

**Managing Market Risk.** The KP Market Trend Model is an analytical system that supports professional investors in their management of significant market fluctuations, in both directions. These so-called fat tails are by far the dominant influence on the performance of equity portfolios.

The Model uses a group of mathematical filters and decision rules to analyze subtle, yet exploitable, underlying

*We are confident that our process will provide portfolio managers with a very considerable risk-adjusted performance advantage*

ing trend signals from the financial markets. While this is inherently an imprecise process, we believe that the KP Model does significantly reduce portfolio drawdowns (negative tail events) over time and, as an inevitable by-product, can improve portfolio returns.

Our studies are recalculated daily and calibrated to focus on those significant trend events (in either direction) that extend two months or longer. Thus, our Model's mission is to keep portfolios on the right side (long or short) of all the major trends, especially those that have multi-year impact on the performance of a portfolio.

We are confident that the daily output of our Models — applied systematically over time — can help portfolio managers deliver a very considerable performance advantage over a conventional, long-only, buy-and-hold investment portfolio.

**Goodbye Efficient Market Theory.** Investing begins with the professional management of both market opportunity and market risk. In terms of the final outcome for a portfolio however, the management of market risk (or systematic risk) has been shown to be especially critical to the final performance of an investment portfolio.

For most of the past 50 years, efforts to analyze market trends have been dismissed as unproductive because the academic community believed financial markets to be "efficient," and devoid of useful information about future price direction. Not surprisingly, very little research effort has gone toward analyzing the market itself, although it was, and remains, by far the dominant influence on portfolio returns.

All that has changed. More recent research has shown that financial markets are inefficient in many interesting

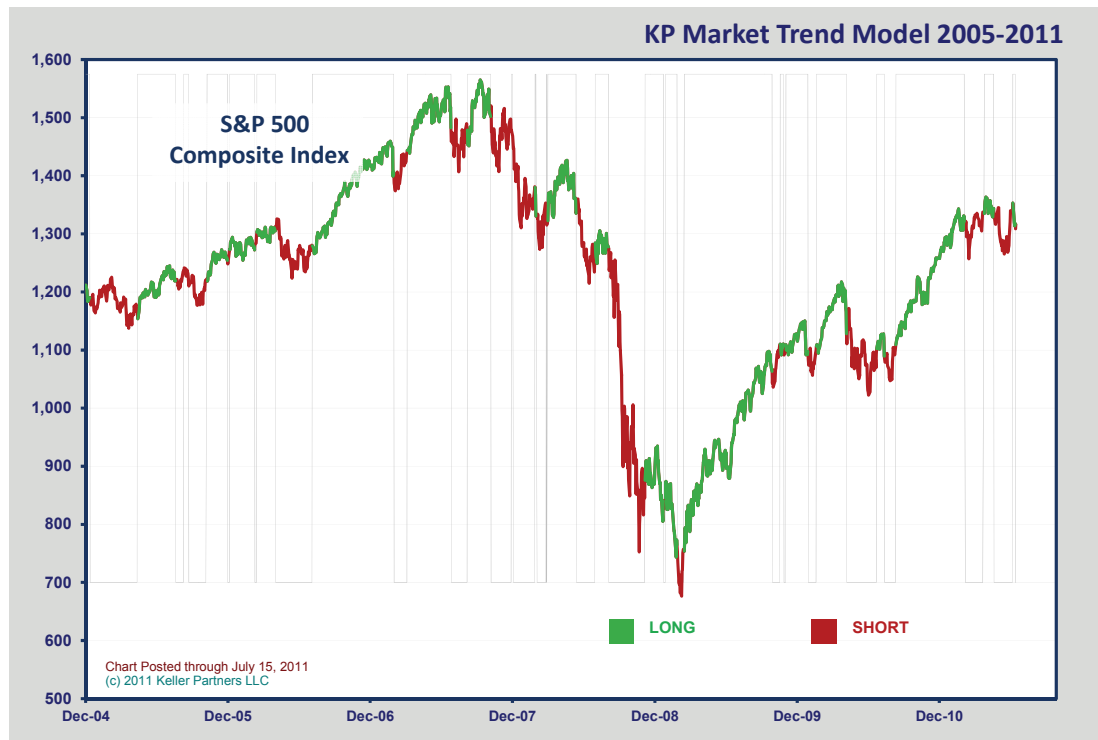


ways, and our work has concluded that some of these inefficiencies can be applied to the analysis and identification of longer-term price

trends. We must stress that markets remain statistically very noisy with a significant random component, such that the information that we extract from all this noise is quite subtle. As would be expected, the performance edge that comes from this analysis is similarly irregular and subtle. However it has been shown to be very powerful over time.

