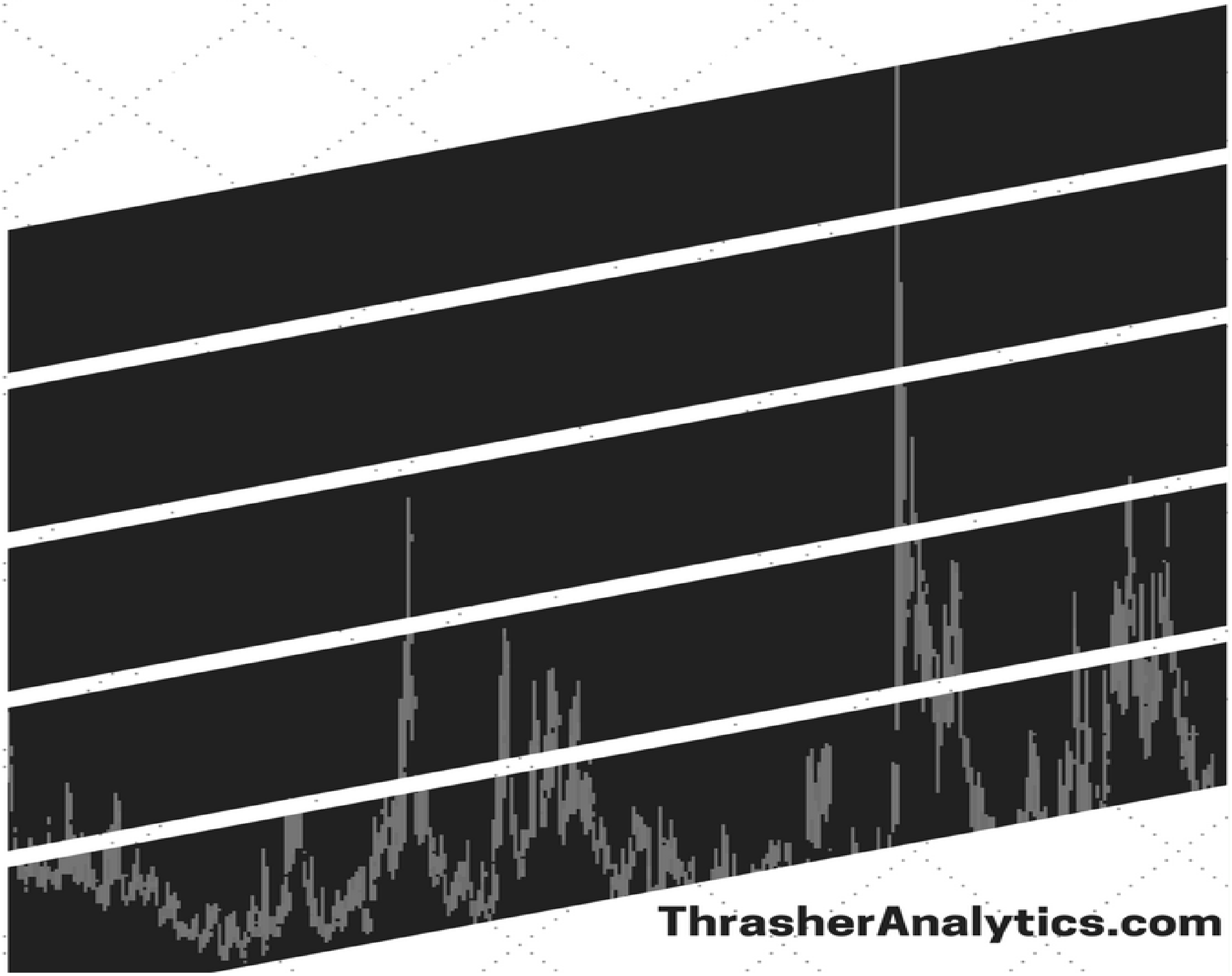
THRASHER ANALYTICS

BI-WEEKLY RESEARCH & ANALYSIS

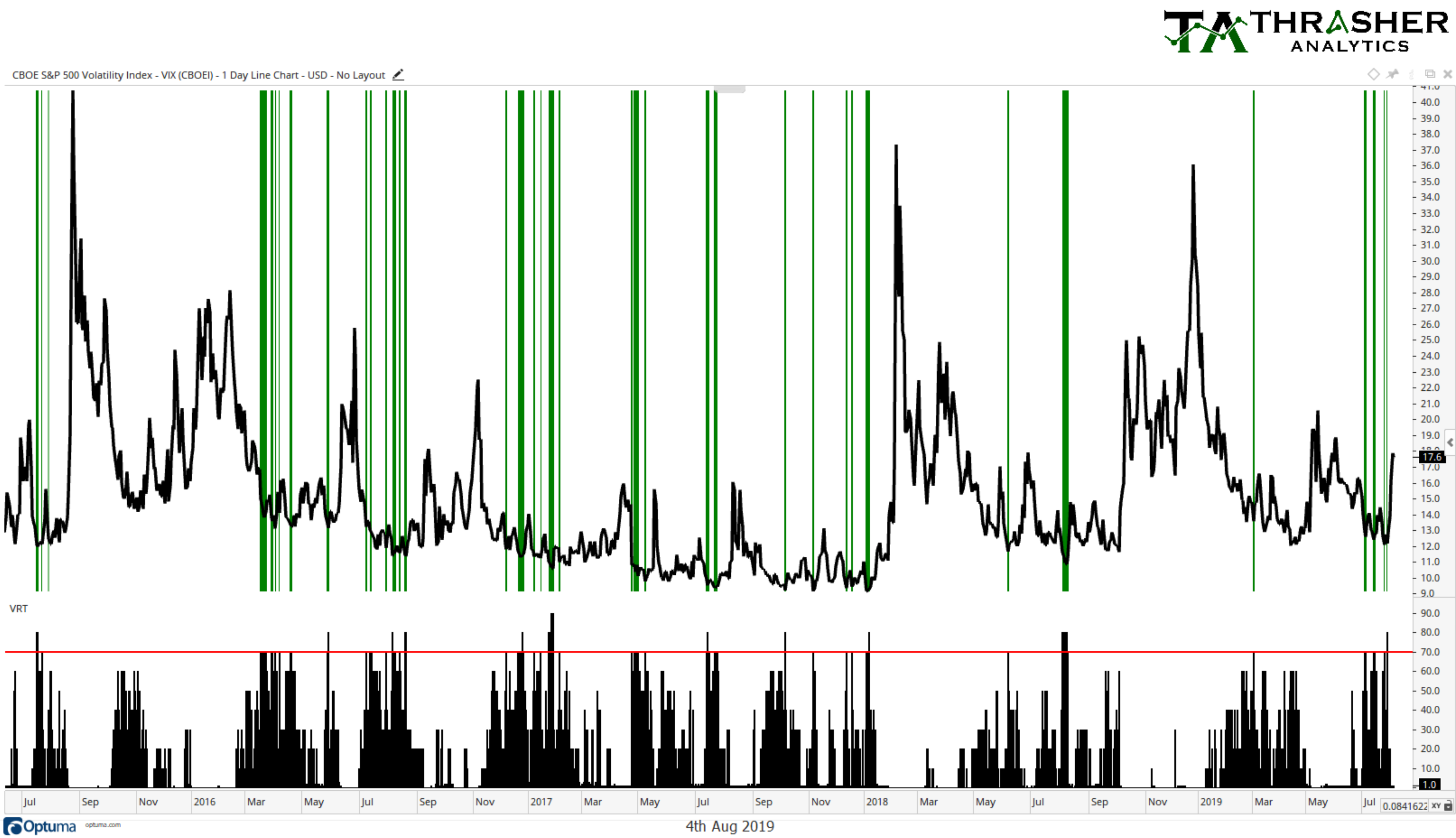


ThrasherAnalytics.com

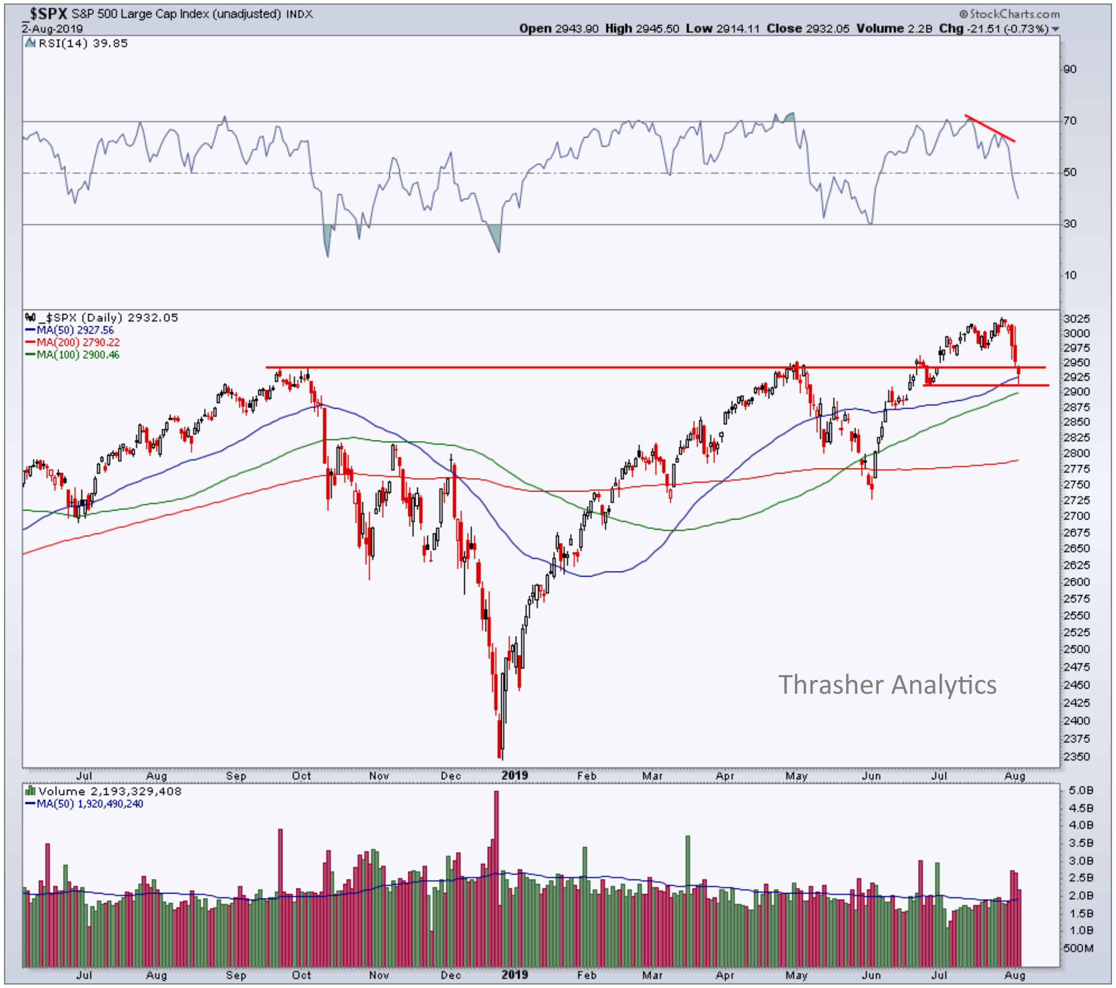
1 Day - Watch List - No Layout

	Sector	> 50MA	> 200MA	1wk Perf	1mo Perf	3mo Perf	12mo Perf
✓	SPDR Real Estate Select Sector Fund ETF	True	True	2%	1.10%	4.68%	14.13%
✓	SPDR Utilities Select Sector Fund ETF	True	True	0.28%	-0.23%	3.74%	14.11%
✓	SPDR Health Care Select Sector Fund ETF	False	True	-1.11%	-2.72%	1.75%	1.98%
✓	SPDR Consumer Staples Select Sector Fund ETF	True	True	-1.89%	0.51%	3.95%	10.38%
✓	SPDR Materials Select Sector Fund ETF	False	True	-2.93%	-2.65%	2.16%	-2.38%
✓	SPDR Communication Services Select Sector ETF	True	True	-3.23%	-0.06%	0.89%	3.03%
✓	SPDR Energy Select Sector Fund ETF	False	False	-3.28%	-3.75%	-5.12%	-20.14%
