trend-following systems. As the name implies, the goal of a trend-following trading system is to stay in tune with the prevailing trend of the market at all times. It is said that one of the biggest benefits of such an approach is that price cannot diverge from itself. In short, this means that while many indicators (such as economic, monetary, market leadership, and/or momentum indicators) can diverge from the trend of the market, a trend cannot diverge from itself. As such, this is a common tool used by active investors seeking to "buy low and sell high."

The most common method of a trend-following system utilizes moving averages. In its simplest form, the prices of the index or security being managed are averaged over a set period of time and plotted against the price of the security on a graph. This creates a "smoothed" view of the trend by removing the day-to-day volatility that can distract investors from the prevailing trend.

There are many variations of moving average indicators including simple, exponential, and weighted averages. In addition, there are many time frames that can be applied; all of which can be plotted forward or backward to improve the trend-following characteristics and results of each indicator. (The most popular moving averages cited by the press include the 50- and 200-day.)

A trend-following system is generally utilized to provide buy and sell signals based on the proximity of the index or security to its moving average. Thus, when an index moves above a moving average a "buy" signal is triggered and when it moves below the moving average, a "sell" signal is given.

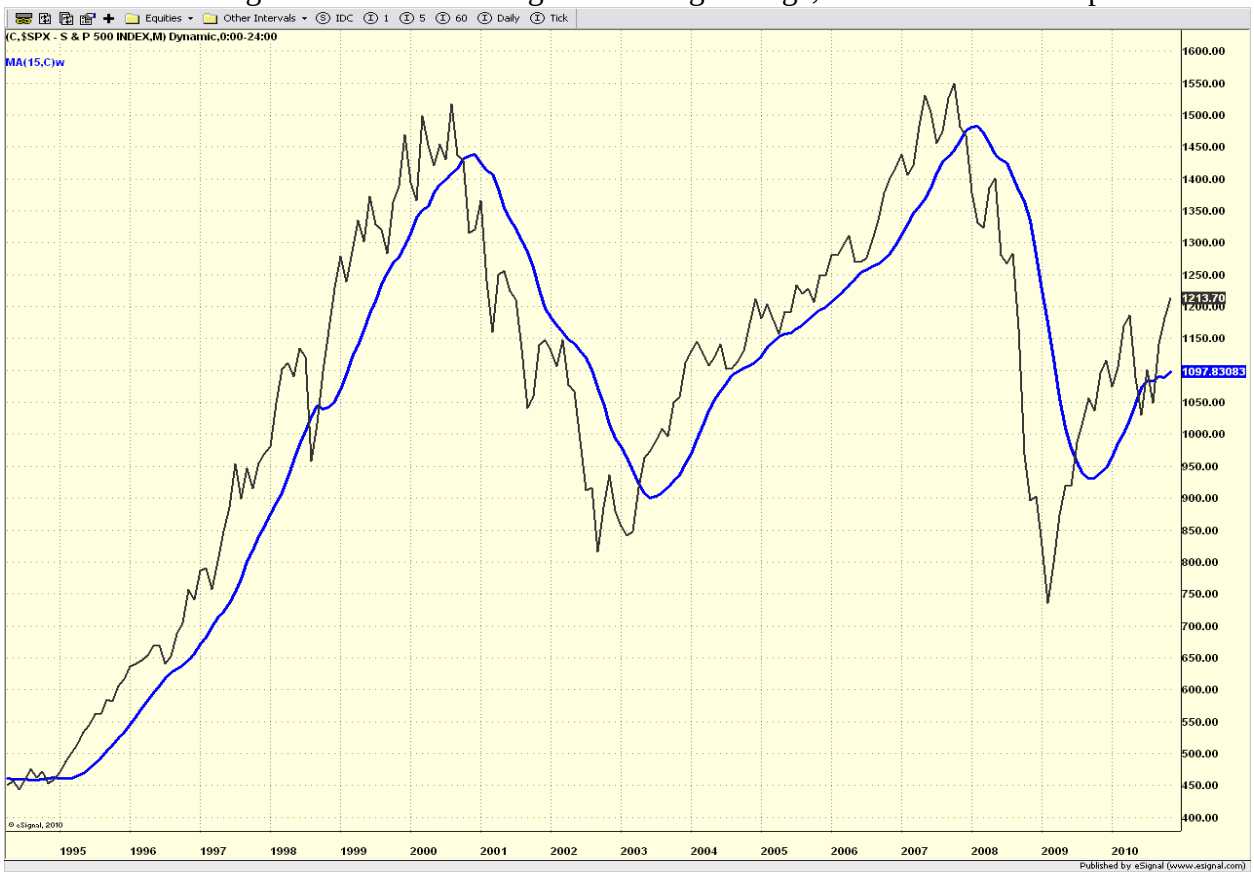
This approach can prove quite useful over time – IF (note the use of capital letters) followed religiously. However, one problem with employing a trend-following approach is there are false signals – better known as "whipsaws." A whipsaw occurs when an investor may sell on the crossing of a moving average only to have to buy back within a short period of time at a higher price, and vice versa.

