



## Baseline Analytics TrendFlex Signals Overview of Methodology

### Executive Summary

Baseline Analytics TrendFlex is a market-timing signal for the S&P 500. The signal is comprised of a credit risk premium indicator filtered by trend-following technical criteria including a scoring algorithm that gauges the risk of a change in the market trend. Trades are triggered on average every 1-4 months and have generated returns between 2.1x and 3.1x versus the S&P 500.

### The TrendFlex Signals

#### TrendFlex Credit Risk Premium Signal (C<sub>R</sub>)

TrendFlex Classic C<sub>R</sub> and TrendFlex Allegiance C<sub>R</sub> are short to intermediate-term, and long-term, respectively, and are comprised of a credit risk-premium indicator based on the relative performance of the iShares iBoxx Investment Grade Corporate Bond ETF (LQD) and the iShares 7-10 Year Treasury Bond ETF (IEF), compared to a moving average of its ratio. A cross above (bullish) or below (bearish) the moving average establishes the signal for the S&P 500.

Credit spreads are unique leading indicators of a change in the S&P 500 market trend. When stocks are risky, bonds tend to outperform. Within that outperformance, “risk-free” U.S. Government debt tends to outperform corporate debt. TrendFlex assesses this relative performance of government and corporate bond markets and has arrived at the Classic and Allegiance timing indicators.

TrendFlex Classic generates a new trade every 5-6 weeks, on average. TrendFlex Allegiance generates a new trade every 3-4 months, on average.

#### Performance (as of July 22, 2016):

	Classic C <sub>R</sub>	Allegiance C <sub>R</sub>
<b>Inception Date</b>	5/9/2011	5/3/2006
<b>Cumulative Return S&amp;P 500</b>	102.0% 49.5% (2.1x return)	243.2% 78.5% (3.1 return)
<b>Total Trades</b>	51	22
<b>Winning Trades (%)</b>	31 (61%)	18 (82%)
<b>Losing Trades (%)</b>	19 (37%)	4 (18%)
<b>Breakeven Trades</b>	1 (2%)	0 (0%)
<b>Avg. % Return Wins</b>	4.6%	14.1%
<b>Avg. Trade % Return Losses</b>	-2.0%	-2.8%

## The TrendFlex Score

When the TrendFlex  $C_R$  signals are in effect, the **TrendFlex Score** is utilized to assess the risk of a change in the trend of the S&P 500. A weighted score is derived from eleven technical indicators to define a tactical investment strategy to hedge or reinforce the major trend as defined by the TrendFlex  $C_R$  signals. The weightings for these indicators were determined following several years of historic data modeling. These indicators are organized into several categories:

- **Index Reviews** (S&P500, Dow, NASDAQ). Key moving average and momentum criteria are reviewed utilizing classic technical analysis.
- **Internal Market Strength** (i.e. Price and Volume Momentum). This includes Advance-Decline measures, Up Volume vs. Down Volume, and High vs. Low %.
- **Market Psychology**. A contrarian perspective incorporating technical analysis of CBOE Put/Call and VIX reading relative to their respective moving averages and trading extremes.
- **Credit Risk** (Government vs. Corporate), as identified by the relative performance of the iBoxx Investment-Grade Corporate bond ETF (LQD) and the 10-Year Treasury ETF (IEF).
- **Intermarket Relationships** (bonds, commodities, stocks)
- **Style** (small cap, large cap, value and growth).

These indicators comprise the TrendFlex Score based on the following weightings:

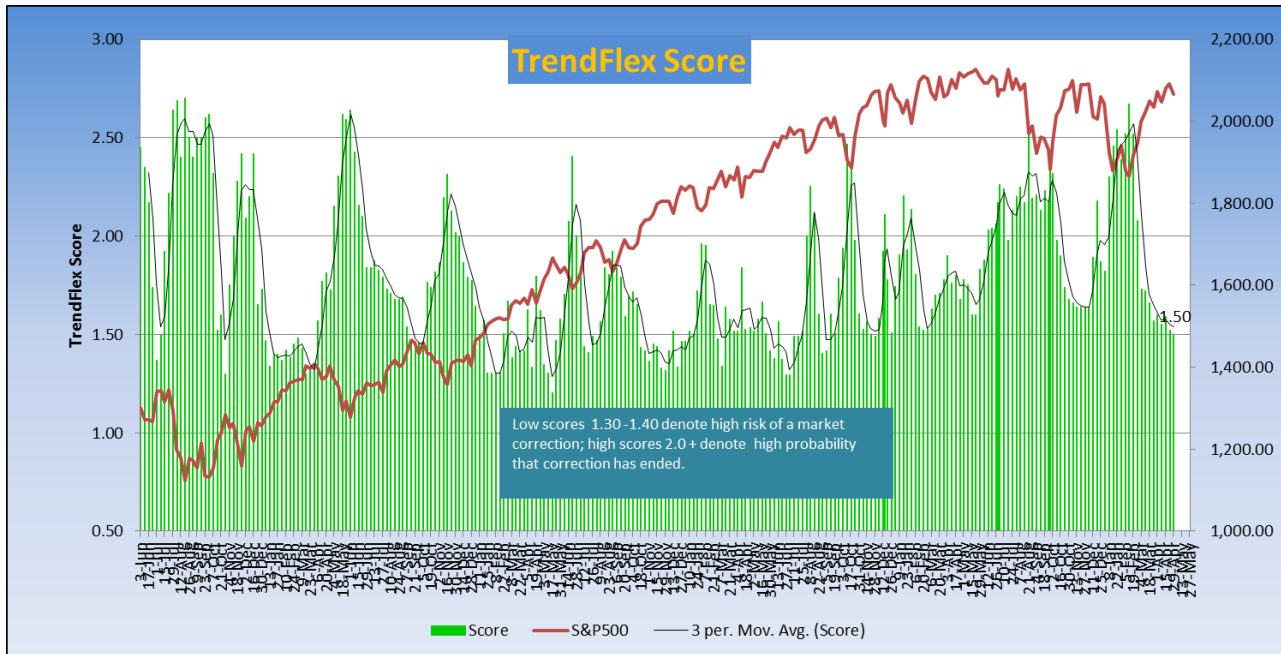
Indicator	Weighting
NYSE Advance-Declines; Up vs. Down volume; High vs. Low %	10.0%
Ratio of S&P 500 and US Treasury Bonds	12.5%
S&P 500 Index (daily chart)	17.5%
S&P 500 Index (weekly chart)	10.0%
Credit risk premium	15.0%
NYSI Summation Index	10.0%
% of Stocks in S&P 500 trading over their 50-day simple moving average	5.5%
CBOE Volatility index (VIX) and CBOE Put/Call Ratio	12.0%
Intermarket Relationships and Style	7.5%