✓	SPDR Industrial Select Sector Fund ETF	False	True	-3.41%	-2.03%	-2.12%	0.05%
✓	SPDR Financial Select Sector Fund ETF	True	True	-3.8%	-0.93%	-0.79%	-1.29%
✓	SPDR Technology Select Sector Fund ETF	True	True	-4.29%	-0.55%	1.22%	9.09%
✓	SPDR Consumer Discretionary Select Sector Fund ETF	False	True	-4.41%	-2.00%	-0.51%	5.94%

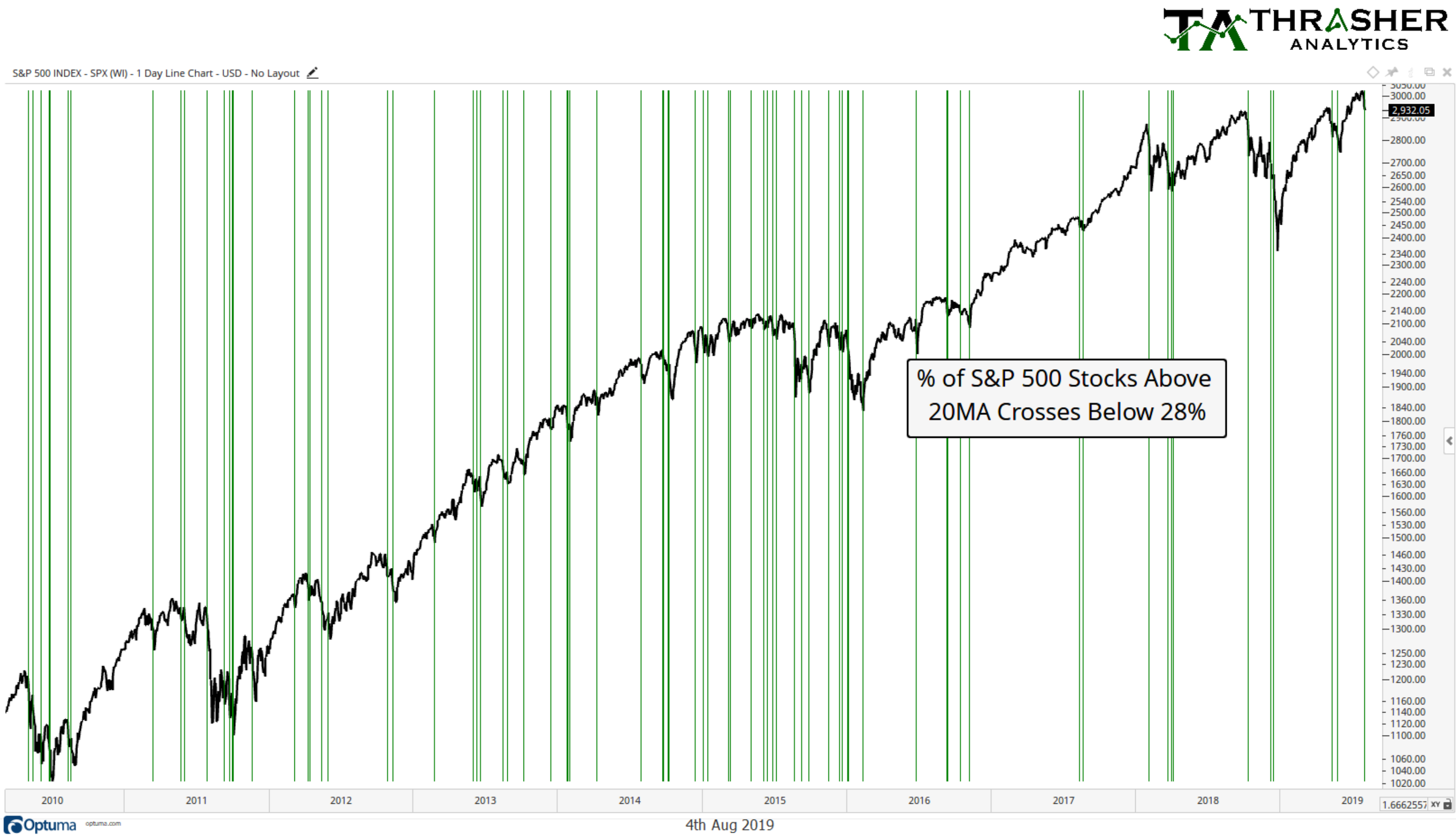
Over the last month, Real Estate and Consumer Staples are the only sectors that have finished in the green. I'd note here that those are two of the three sectors (along with Utilities) in the Thrasher Analytics Sector Rotation Model, which has been updated later in the letter. Real Estate and Utilities were the only positive sectors last week and Energy remains the only sector to still be trading below its 200-day Moving Average.