While definitely not immune to this problem, one of our favorite trend-following indicators is a 15-month weighted moving average plotted against the S&P 500 index and then moved forward two periods. See Chart 1 below. On the chart, the blue line is the trend-following moving average and the black line is the S&P 500. As one can readily see, a strategy which "buys" when the S&P 500 moves above the blue line and "sells" when the index moves below the blue line would appear to have kept investors on the correct side of the prevailing trend for many years at time.

In reviewing the chart, we felt that further study was warranted. Thus we tested a strategy that was "long" when the S&P 500 was above the blue line and "short" when below the blue line. A hypothetical backtest of the system from 12/31/1994 through 12/31/2010 which "bought" the S&P 500 index at the close of the day when the index moved above the moving average (the blue line on the chart) and then sold short the S&P 500 at the close of the day when the index moved below the moving average, showed a cumulative gain of +458.76% for the period. By comparison, the price-only S&P 500 index shows a gain of +173.83% during the time frame.

Thus, using **this simple trend-following system would have generated gains that were more than two and one-half times the buy-and-hold approach.**

Chart 1:
S&P 500 Plotted against a 15 month weighted moving average, moved forward two periods



Black Line: Monthly closes of price-only S&P 500 index
Blue Line: 15 month weighted moving average moved forward 2 periods

However, as anyone who has ever traded the market knows, every active management system has its drawbacks. And in this case, there are two primary issues.

The first drawback to using such a system is the number and severity of whipsaw trades. While the "bad trades" of 1998, and 2010 don't look like much on the chart from a long-term perspective, living through such whipsaws in real-time can prove challenging from an emotional standpoint. For example, the 1998 sell created an -11.8% losing trade as the system said to sell on 9/1/98 at 994.26, only to give a buy signal two months later at 1111.60. Then in 2010, the system gave a sell on 7/1/10, a buy on 8/1/10, a sell on 9/1/10 and then a buy on 10/1/10; creating losses of -7.9%, -8.7%, -4.0%, and -5.8% respectively. (For the record, the ensuing long trade beginning on 9/1/10 produced a gain of +9.72% through year-end.)

Thus, it is important to recognize that a trend-following system works very well when the market is "trending" in one direction or the other, but is susceptible to whipsaws during sideways or highly volatile environments.

The second drawback to using this type of trend-following system is that the whipsaw trades wind up producing periods of relatively severe underperformance on a calendar-year basis (the time-frame over which most money managers are judged). For example, in 1998 the system lost -0.07% while the S&P 500 gained +26.67%. In 2003, the system gained just +3.59% versus +26.38%. In 2009 the system lost -1.02% and the S&P 500 gained +23.45%. And finally, in 2010, the multiple whipsaws produced a loss of -16.45% while the S&P gained +12.78%.

The table below illustrates the calendar year returns of the 15-month trend system we've been discussing compared to the price-only S&P 500 index.

Year	15-Mo Trend System	S&P 500
1995	34.11%	34.11%
1996	20.26%	20.26%
1997	31.01%	31.01%
1998	-0.07%	26.67%
1999	19.53%	19.53%
2000	3.60%	-10.14%
2001	13.04%	-13.04%
2002	23.37%	-23.37%
2003	3.59%	26.38%
2004	8.99%	8.99%
2005	3.00%	3.00%
2006	13.62%	13.62%
2007	3.53%	3.53%
2008	35.60%	-38.49%
2009	-1.02%	23.45%
2010	-16.54%	12.78%
Cumulative	458.76%	173.83%

While there were definitely calendar years in which the system generated substantial outperformance (2000, 2001, 2002 and 2008), it is often difficult to continue to implement a management system from an emotional standpoint during extended periods of underperformance. Ask yourself if you could honestly continue to implement such a system in 2011 after losing money in both 2009 and 2010 while the market produced gains.

Therefore, given the disparity of returns compared to the overall market, we will conclude that such an approach is inappropriate for use as a stand-alone active management system.

Alternative Solution: Utilizing "Rules" and/or "Market Indicators"

Another management approach we considered incorporating into our risk management strategies involved market indicators and/or "rule-based" buy and sell signals. The idea is that individual indicators, groups of indicators, and/or market "rules" may potentially provide consistent signals and may help in avoiding the pitfalls of a pure trend-following system.

One such approach we explored involved the use of a rate-of-change indicator in order to trigger buy and sell signals for the S&P 500 index. Using an approach pioneered by Ned Davis Research, one first measures the 26-week rate-of-change of the Value Line Geometric Index. Next, the rate-of-change is smoothed via a two-week front-weight average, and then plotted on a chart.

Since the rate-of-change indicator is plotted in percentage terms, it is termed an oscillator. As such, one can identify absolute levels on the chart where the market is considered to be overbought as well as oversold. In this particular system, a reading above +10% was considered overbought while a reading below +1% was considered oversold.

The concept of the system is fairly straightforward. Our study of historical market trends reveals that when a market moves higher for a long period of time, it will become overbought in the process. Once overbought, a market will, over time, tend to lose upside momentum and then eventually change direction. Thus, the idea is that once a market has trended enough to become overbought, it is then "set up" for a potential reversal. For our purposes, once the indicator exceeded the overbought level and then reversed (indicating that momentum has peaked) a sell signal was given.