The resulting weightings are applied to a technical analysis score that ranges from 1.0 (highly bullish on equities) to 3.0 (highly bearish on equities). These extremes denote the potential of a trend change (i.e. a score close to 1.0 indicates an overly-extended bullish period, at which time hedges to long equity positions are recommended).

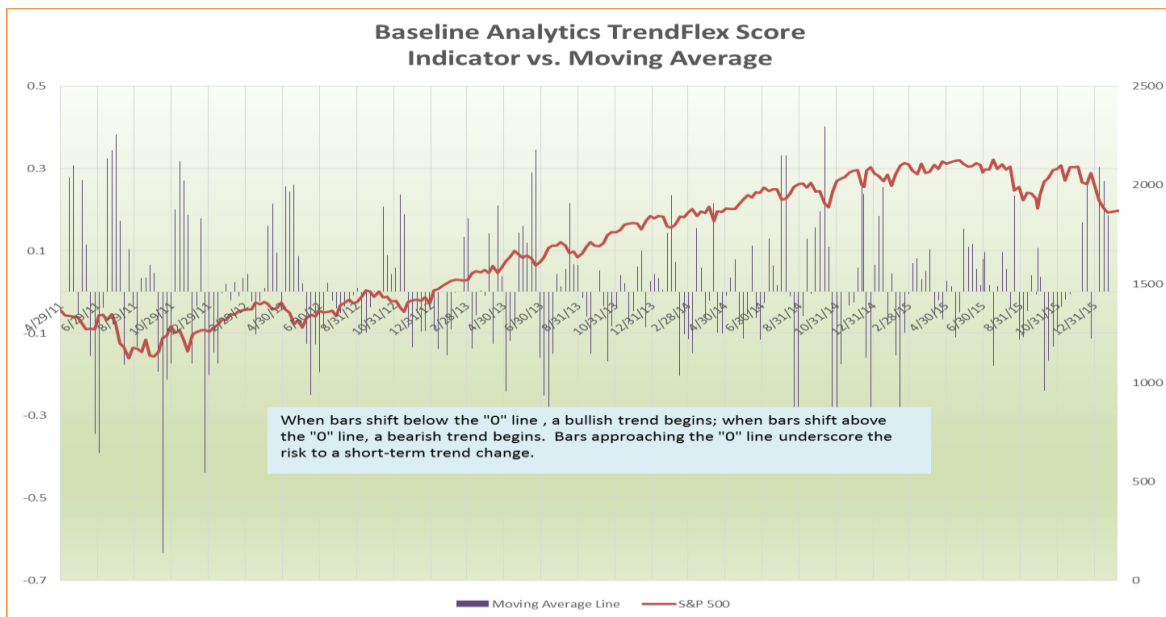
At extreme readings of the resulting weighted TrendFlex Score (above 2.60 and below 1.40), the probability of a market trend change is high. An alert is signaled when the score closes below (bullish) or above (bearish) its 3-week simple moving average (grey solid line in the chart below).

## TrendFlex Score and Signals

As can be seen in the TrendFlex Score chart below, the TrendFlex Score as it crosses above or below its three-week moving average, has identified short-term market turning points since its inception in 2010.



Below is another view of the TrendFlex Score. The chart below depicts the TrendFlex Score as vertical bars plotted with the S&P 500. Note that a shift from positive to negative bars (bars that stretch below the "0" horizontal line) tend to precede an uptrend in the S&P 500.



A bullish environment exists when the TrendFlex Score is below its moving average. Bars that shift from negative to positive tend to precede a downtrend in the S&P 500, as the TrendFlex Score is above its



## TrendFlex Score and Signals

moving average, which is bearish for equities. These shifts above and below its moving average are utilized to signal an impending change in trend of the S&P 500 (likewise providing an indicator for other major equity indices).

Again, the TrendFlex Score is utilized as a hedge (or enhancement) to the TrendFlex  $C_R$  signals, which are considered to be the “major” trend.

## Signal delivery

Classic  $C_R$  and Allegiance  $C_R$  represent the main signals, and are communicated to subscribers upon a signal change following the daily close in the U. S equity markets. A change in the risk profile of the signal is communicated using the TrendFlex Score, and updates are provided as the risk profile shifts from reinforcement of the major trend, to a warning of a potential change in the trend. TrendFlex Score changes are likewise communicated following the daily close in the U.S. equity markets.

## About Baseline Analytics

Founded in 2005, Baseline Analytics utilizes a combination of macro-economic, fundamental and technical research and analysis. TrendFlex delivers a simple, objective tool to assess the risk of a change in market trend. Our subscribers are Investment Advisors, Portfolio Managers and Individual Investors who use the TrendFlex tool to validate and adjust investment strategies and to participate on the *right* side of the market trend at all times.

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