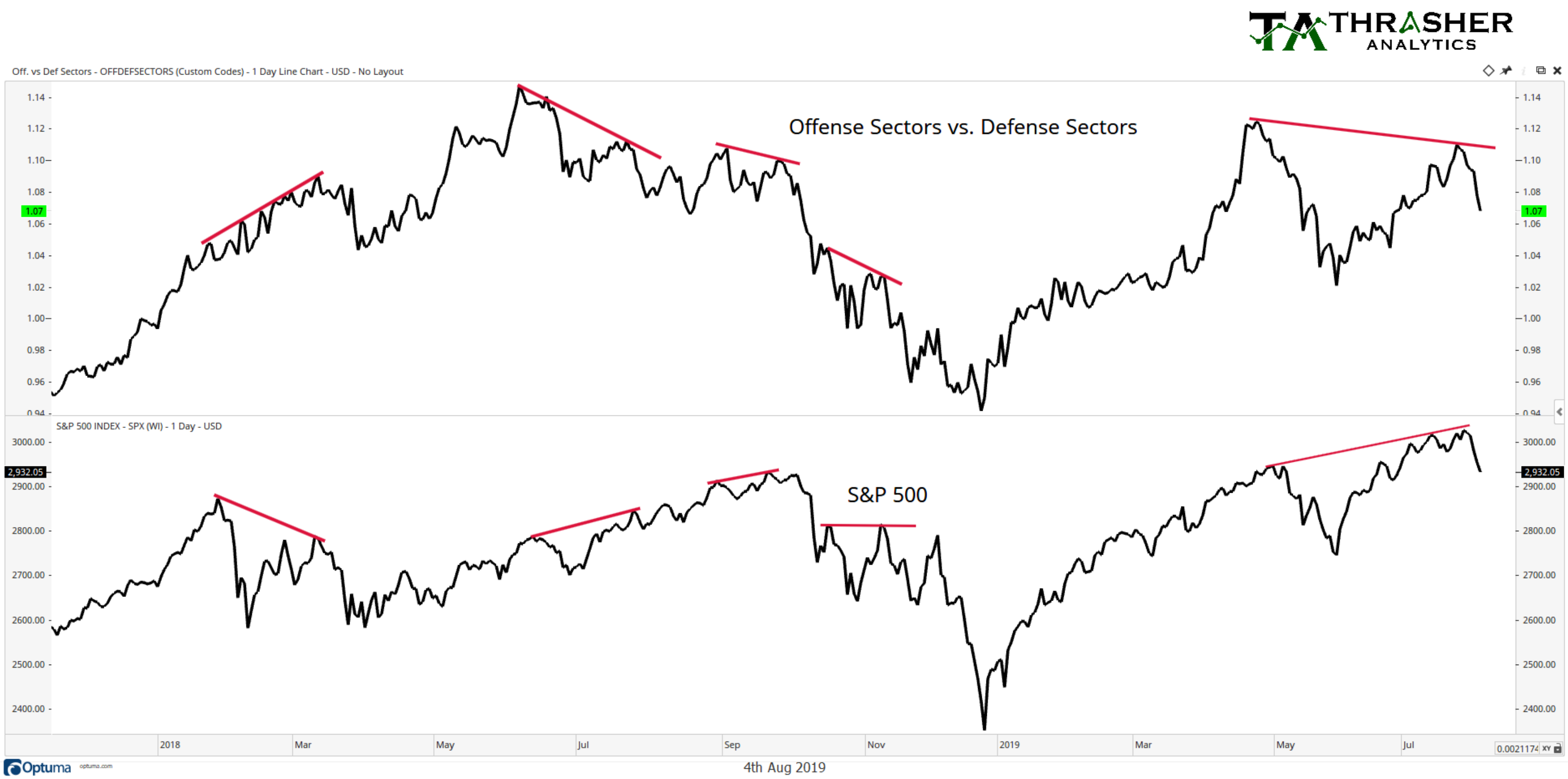
The Volatility Index saw its move higher last week, most notably on Thursday and Friday as the market reacted to Powell's press conference following the rate cut and Trumps continued battle with China. While many on social media and in the financial press were caught off guard by the volatility, reads of this letter were not. The data had been pointing to an expectation of a spike higher in volatility along with three signals by the Volatility Risk Trigger. From here, I believe there's been a good amount of juice squeezed from the VIX. Outside of another news-related catalyst, we could begin to see the vol curve begin to flatten out and while spot VIX may not plummet, I'm not anticipating any major moves higher right away.



The S&P 500 declined down to its June low, finding support at this level along with the 50-day Moving Average. The drop last week had price break below the important September '18 and April '19 pivot point highs. This 2950 level will be a critical level to watch going forward, what we don't want to see is a bounce to rest it that fails on heavy volume. If price continues lower, there are several areas of possible support under the 50-day MA, including the 100-day MA right around 2900 as well as the 200-day MA and the June low. The gap between where we are today and the 200-MA and June low gives a lot of 'open air' to price action, leaving not much in terms of support for traders to latch on to until we get to 2800.

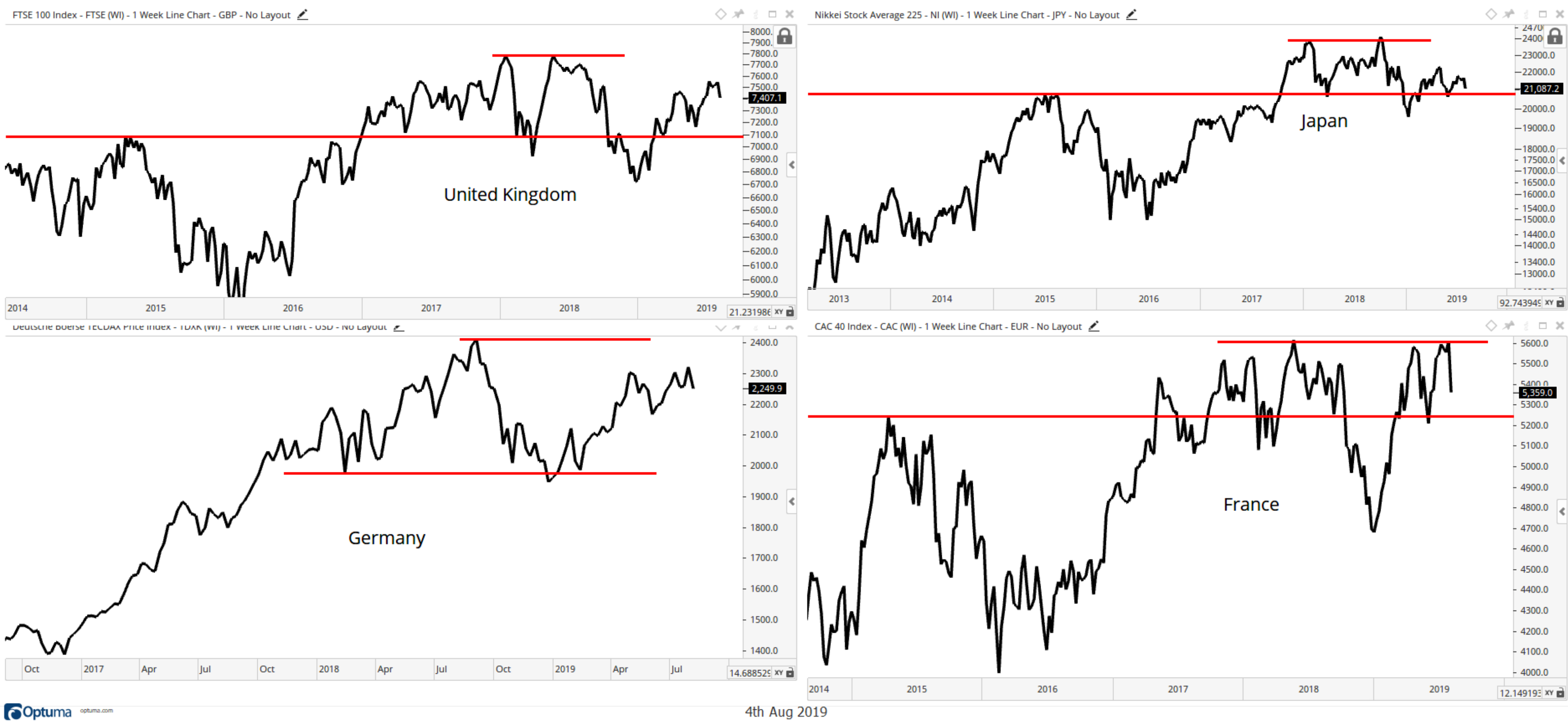


In my last letter I highlighted a chart showing the bearish divergence in the % of stocks trading above their respective 20-day Moving Average. This was a sign that short-term breadth was a concern and could lead to price moving lower. That's now what we've seen and the % of S&P stocks above their 20-MA has crossed below 28%. The chart above shows each time this has occurred since 2010. Historically, the market has put in a brief bounce at this point, but by no means has it marked only lows as you can see from the chart. We are not yet to a point to call for capitulation like we saw in December '18.