The same approach was used on the buy side. Once a market has declined sufficiently to trigger an oversold reading and then reversed higher, a buy signal was given.

In testing this system, buy and sell signals were devised based on overbought/sold levels. When the smoothed 26-week rate-of-change was below +1% (indicating an oversold condition) and then moved above the +1% level, the system triggered a buy signal. Conversely, when the rate-of-change first moved above the +10% level end then reversed below, a sell signal was given.

According to the computers at Ned Davis Research, if one bought the S&P 500 index when buy signals were given and then moved to cash when sell signals were given, the hypothetical backtest of the system would have produced an annual gain per annum of +10.6% per year between 7/19/1968 and 12/31/2010. The good news is this far exceeds the buy and hold return of the S&P 500 index of +6.1% per year.

Perhaps even more impressive is the fact that during the test period, 93% of the buy signals were profitable. And for the record, the latest buy signal occurred on 7/30/2010.

Given the profitability ratio (93%) and the stellar outperformance over a period of more than 40 years, this would appear to be a strong method of active management for the stock market.

However, there is one issue with this approach that needs to be recognized. Although it would be easy to ignore the small number of losing trades (remember, there were only two losing long trades during the period spanning over 42 years), it should be noted that due to the fact that the indicator is an oscillator and must reach extreme levels before a signal is given, the system can get "out of whack" with the major trend of the market and stay that way for extended periods of time.

For example, in late 1999, this indicator gave a buy signal. For several months, the signal looked to be correct as the market moved higher. But unfortunately, this was the second buy signal of that particular uptrend and the momentum quickly began to wane. As such, the market never became overbought after the buy signal and therefore, a sell signal was not given until 2002 – long after it was obvious that a bear market was underway and heavy losses were mounting from the trade.

In addition, after close inspection of the signals, we found that this type of indicator tended to issue sell signals that were relatively "early." Therefore, the market tended to move higher from the point of the sell signal in more than one-half of the occurrences.

Although this approach has proved very profitable over a long period of time and the vast majority of signals were profitable, history shows that the sell signals tend to be early and the bad signals would have been very difficult to live with on a real-time basis. Thus, we will conclude that it would be inappropriate to employ such a rule-based system exclusively.

Problem: Times Change, Markets Change

There have been many market indicators and rule-based strategies that have worked well for years only to suddenly stop working due to a change in the market environment. Thus, we believe the biggest downfall to using a single indicator system to provide buy and sell signals is the simple fact that markets can change over time.

For example, during the 1980's a successful market timing firm I worked with employed a fairly simple breadth model to determine their buy and sell signals. When the total number of advancing issues on the NYSE exceeded declining issues by more than 500, the model produced a "buy" signal. And when there were net 500 declining issues, a sell signal was given. For many years, this worked well and the firm prospered.

However, the character of the NYSE advance/decline line slowly changed over time as the exchange listed more and more closed-end mutual funds, REIT's and other bond-like vehicles. In short, the change in character of the advance/decline data dealt a severe blow to this breadth-based model and eventually the firm disbanded due to an extended period of bad performance and the inability to both identify and adapt to the changed environment.

A similar situation occurred when stocks went from being traded in eighths and sixteenths, to pennies. Suddenly, the breadth statistics were very different. The bottom line to this change is it took much less price movement in order to create an advancing or declining issue on any given day.

Another example would be the relatively well-known "10-to-1 up day" buy signals and "9-to-1 down day" sell signals. For many years, buying when up volume exceeded down volume by a measure of 10-to-1 was a good indication that stocks were likely heading higher over the next 1, 3, and 6 months. According to Ned Davis Research, the S&P 500's mean gain after up volume exceeded down volume by a measure of at least 10-to-1 over the following three months has been +4.1% since 1950. This compares quite favorably to the average return of +2.0% for all three month periods.

And when a second 10-to-1 signal has been given without an intervening sell signal, the returns are even better. Over the next three months, the S&P averaged gains of +4.5% vs. +2.0% for all three month periods. And over the next six months, the S&P showed cumulative returns of +11.4%, which is more than double the average of +4.1% for all six-month periods.

However, a change in the market's environment has hurt this reliable indicator. In short, the recent advent of high frequency trading has caused this indicator to lose its value. The problem is the frequency of the signals has increased dramatically over the past few years. From 10/1/80 through 12/31/07 – a period of 28 years – there were a total of 40 buy signals given by this indicator (an average of 1.4 buy signals per year). But from the end of 2007 through 10/28/2010

(a period of less than three years), there were approximately 42 signals – or an average of nearly 15 per year!

Yet another example of an indicator losing its effectiveness due to changes in the market would be the put-call ratio, which was invented by Martin Zweig in the early 1980's. Once a key indicator of speculative activity, the advent of sophisticated program trading, hedging, and asset allocation systems have rendered the indicator (in its original form) all but useless as a buy and sell indicator in today's environment.

The key lesson to learn from this analysis is that the characteristics of the market and the effectiveness of specific indicators change over time.

Alternative Solution: A "Model-of-Models" Approach

In an attempt to avoid the pitfalls of trend-following and/or single market-model or rule-based signals and the issue of changing market environments, we looked at another approach; something we call the "model-of-models" method. Instead of using a single indicator or model, this approach combines a series of market indicators and/or market models in order to create of model made up of many other models.