### Buy/Sell Points of the KP Trend Model since 2005

*This chart illustrates the buy/sell decisions of the KP Trend Model for the 6.5 years ended June 2011, a period that saw violent swings in both directions but very little gain for the buy-and-hold investor. This period excludes the KP Model's development period (2000 through 2004), and thus has greater significance, since it presents the model's capabilities on a going-forward, or "out-of-sample" basis.*



**What to Expect.** The KP Trend Model changes direction roughly seven times a year, although the time interval between trend signals will be highly irregular.

Historically, at least half of the changes of direction will prove to be unproductive and reverse themselves in a matter of a few weeks, usually with a small loss.

The balance of the signals will be “correct” in the sense that the trend identified by the Model will continue long enough to be followed profitably. These “correct” signals will include those that identify major, critical trend events such as the declines of 1987, 2000-02, and 2008, or the broad advancing markets of 1998-99, 2003 or 2009.

Trend Recognition Scorecard (Long/Short)				
December 31, 1996 — June 30, 2011				
	Profitable Signals		Unprofitable Signals	
	Number	Avg Return	Number	Avg Return
<b>Nasdaq 100 (NDX)</b>	37	14.7%	50	-3.5%
<i>Average Signal Length</i>	73 days		19 days	
<b>S &amp; P 500 (SPX)</b>	39	7.3%	48	-2.4%
<i>Average Signal Length</i>	70 days		19 days	

Having a portfolio positioned correctly for such major trend events is the sole objective of this model. The price for being aligned with the trend when it really counts comes in the form of the more frequent small losses. Like a tsunami warning system, the Model’s directional signals will not always prove correct, but they should never be ignored.

## Design Concepts Incorporated into the KP Market Trend Model

- We feel that the primary mission of a professional manager is to control portfolio drawdown. Accordingly, the KP Model is designed to be aggressive and systematic about controlling losses. When drawdown is successfully contained, returns almost always improve.
- Contrary to common sense and widespread practice, the flow of economic data and economic forecasts are insufficient tools to manage portfolio risk. Our model does not incorporate any economic data, relying instead entirely on internal market data.
- The KP Model’s design is adaptive. Since the internal rhythms and recurring tendencies (the “signature”) of financial markets mutate over time, the Model recalibrates itself over time as well. This has been especially important in recent years.



**More Charts:** This QR code can be scanned with an i-phone or i-pad to link to a chart on our [website](#) illustrating the conservative S&P 500 long/cash portfolio strategy with the KP Model, one of the alternatives presented below.

## KP Model Signals Implemented on US Equity Indices

December 31, 2004 — June 30, 2011  
78 Months

	31-Dec-04	30-Jun-11	Annual No of Trades	Return Calculations		Standard Deviation (monthly)	Sharpe Ratio RFR=1.0%	Maximum Drawdown
				Annual Returns	versus Benchmark			
<b>NDX</b>								
<i>Benchmark Performance</i>								
Buy/Hold: NDX	Index Perf.	100,000	143,424	none	5.70%	5.9%	0.33	-50.1%
<i>Model-Guided Strategies</i>								
Long/Cash NDX	\$ 100,000	\$ 221,948	6.9	13.0%	+ 7.3%	3.7%	0.94	-12.0%
Long/Short - NDX	\$ 100,000	\$ 257,922	6.9	15.7%	+ 10.0%	4.7%	0.91	-18.4%
NDX = Nasdaq 100 Index								
<b>SPX</b>								
<i>Benchmark Performance</i>								
Buy/Hold: SPX	Index Perf.	100,000	107,178	none	1.07%	4.7%	0.09	-52.6%
<i>Model-Guided Strategies</i>								
Long/Cash - SPX	\$ 100,000	\$ 147,742	6.9	6.2%	+ 5.1%	3.2%	0.51	-21.7%
Long/Short - SPX	\$ 100,000	\$ 153,743	6.9	6.8%	+ 5.8%	3.9%	0.48	-18.3%
SPX = Standard & Poor’s 500 Composite Index								

**Evaluating the KP Trend Model.** Whenever our Model shifts to a “hedged” or “short” status (i.e., when the color on the graph on page 1 has turned red), it is suggesting that the portfolio become defensive — less exposed to the market. The question then becomes: what action do we take on this signal, and how productive and reliable have these signals been?

When we evaluate how well our model reduces market risk and improves portfolio returns, we apply its signals to two major US equity indices, the S&P 500 (SPX) and the Nasdaq 100 (NDX) for the 6 1/2 years ended June, 2011. This 6.5-year period is the same “out-of-sample” data period covered by the graph on the front page, and it is independent of the data we used to calibrate the Model.

For evaluation purposes, the first test assumes that the portfolio shifts 100% to cash whenever the model turns negative; the second test assumes that the portfolio switches to a 100% “short” position in the index when the model is negative. In all cases, an active approach using the KP Model results in a significant reduction of risk (reduced drawdown, better Sharpe Ratios) and higher returns.