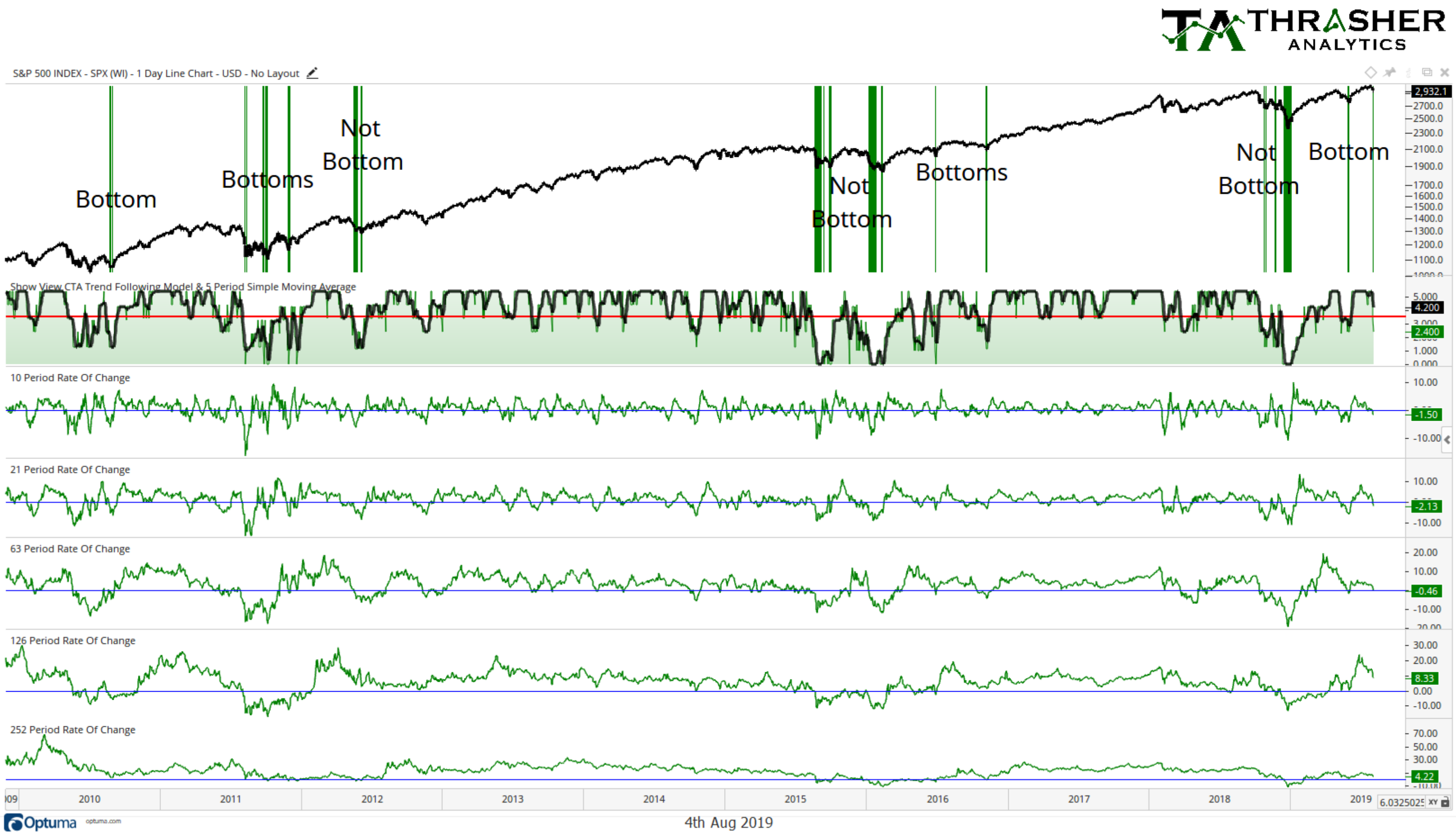
I showed this chart in my last letter, noting the divergence in sector leadership. Since then as the S&P moves lower, the defensive sectors have continued to hold the reigns, leading the offensive sectors in relative performance.

INTERNATIONAL EQUITIES YET TO BREAKOUT



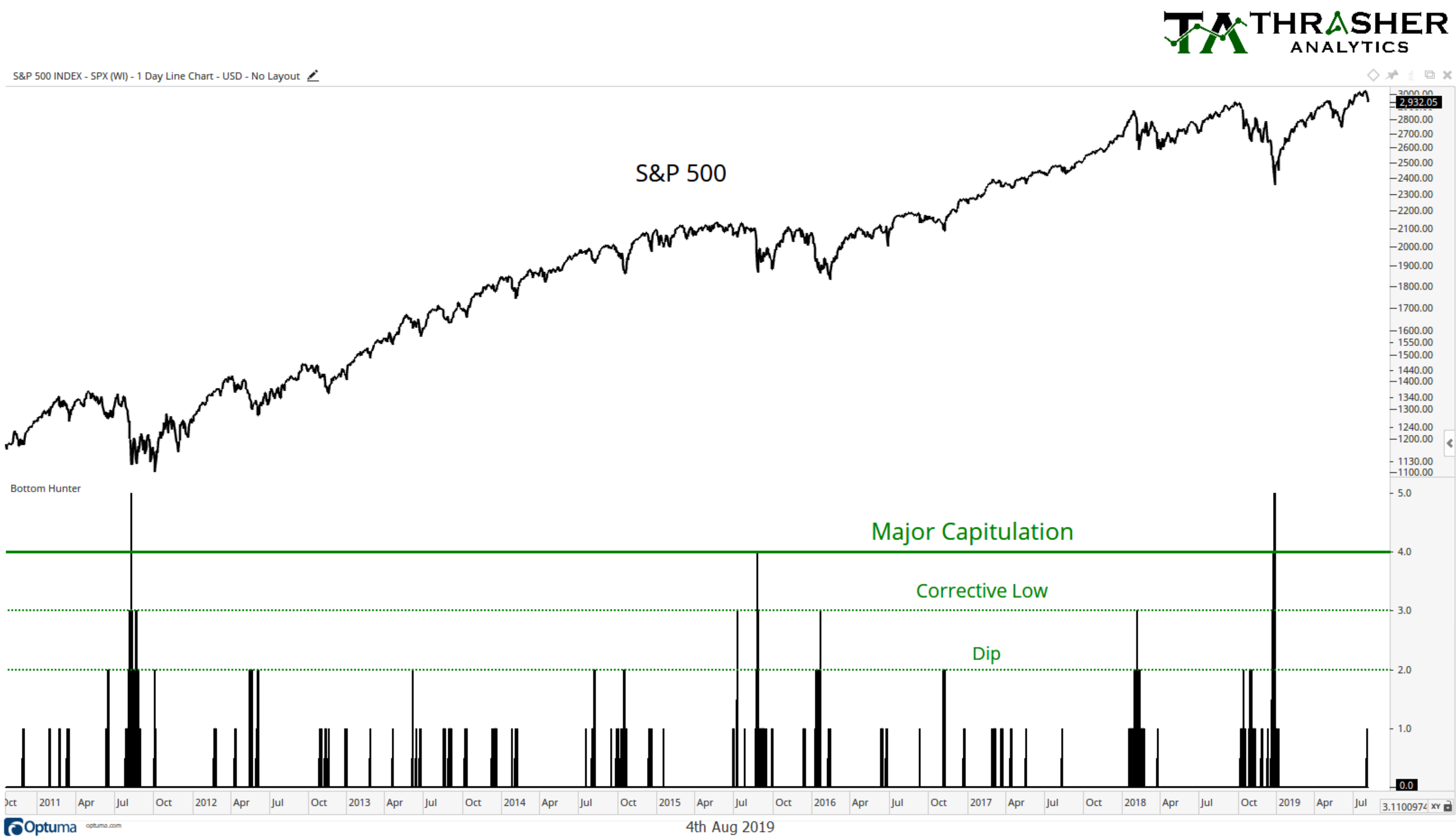
Besides the U.S. equity market, the United Kingdom, Germany, Japan, and France make up the bulk of the MSCI ACWI index. With U.S. equities seeing a dip lower, we can see that France also hit the prior high and moved lower last week. Japan, Germany, and the UK still have yet to reach their prior price highs.