Think of this approach as a recipe that an investor "stirs up" in help order to guide their investing decisions. Typically a model-of-models includes trend and momentum indicators, as well as any number of other indicators such as economic, monetary, fundamental, sector, etc. The ingredients can vary widely – as can the results.

The key to the model-of-models approach is that each category of market analysis itself contains multiple models or indicators. These indicators are then summed to create a "weight of the evidence" signal for the category.

The model-of-models system we researched and tested contained ten categories of analysis:

- ✓ Market Breadth
- ✓ Liquidity
- ✓ Seasonality
- ✓ Sentiment
- ✓ Trend
- ✓ Volatility
- ✓ Volume
- ✓ Economic
- ✓ Fundamental
- ✓ Individual Equity Ratings

Each of the ten categories is itself made up of between two and five separate, individual indicators or models (a total of 33 different market indicators or models are employed in the overall model-of-models) that have been tested and proven successful in their own rights.

Adding an Alternative Signal "Mode"

Traditional active management systems have generally been constructed to give buy and sell signals. Thus, investors generally go long on a buy signal and then to either cash or to a short

position on a sell signal. However, this approach leaves out an important alternative – the neutral position.

The stock market can head in one of three directions: up, down, or sideways. Therefore, in the development of a market model it makes sense to include an option that can identify and be positioned accordingly for those periods when the market moves sideways.

Based on this assumption, we decided that the model-of-models system we would review should employ three modes: Buy, Sell Short, and Hold (cash). In our opinion, it is the addition of this third mode that makes the system relatively unique.

Step 1: Backtesting the 10-Model-of-Models Approach

Before we ever consider going live with an investment strategy, we insist that the management system be thoroughly backtested – preferably in good markets, bad markets and everything in between. Therefore, we asked Ned Davis Research, one of the largest institutional research firms in the country, to conduct an independent test of the system on a calendar-year basis. In short, we were looking for an indication of how the system might perform in different years and varying conditions.

We should make it clear that all backtests are inherently flawed and should not be used to determine how a system might perform going forward. Rather, a backtest merely gives us a general indication of what we might be able to reasonably expect in different environments.

Below is a summary of the hypothetical computer backtest of the 10-model-of-models system. The overall model included a market breadth model (comprised of 3 individual indicators), a market liquidity model (made up of 2 individual indicators), a seasonality model (2 individual indicators), a sentiment model (containing a total of 5 different indicators), a trend model (5 indicators), a volatility model (2 individual indicators), a volume model (5 separate indicators), an economic model (comprised of 2 indicators and 3 models), a fundamental model (1 model and 1 indicator), and an individual stock rating diffusion model (made up of 2 different stock diffusion models).

Each of the 10 models was scored as -1, 0, or +1. A score of -1 is negative, 0 is neutral, and +1 is positive. On a weekly basis, the models were then summed in order to come up with a composite score in the range of -10 to +10. For the backtest, scores in excess of +1.5 generated buy signals. Scores between +1.5 and -1.5 generated a neutral signal. And scores below -1.5 generated a sell signal.

The model tested provided a weekly signal. Thus, when the model gave a buy signal, the backtest assumed that the test portfolio went long the S&P 500 at the close of business on the first trading day following the signal (usually a Monday). The test then assumed a long position was held until either a neutral signal or a sell signal was given.

When a neutral signal was given, the backtest assumed that the model sold the S&P 500 at the close on the next trading day and was then invested in a T-Bill proxy.

And when a sell signal was given, the test went short the S&P 500 index at the close of the next business day.

It is important to note that the results of our backtest do NOT represent and are NOT intended to represent, actual trading. As we've mentioned, the backtest was done in order to provide us with an indication of what we might be able to expect in varying market environments such as up markets, down markets, and the "in between" type of environments.

Additional assumptions made in our backtest include the following: A price-only S&P 500 index was utilized, meaning that dividends were not considered. No commission charges were assessed for any signals. There were no management fees withdrawn. And there was no trade slippage assumed since end-of-day pricing was used.

Below is a table summarizing the results of this hypothetical backtest:

Historical Backtest of 10-Model-of-models Trading System

10-Model-of-models Decision System Historical Test Results Using Long/Short/Neutral Strategy				
Year	**Weekly L/S/N Test**		**S&P 500**	
1987	22.60%	$ 10,000.00	5.69%	$ 10,000.00
1988	28.80%	$ 12,260.00	16.64%	$ 10,569.00
1989	43.10%	$ 15,790.88	32.00%	$ 12,327.68
1990	24.60%	$ 22,596.75	-3.42%	$ 16,272.54
1991	16.40%	$ 28,155.55	30.95%	$ 15,716.02
1992	6.00%	$ 32,773.06	7.60%	$ 20,580.13
1993	7.20%	$ 34,739.44	10.17%	$ 22,144.22
1994	24.30%	$ 37,240.68	1.19%	$ 24,396.28
1995	21.80%	$ 46,290.17	38.02%	$ 24,686.60
1996	19.30%	$ 56,381.43	23.06%	$ 34,072.44
1997	19.00%	$ 67,263.04	33.67%	$ 41,929.55
1998	39.50%	$ 80,043.02	28.73%	$ 56,047.23
1999	57.70%	$ 111,660.01	21.11%	$ 72,149.60
2000	39.40%	$ 176,087.84	-9.11%	$ 87,380.38
2001	35.20%	$ 245,466.45	-11.98%	$ 79,420.02
2002	31.00%	$ 331,870.64	-22.27%	$ 69,905.51
2003	0.30%	$ 434,750.53	28.72%	$ 54,337.55
2004	24.30%	$ 436,054.79	10.82%	$ 69,943.29
2005	14.60%	$ 542,016.10	4.79%	$ 77,511.16
2006	10.20%	$ 621,150.45	15.74%	$ 81,223.94
2007	24.40%	$ 684,507.79	5.46%	$ 94,008.59
2008	42.60%	$ 851,527.70	-37.22%	$ 99,141.46
2009	77.70%	$ 1,214,278.50	27.11%	$ 62,241.01
Cumulative	**21,477.73%**		**691.15%**	

Please see important disclosures at the end of the research report regarding the inherent limitations of hypothetical backtested results.

In reviewing the hypothetical backtest results, the first thing that jumped out at us was the fact that there were no negative returns for any calendar year. While there were several years in

which the system underperformed the market – sometimes by a large degree such as in 1995, 1997, and 2003 – we viewed the fact that there were no losing years as a positive.

The next point we considered important was that the test was done over a period of 23 years. This period included many and differing market cycles, including both a secular bull and secular bear market cycle as well as several cyclical bull and cyclical bear markets within the context of each secular cycle.

Step 2: Implementing the Approach in a "Live Testing" Environment

Since backtested results have limitations that are many and varied (see the important disclosures at the end of this report), we decided to then take a new and unique step in order to further test the system. Our goal was to test the trading strategies in a more stringent "live" environment, but avoid putting client assets at risk during the test.

We implemented this test by publishing our buy and sell signals in real-time via an internet website. Whenever a signal was given, the website would send an email alert including the exact instruction of the move to those individuals subscribed to the service. While this is definitely NOT the same as actual trading, this "live testing environment" with subscribers who were paying for the signals, provided a more real-world test of the system than does a computer generated backtest.

During our "live test" period, we added another component to the 10-model-of-models system. Since the 10-model-of-models system is calculated weekly, we wanted to create a shorter-term model in order to keep the portfolio in line with the trend in between weekly signals. Dubbed the "Daily Decision Model," this model is comprised of the following models/indicators:

Daily Decision Model-of-Model Components:

- Short-Term Trend Model (2 indicators)
- Intermediate-Term Trend (2 indicators)
- Trend and Breadth Confirm Models (2 models)
- Momentum Models (3 models)
- Overbought/Sold Models (3 indicators)
- Sentiment Models (2 models)

On July 15, 2009, we initiated the "live test" period with the combination of the 10-Model-of-models system and the Daily Decision Model on an independent website not affiliated with Heritage. When either model gave a signal, a trade alert was issued during trading hours via email to those individuals who had subscribed to receive the signals. The "trade" was then "implemented" in the hypothetical model portfolio within an hour of the trade alert email and the price was posted on the website.

We ran three different model portfolios during the testing period: a Main Model, an Aggressive Model, and a Hybrid Model.

The Main Model employed a long/short/neutral strategy using the S&P 500 as the market index with manager discretion as to which mode (short or cash) to use on sell signals.

The Aggressive Model employed a long/short strategy using leveraged ETFs with the manager having discretion over which ETF to utilize on each trade.

The Hybrid Model utilized a leveraged long/short/neutral approach with manager discretion as to which mode to use during sell signals (short or cash) and which ETF's to employ on each trade.

During the 2009 testing period, the Main Model went long the S&P 500 index when on buy signals, either short the S&P 500 index or to cash proxy on sell signals, and moved to a cash position during neutral signals. In 2010, the Main Model utilized the SPDR Trust S&P 500 ETF (SPY) on buy signals, either the ProShares Short S&P 500 ETF (SH) or a cash proxy on sell signals, and a cash proxy during neutral signals.

The Aggressive and Hybrid Models utilized leveraged and non-leveraged ETF positions (specific positions were detailed in each trade alert). The Aggressive model moved to a short position on sell signals. The Hybrid Model moved to a cash position during neutral signals and to either a short or neutral position on sell signals.

Given that we believed the market was in a "cyclical bull" phase during the test, we did not use a short position in the main and hybrid models during this period.

Note that in the "live testing environment" the cash proxy earned no interest and no commissions were considered to have been paid for any of the hypothetical trades.

Historical Results of "Live Test" Period

Below are the trade results of the "live internet test" for the period 7/15/2009 – 9/9/2010. The start date was chosen because it was the first trade at the beginning of the live test period. The end date was chosen as the date this report was last updated.