CTA Model Loses a Few Legs



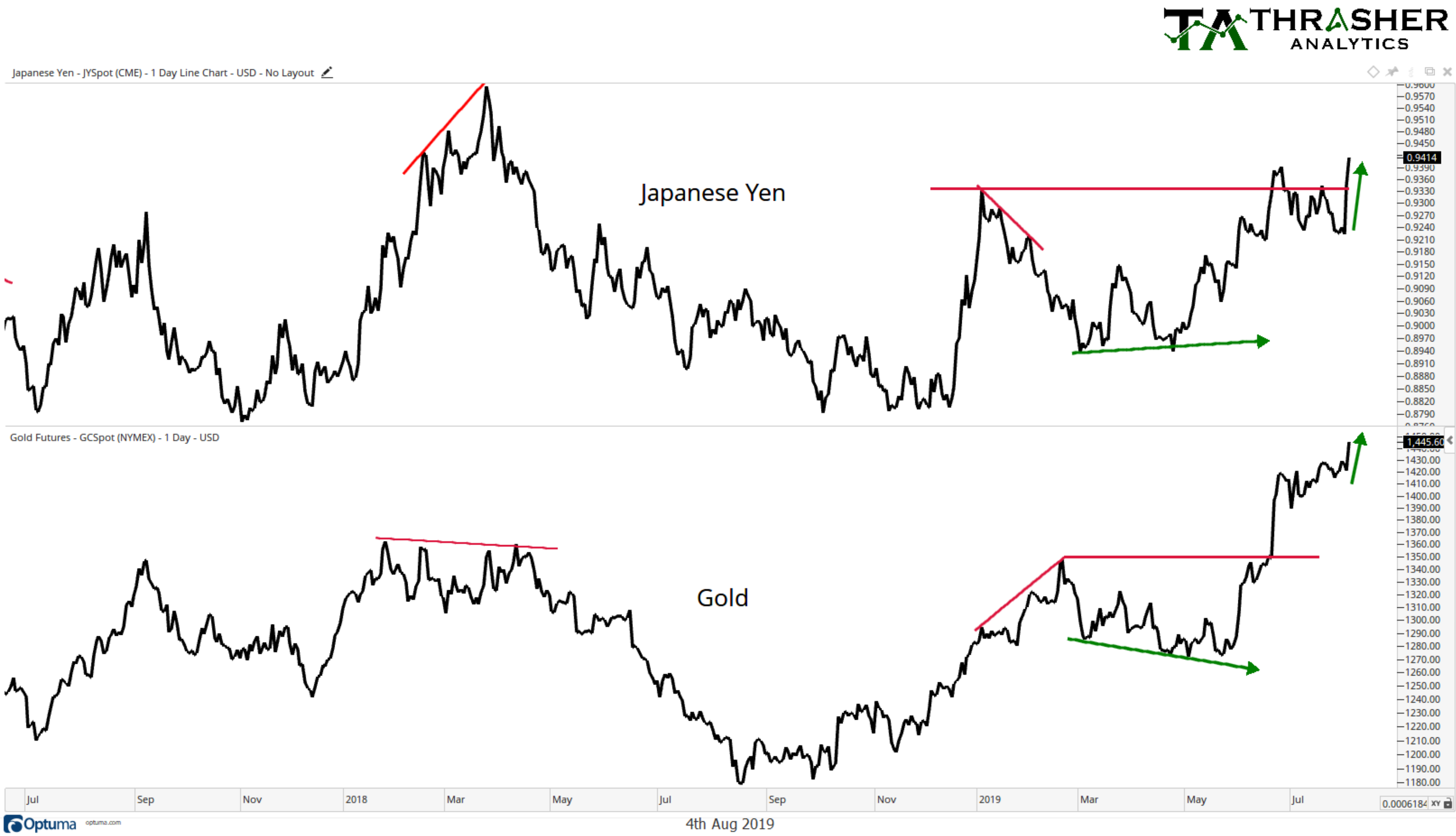
A common method of trend following/CTA trading involves simple momentum trading on various lookback periods. I combine several common periods to create a very simple 'CTA Model' that's shown above along with the individual inputs. This can be useful to watch to understand what lookback periods have moved negative and could be catalyst for trend traders to flip from positive to negative trend. At this point the 10-day, 21-day, and 63-day trends have moved negative (as measured by ROC). The green lines on the top S&P chart show when each component has been at or below its current level. In 2010 and 2011 these marked lows in the market, 2012 stocks continued lower, as they also did in 2015 and 2016. Later in '16 lows were marked at this point and of course stocks moved lower still in Q4 of last year. We saw a bottom formed a few months ago by this point in May. So the data is fairly mixed (with a small sample size).

If we see a move below the 50-day MA in early trading this week, then it may suggest we have further to go before a low is formed. If that does happen, the 1-year (252-day) trend could reverse, leaving just the 6-month trend positive.

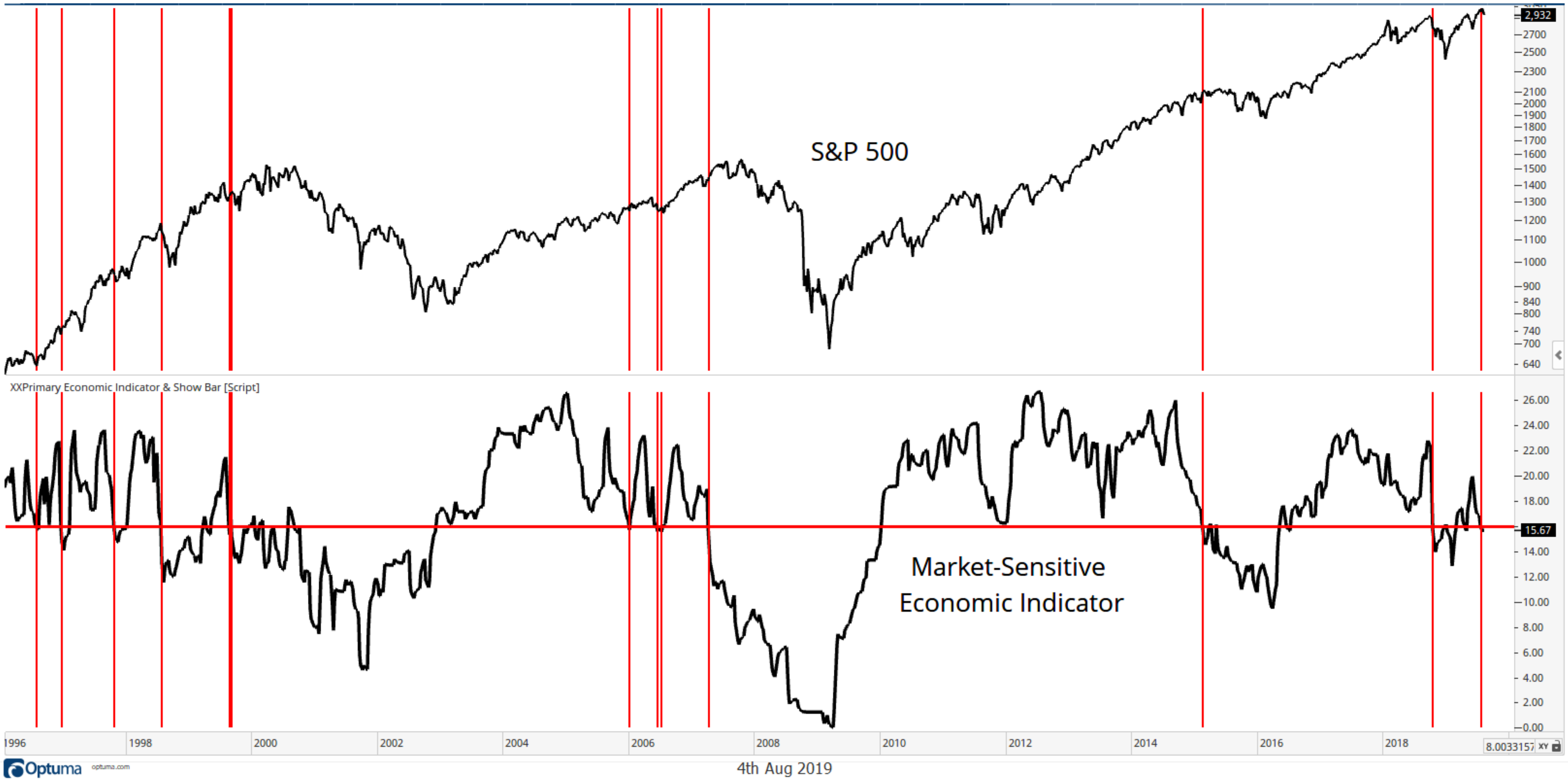


Above is the Thrasher Analytics Bottom Hunter indicator. This tool looks for signs of capitulation in breadth and momentum data, which when used in concert with one another, has a solid track record of identifying low points in price. As of Friday, we do not have an indication that the market has reached a form of capitulation or corrective low yet. Which is understandable as the S&P is off only by a few percentage points at this point.

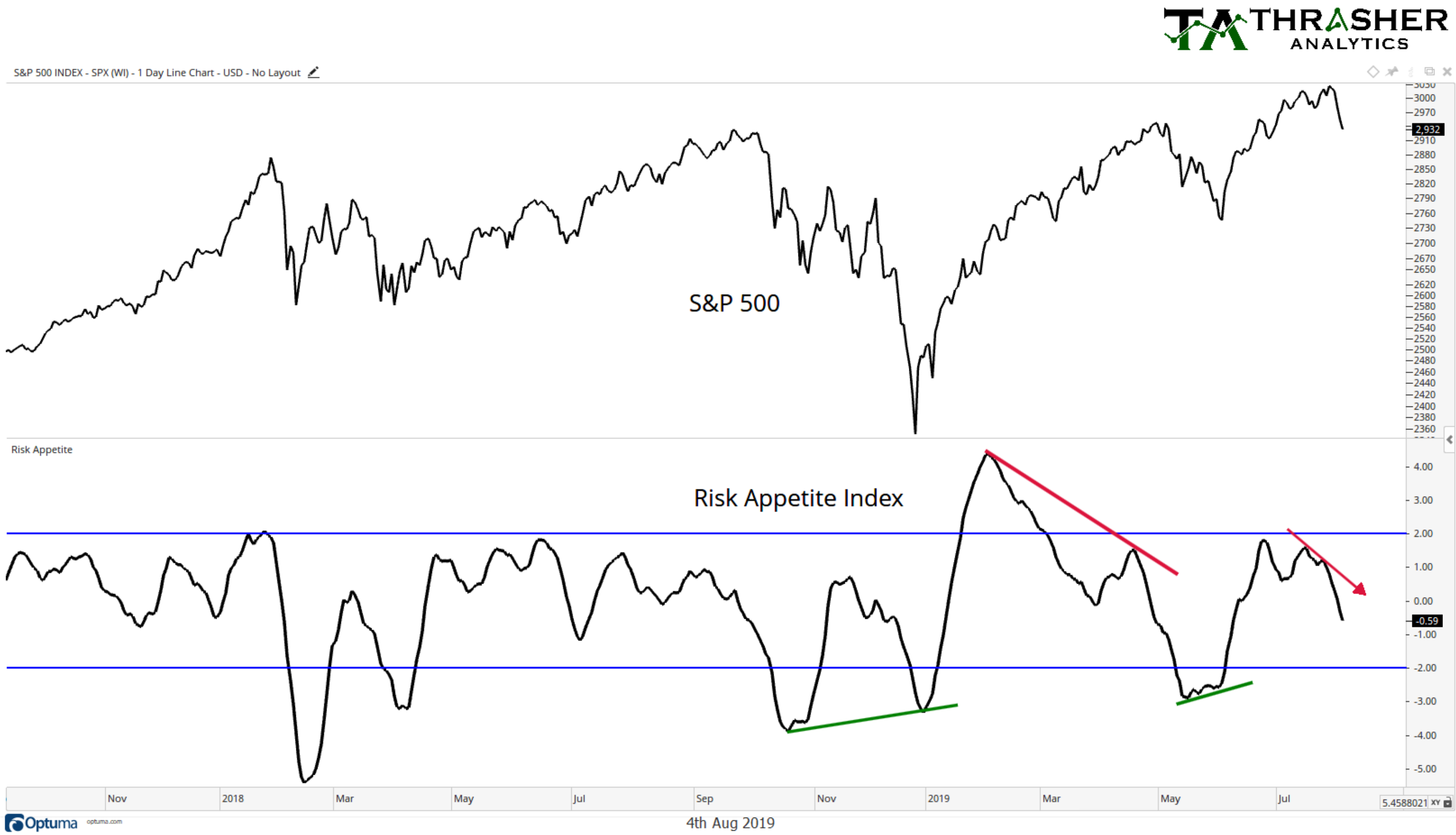
The volume profile for the S&P 500 showed a bearish divergence by not confirming the higher high in price in late July. While the market was in a confirmed up trend, the net volume began to show signs of distribution with more shares being traded on down bars than on up bars.



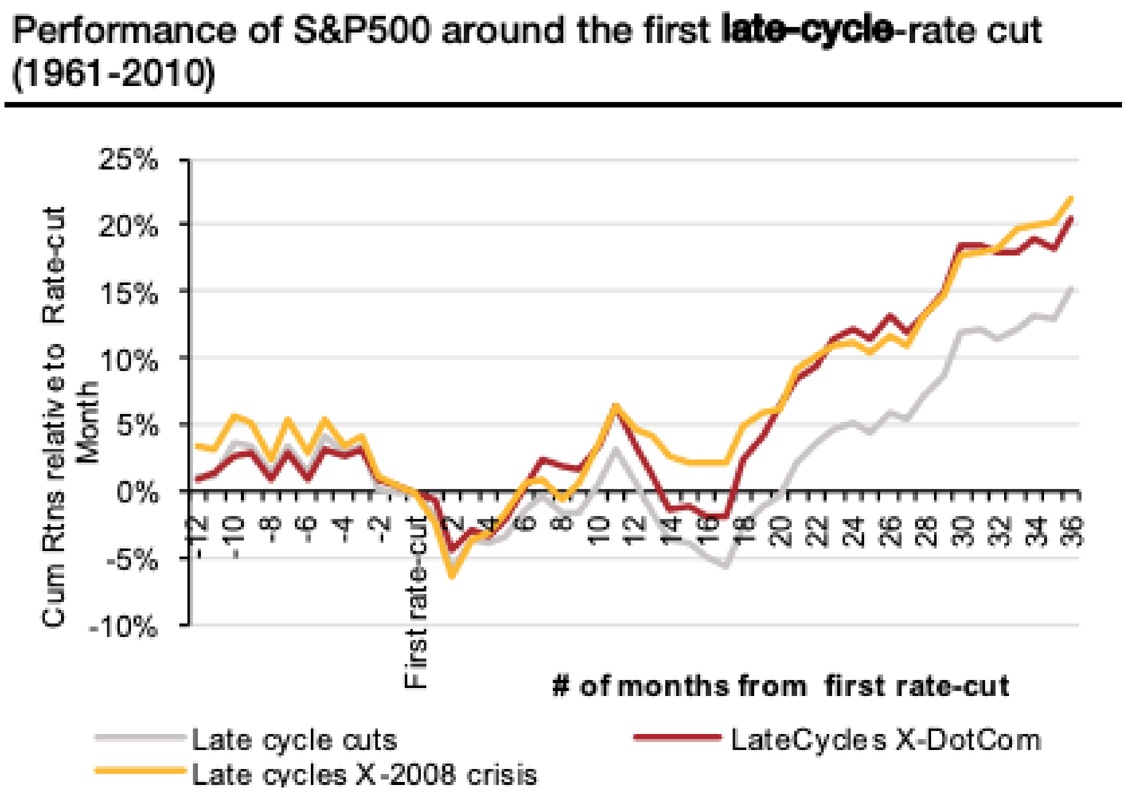
I last showed this chart when calling a bottom in gold prices back in May as a bullish divergence between gold and yen developed. Since then, gold prices have rallied and moved to a new five year high. We want to see the yen confirm the moves in gold and as of last week, it did as the yen broke above the prior 2019 high. We now have both markets trading in sync with one another, a positive sign for gold prices.



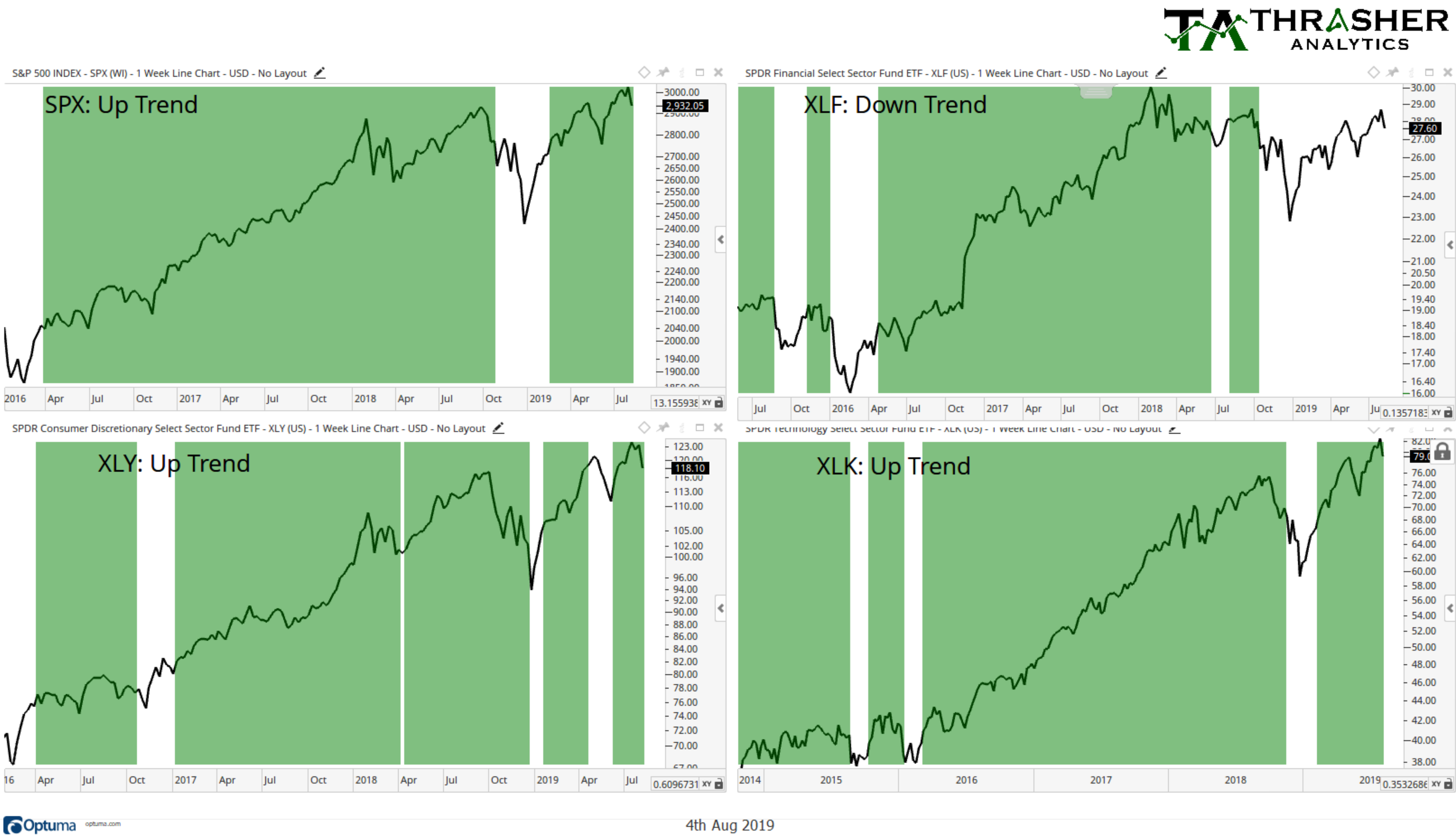
Above is a chart of the Thrasher Analytics Market-Sensitive Economic Indicator (MSEI). While many analysts look at economics from a recession forecasting standpoint, I'm much more concerned with the economic impact on equities. This is why the MSEI was built to be sensitive to data changes that have the largest impact to price. The MSEI has now moved below 16, an important development and one we haven't seen since the fourth quarter of last year. I've marked red lines when the indicator falls from being above 18 to under 16. As you can see, this does not happen very often, in fact just twice in the last ten years. The move was short-lived in '18 and moved back above 16 by early this year. In 2015 the market rounded out a top before declining for several months. In 2007 the equity market continued to move higher until a final major peak was formed, and the MSEI was nearing single digits, a sign that major slowing was developing from a economic viewpoint. Multiple breaks of 16 occurred during the late-90s, the 1998 break stands out to me as a common econ and geopolitical environment mirrors today.