Main Model "Live Testing" Trading History

Date	Action	Price	Long	Short	Balance
					10,000.00
15-Jul-09	**Buy S&P**	919.06			10,000.00
31-Aug-09	Cash	1019.53	10.93%		11,093.29
8-Sep-09	Buy	1021.00			11,093.29
21-Sep-09	Cash	1061.05	3.92%		11,528.48
5-Oct-09	Buy	1033.04			11,528.48
12-Oct-09	Cash	1075.55	4.12%		12,002.92
26-Oct-09	Buy	1078.00			12,002.92
27-Oct-09	Cash	1066.72	-1.05%		11,877.31
9-Nov-09	Buy	1084.25			11,877.31
December	**Valuation**	1115.10	1.78%		12,088.75
2010		**111.44**			12,088.75
21-Jan-10	Sell SPY	112.05	0.55%		12,154.93
17-Feb-10	Buy SPY	109.99			12,154.93
4-May	Sell SPY*	118.12	7.39%		13,053.44
24-May	Buy SPY	108.32			13,053.44
1-Jun	Sell SPY	108.85	0.49%		13,117.31
15-Jun	Buy SPY	110.88			13,117.31
24-Jun	Sell SPY	108.16	-2.45%		12,795.51
13-Jul	Buy SPY	109.38			12,795.51
27-Sep	Sell SPY**	115.32	5.43%		13,490.44
5-Oct	Buy SPY	115.97			13,490.44
18-Oct	Sell SPY	118.17	1.90%		13,746.38
25-Oct	Buy SPY	118.84			13,746.38
17-Nov	Sell SPY	118.55	-0.24%		13,712.83

22-Nov	Buy SPY	119.49		13,712.83
31-Dec	Year End***	126.40	5.78%	14,505.89
2011		**126.40**		14,505.89
19-Jan	Sell SPY	128.89	1.97%	14,791.98
26-Jan	Buy SPY	129.75		14,791.98
31-Jan	Sell SPY	128.54	-0.93%	14,654.03
2-Feb	Buy SPY	130.48		14,654.03
22-Feb	Sell SPY	133.14	2.04%	14,952.79
28-Feb	Buy SPY	133.02		14,952.79
7-Mar	Sell SPY	131.62	-1.05%	14,795.40
21-Mar	Buy SPY	129.75		14,795.40
18-Apr	Sell SPY	129.98	0.18%	14,821.63
27-Apr	Buy SPY	134.68		14,821.63
3-May	Sell SPY	135.82	0.85%	14,947.10
29-Jun	Buy SPY	130.6		14,947.10
1-Aug	Sell SPY	128.58	-1.55%	14,715.89

Aggressive Model "Live Testing" Trading History

Date	Action	Price	Long	Short	Balance
					10,000.00
15-Jul-09	Buy UWM	19.1			10,000.00
2-Sep-09	Sell UWM	22.94	20.10%		12,010.67
	BUY SDS	45.52			12,010.67
8-Sep-09	Sell SDS	43.52		-4.39%	11,482.92
	Buy QLD	46.89			11,482.92
28-Oct-09	Sell QLD	48.98	4.46%		11,994.78
	BUY SDS	40.72			11,994.78
4-Nov-09	Sell SDS	39.76		-2.36%	11,711.98
	BUY SSO	34.27			11,711.98
December	**Valuation**	38.24	3.63%		12,137.16
2010		**38.24**			12,137.16
21-Jan-10	Sell SSO	38.60	0.94%		12,251.43
	Buy SDS	34.57			12,251.43
17-Feb-10	Sell SDS	35.52		2.75%	12,588.13
	Buy QLD	55.63			12,588.13
4-May	Sell QLD	65.90	18.46%		14,912.24
	Buy SDS	30.46			14,912.24
24-May	Sell SDS	35.22		15.63%	17,242.74
	Buy UWM	29.84			17,242.74
2-Jul	Sell UWM	25.39	-14.91%		14,671.21
13-Jul	Buy UPRO	135.66			14,671.21
27-Sep	Sell UPRO	155.34	14.51%		16,799.68
	Buy SPY	114.72			16,799.68
17-Nov	Sell SPY	118.55	3.34%		17,360.58
	Buy SDS	27.23			17,360.58
22-Nov	Sell SDS	26.79		-1.62%	17,080.04
	Buy MVV	55.65			17,080.04
2011		**63.68**	**14.43%**		19,544.75
14-Mar	Sell MVV	69.12	8.54%		21,214.49
	Buy SDS	22.03			21,214.49
18-Mar	Sell SDS	22.34		1.41%	21,513.02
	Buy SH	42.54			21,513.02
21-Mar	Sell SH	42.10		-1.03%	21,290.50
	Buy MVV	71.00			21,290.50

18-Apr	Sell MVV	71.08	0.11%		21,314.49
	Buy SDS	21.74			21,314.49
27-Apr	Sell SDS	20.24		-6.90%	19,843.78
	Buy DDM	64.78			19,843.78
31-May	Sell DDM	64.25	-0.82%		19,681.42
	Buy SDS	20.30			19,681.42
29-Jun	Sell SDS	21.08		3.84%	20,437.69
	Buy SSO	51.83			20,437.69
1-Aug	Sell SSO	50.07	-3.40%		19,743.65
	Buy SDS	21.65			19,743.65
8-Aug	Sell SDS	26.30		21.48%	23,984.42
	Buy SH	46.20			23,984.42
	Current	45.46		-1.60%	23,600.24