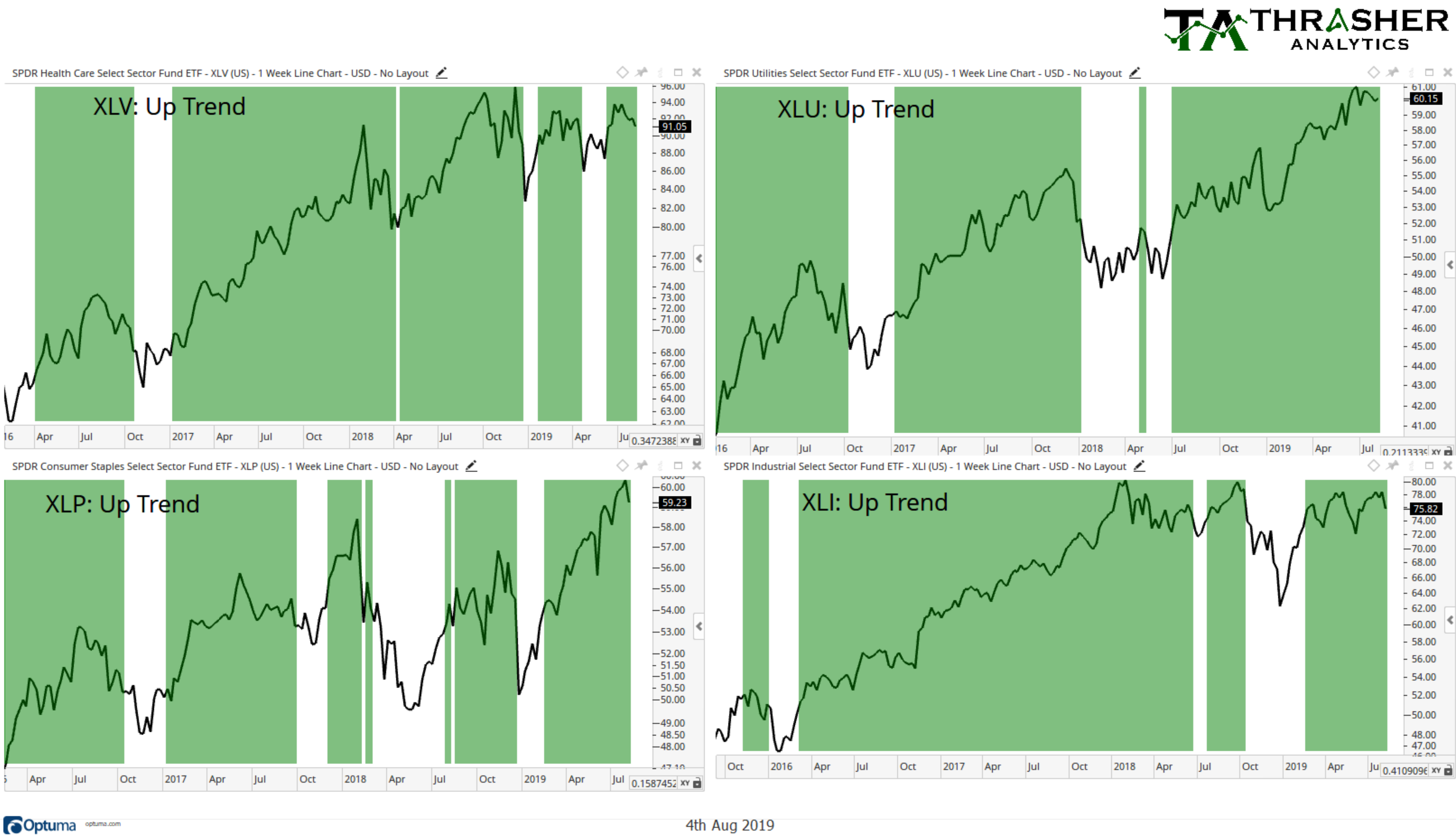
The divergence that developed in risk appetite provided useful insight into the market environment going into last week's decline in equity prices.



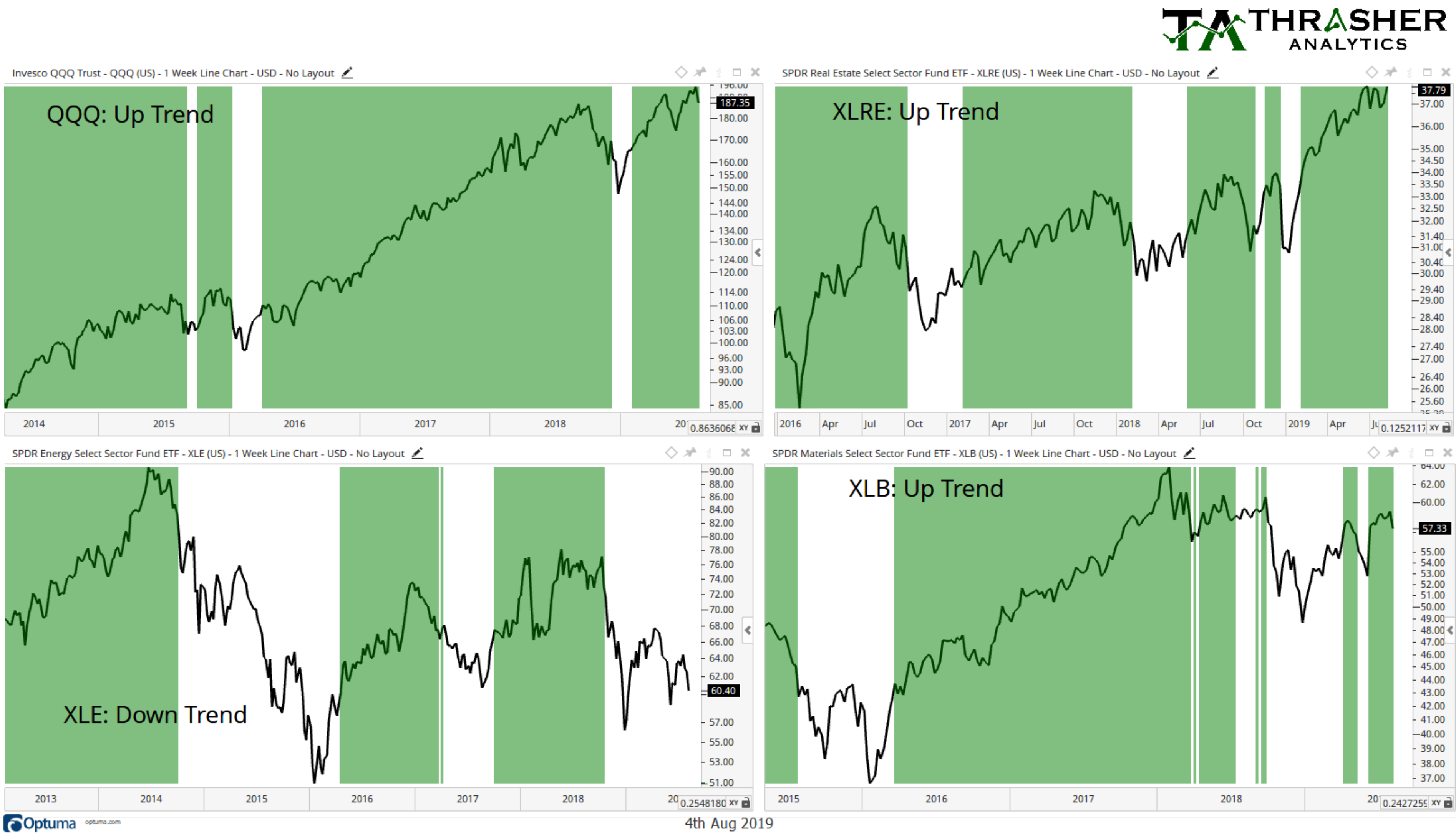
In a recent note by Andrew Lapthorne of Société Générale, he discussed the recent rate cut by the Federal Reserve. Lapthorne highlighted his analysis calling it a late-cycle cut, running the data on the market's performance in previous instances, shown in the chart above. Lapthorne notes, "Market performance after late-cycle rate cuts may not be as strong [because] rate cuts in a late cycle after a monetary tightening peak coincide with periods of economic slowdown, contraction in aggregate demand and falling corporate profitability." On the impact of the rate cut, he says, "A late cycle easing, while providing an economic stimulus that could help sustain markets, can also act as a signal of underlying economic weakness, and so instead winds up shaping negative market sentiment." So while the market is unable to enjoy the injection of lower rates due to the forced dealing with lower economic growth and the pass-through that has to corporate profitability. As the chart shows, when in a late cycle of economic growth, the market has historically faltered for two to six months.