Hybrid Model "Live Testing" Trading History

Date	Action	Price	Long	Short	Balance
					10,000.00
15-Jul-09	**Buy UWM**	19.10			10,000.00
31-Aug-09	Cash	24.02	25.76%		12,576.17
8-Sep-09	Buy QLD	46.89			12,576.17
21-Sep-09	Cash	51.00	8.77%		13,678.59
5-Oct-09	Buy MVV	35.88			13,678.59
12-Oct-09	Cash	39.36	9.70%		15,005.37
26-Oct-09	Buy QLD	53.43			15,005.37
27-Oct-09	Cash	51.40	-3.80%		14,435.22
9-Nov-09	Buy SSO	36.17			14,435.22
December	**Valuation**	38.24	3.63%		14,959.26
2010		**38.24**			14,959.26
21-Jan-10	Sell SSO	38.60	0.94%		15,100.10
17-Feb-10	Buy QLD	55.63			15,100.10
4-May	Sell QLD	65.90	18.46%		17,887.95
24-May	Buy UWM	29.84			17,887.95
1-Jun	Sell UWM	30.24	1.34%		18,127.75
14-Jun	Buy MVV	46.30			18,127.75
24-Jun	Sell MVV	42.60	-7.99%		16,679.02
13-Jul	Buy SSO	36.21			16,679.02
27-Sep	Sell SSO	39.76	9.80%		18,314.31
5-Oct	Buy SPY	115.97			18,314.31
18-Oct	Sell SPY	118.17	1.90%		18,661.76
25-Oct	Buy SPY	118.84			18,661.76
17-Nov	Sell SPY	118.55	-0.24%		18,616.22
22-Nov	Buy MDY	154.51			18,616.22
	Year end	165.14	6.88%		19,897.05
2011		**165.14**			19,897.05
19-Jan	Sell MDY	168.4556	2.01%		20,296.55
26-Jan	Buy SPY	129.75			20,296.55
31-Jan	Sell SPY	128.54	-0.93%		20,107.26
2-Feb	Buy MDY	170.24			20,107.26
22-Feb	Sell MDY	176.24	3.52%		20,815.97
28-Feb	Buy SSO	53.48			20,815.97
7-Mar	Sell SSO	52.34	-2.13%		20,372.22
21-Mar	Buy MDY	174.46			20,372.22
18-Apr	Sell MDY	174.65	0.11%		20,394.41
27-Apr	Buy DDM	64.78			20,394.41
3-May	Sell DDM	66.92	3.30%		21,068.17

29-Jun	Buy SSO	51.83		21,068.17
1-Aug	Sell SSO	50.07	-3.40%	20,352.72

* SPY X-div on 12/17 for $0.65276, record date 12/21, payment 1/18
** SPY X-div on 6/18 for $0.53128, record date 6/22, payment 7/30
*** SPY X-div on 9/21 for $0.60213, record date 9/21, payment 10/29
**** SPY X-div on 12/17 for $0.65276, record date 12/21, payment 1/18
***** MDY X-div on 12/17 for $0.45559, record date 12/21, payment 1/18

Results Summary of "Live Test" Period

Below are the annual and cumulative results of the "live test" for the period 7/15/2009 – 9/9/2011. The start date was chosen because this was first trade at the beginning of the live test period. The end date was chosen as the last date this report was generated.

Live Testing Environment Summary
10-Model Weekly and
Daily Decision Model
From 7/15/2009 – 9/9/2011

Period	Main	Aggressive	Hybrid	S&P 500
2009 (From 7/15 Buy)	20.89%	21.37%	49.59%	21.33%
2010	20.00%	61.03%	33.01%	12.78%
2011 (YTD)	1.45%	20.75%	2.29%	-8.22%
Cum	**47.17%**	**135.99%**	**103.53%**	**25.59%**

Please see important performance disclosures at the end of the report. The S&P 500 Index used is price only and does not include the reinvestment of dividends. Past performance is not a guarantee of future results.

Employing the 'Models-of-Models' System as a Hedge

Another use of the system we explored was to combine the model-of-models system with other long-oriented programs as a method to hedge potential downside risk during severe market declines.

Although all of the programs we offer strive to "manage risk" during severe market declines, as mentioned early in this report, many of the programs utilize a longer-term approach to risk management. As such, coupling the model-of-models system with programs that employ longer-term risk management approaches could potentially manage downside risk "faster."

Conclusion – An Active Management System Has Potential

In our opinion, the stock market is currently in the midst of a secular bear market environment that, based on the length of prior secular bear periods, could continue for several years. We also believe that the public has become disillusioned with both the stock market in general and the buy-and-hold approach to investing in particular.

Thus, it is our belief that conditions warrant a shift to a more actively managed approach to the U.S. stock market.

Our research shows a model-of-models approach to be superior to trend-following or single rule-based indicator systems as changing market environments can negatively impact these approaches.

Our computer-based research showed that a model-of-models system would have provided superior performance over a long period of time and over multiple market cycles.

In order to seek a management strategy that would function in differing environments and not fall prey to the problems found in trend-following and single-model approaches, we first backtested a weekly "model of models" system. We then supplemented the weekly model system with a daily model to deal with shorter-term movements that can take place intraweek.

Next, we created a "live test" environment for the combination of models via an internet website. During the "live test," signals were sent to subscribers via email alerts and implemented in a model portfolio.

After more than 25 months of testing, the combination of the weekly and daily model-of-models has showed positive results. Thus, we will conclude that the approach is worthy of further consideration.

Important Disclosures Relating to Backtesting:

The test results provided herein are HYPOTHETICAL. The test of the trading system displayed is for information purposes only and should not be used or construed as an indicator of future performance, an offer to sell, a solicitation of an offer to buy, or a recommendation for any security or investment program.

The return calculations presented are based on historical system testing. It should be noted that test results **do NOT represent actual trading, do NOT take into account either the payment of commissions or reinvestment of dividends, have inherent limitations, and are for informational purposes only.**

All returns illustrated in this research report are before commissions, management fees, and slippage. As such, returns illustrated cannot be expected to be achieved. There can be no guarantee, that profits will be made, or even that losses will be avoided. Some of the risks these strategies can be exposed to include: strategy and timing decisions may not always be correct and may adversely affect account performance. The implementation of timing signals may not be done in a timely fashion. The use of leverage may magnify risk. Leverage and ETF's employing derivatives carry other risks that may result in losses, including the effects of unexpected market shifts, default and/or the potential illiquidity of certain derivatives.

The performance results depicted have been produced by application of selected trading signal criteria to historical stock index price data. It is assumed that when on a "buy" signal, the hypothetical test account owns the S&P 500 stock index or the ETF specified in the trade alert. When on a "sell" signal, it is assumed that the hypothetical test account is short the S&P 500 stock index or the ETF specified in the trade alert. When on a neutral signal, it is assumed that the hypothetical test account is invested in T-Bill index. Annual returns are compounded on a trade by trade basis.

The attached hypothetical system test research report is NOT represented as actual trading or client experience, nor does it reflect the impact on decision making of economic or market factors experienced during actual management of funds. Performance between selected dates may be misleading as indicative of overall performance of a strategy, since they may have been selected to present optimum performance.

Actual results may differ from results reported for the model portfolio for many reasons, including, without limitation: (i) performance results for the model portfolio do not reflect trading commissions that you may or may not incur; (ii) performance results for the model portfolio do not account for the impact, if any, of certain market factors, such as lack of liquidity, that may affect your results; (iii) the securities chosen for the model portfolio may be volatile, and although the "purchase" or "sale" of a security in the model portfolio will not be made in the model portfolio until confirmation that the email alert has been sent to all subscribers, delivery delays and other factors may cause the price you obtain to differ substantially from the price at the time the alert was sent; and (iv) the prices of securities in the model portfolio at the point in time you begin subscribing to our service may be higher than such prices at the time such stocks or options were chosen for inclusion in the model portfolio.

Index returns are price only and do not include the reinvestment of dividends. The S&P 500 is a stock market index containing the stocks of 500 large-cap corporations, most of which are US companies. The index is the most notable of the many indices owned and maintained by Standard & Poor's, a division of McGraw-Hill. S&P 500 is used in reference not only to the index but also to the 500 companies that have their common stock included in the index.

Past performance is not a guarantee of future results.

Abstract:

With the stock market currently in the midst of a secular bear market environment, we believe that the public has become disillusioned with both the market in general and the buy-and-hold approach to investing in particular. Thus, it is our belief that conditions warrant a return to a much more actively managed approach to the U.S. stock market and that clients/registered reps will more readily adopt such a strategy in this environment.

While we have "managed risk" for clients for more than 20 years, the enclosed research report chronicles our efforts to develop a much more active management system than what we have been employing. In our report, we review the thought process behind the development of the system as well as the step-by-step methodology employed to create and more importantly, test what appears to be a very promising approach to active management.

As NAAIM members are no doubt aware, the creation of an active trading system is hardly a new idea. However, what makes the report and our approach unique, fresh, and new is the implementation of a new testing ground for the system.

While backtests are helpful in determining the general usefulness of a system, we all are aware of the many flaws involved with computerized backtests. Therefore, we created a "live testing environment" via an internet website and "ran" the system in this live environment for 17.5 months in order to better test its effectiveness.

Instead of the computers simply determining when a buy or sell signal was given, we wanted to create a more real-time environment in which to test the system. Thus, we developed a subscription e-letter service for the system on a public website. Whenever a signal was given by the system, the subscribers who were paying for the service's alerts (there were more than 500 paying subscribers as of 12/31/2010) were sent a real-time trade alert via email.

We then recorded the "trade" in real-time for all the subscribers to see and tracked performance on a daily basis via a report to all subscribers. This key to this approach is it "kept us honest" during the testing. For example, if there was ever a mistake in the pricing (such as a typo in the daily report), we definitely heard about it from the subscribers as they could contact us directly at any time. Thus, we were required to make sure that the pricing of the trades was legitimate and realistic.

We are also pleased to report that our efforts were recognized in the industry as our daily report won the 2010 STAR (superior trading and research) award for newsletters from TraderPlanet.

In closing, our research and testing shows that a model-of-models approach provided impressive results in both a backtested and "live testing" environment. Thus, we will conclude that the approach is worthy of further consideration.