SPX, XLY, and XLK are all in up trends with XLF in a down trend.



XLV, XLU, XLP, and XLI are all in up trends.



QQQ, XLRE, and XLB are in up trends and XLE is in a down trend.

The following charts will become a regular installment for this, and future letters. Each page will include a daily and weekly chart with two indicators that are unique to Thrasher Analytics. With a focus on risk mitigation, the focus of these charts is on potential mean-reversion of each asset through the analysis of the two indicators described below.

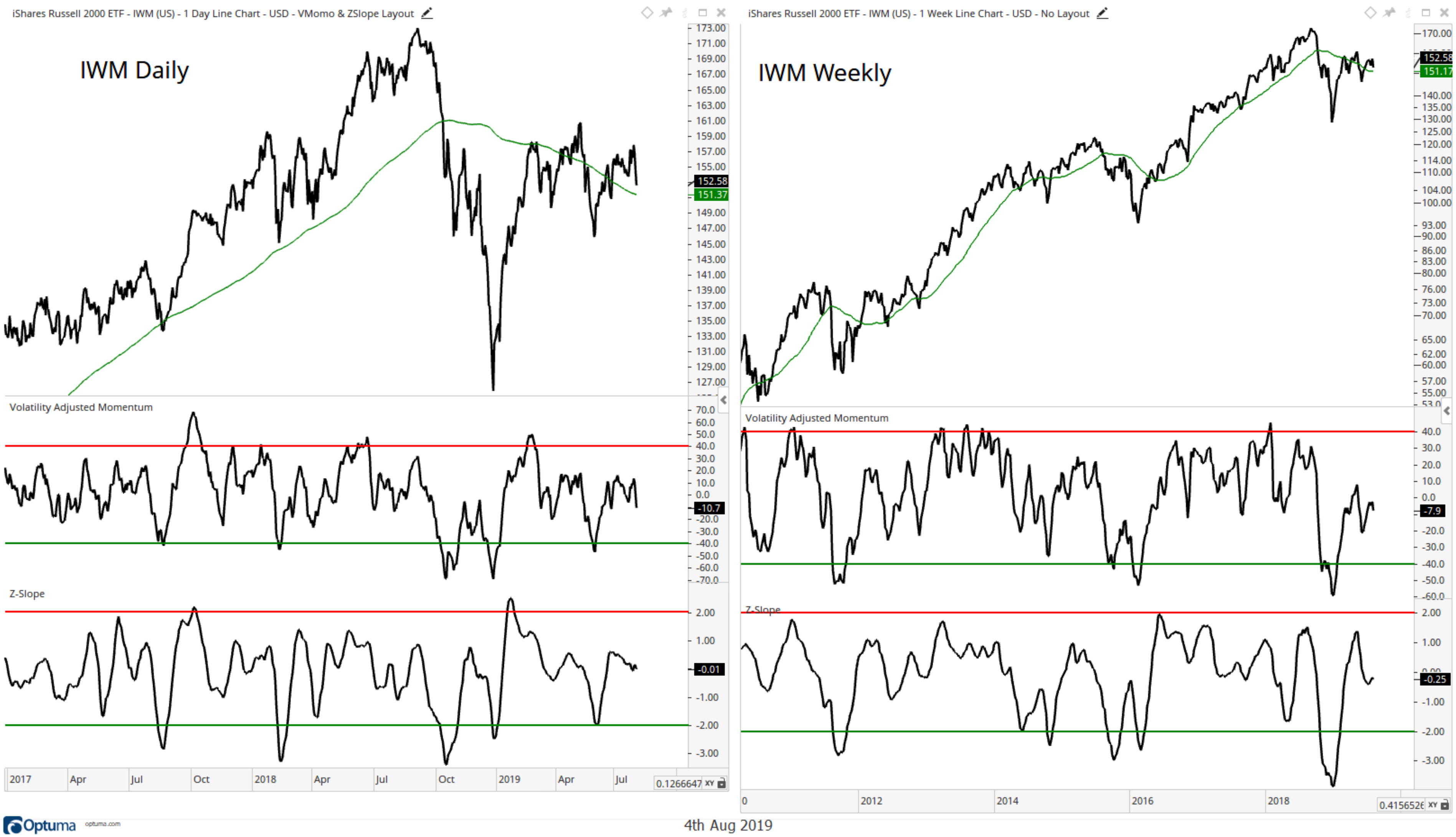
Volatility-Adjusted Momentum (VaM: This is a spin on the traditional measures of momentum, taking into account the volatility of the underlying asset into the calculation. By adjusting for volatility we can get a better look at potential mean-reversion signals when risk/ reward becomes unbalanced towards 40 as 'overbought' or –40 as 'oversold.'

Z-Slope: This indicator takes two lookback periods, one long and one short, for calculating the slope and evaluates the z-score of the difference. This provides insight into whether the current slope of the trend fits within the long-term price history of the security. If a z-score breaks above 2, then the slope has gotten to upward sloping compared to its history. And the opposite is true when we get readings below –2, that the downward sloping trend has gotten 'oversold' compared to the asset's price history.

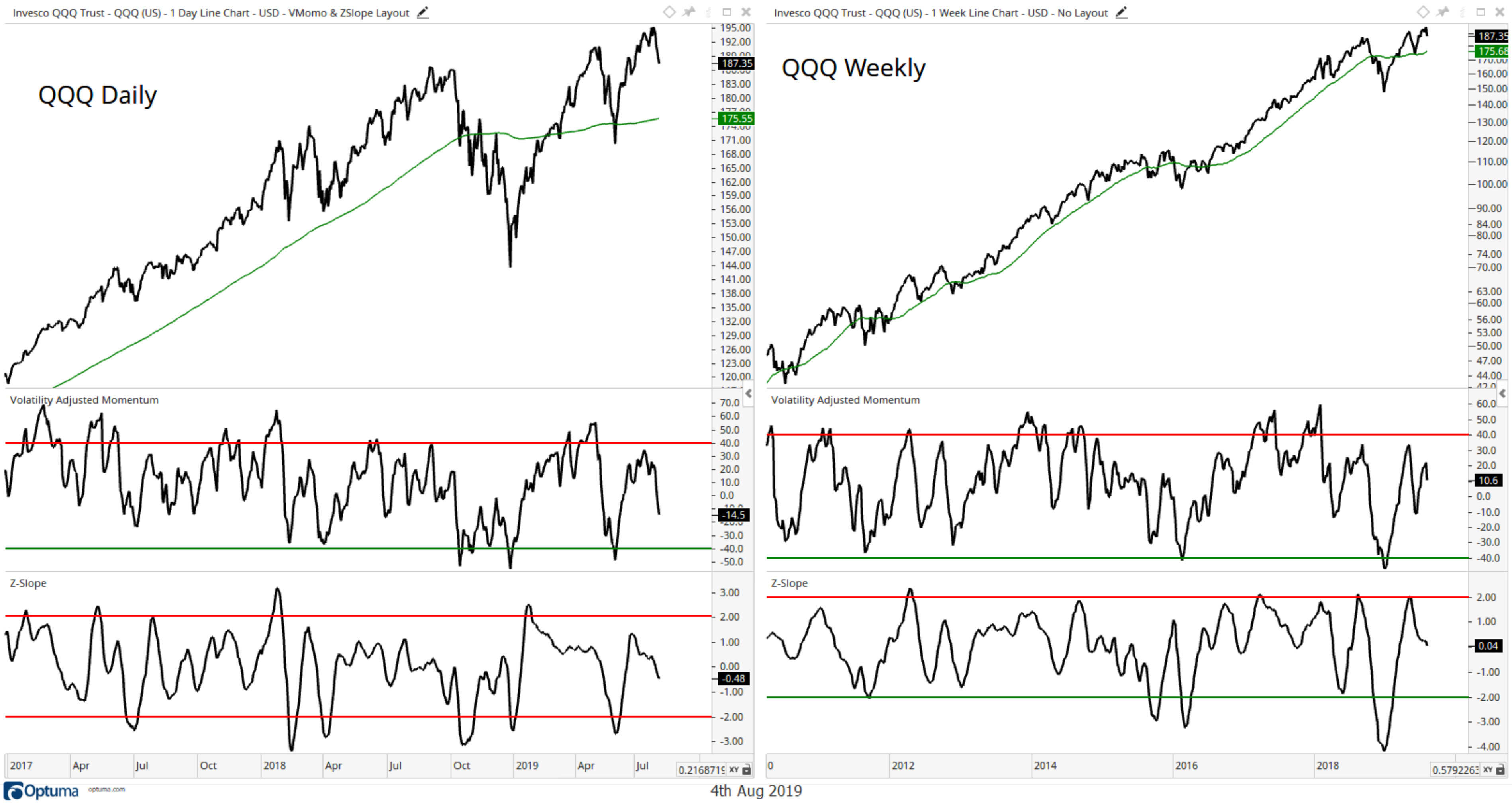
4th Aug 2019

Daily VaM is moving away from 'overbought level'

THRASHER ANALYTICS

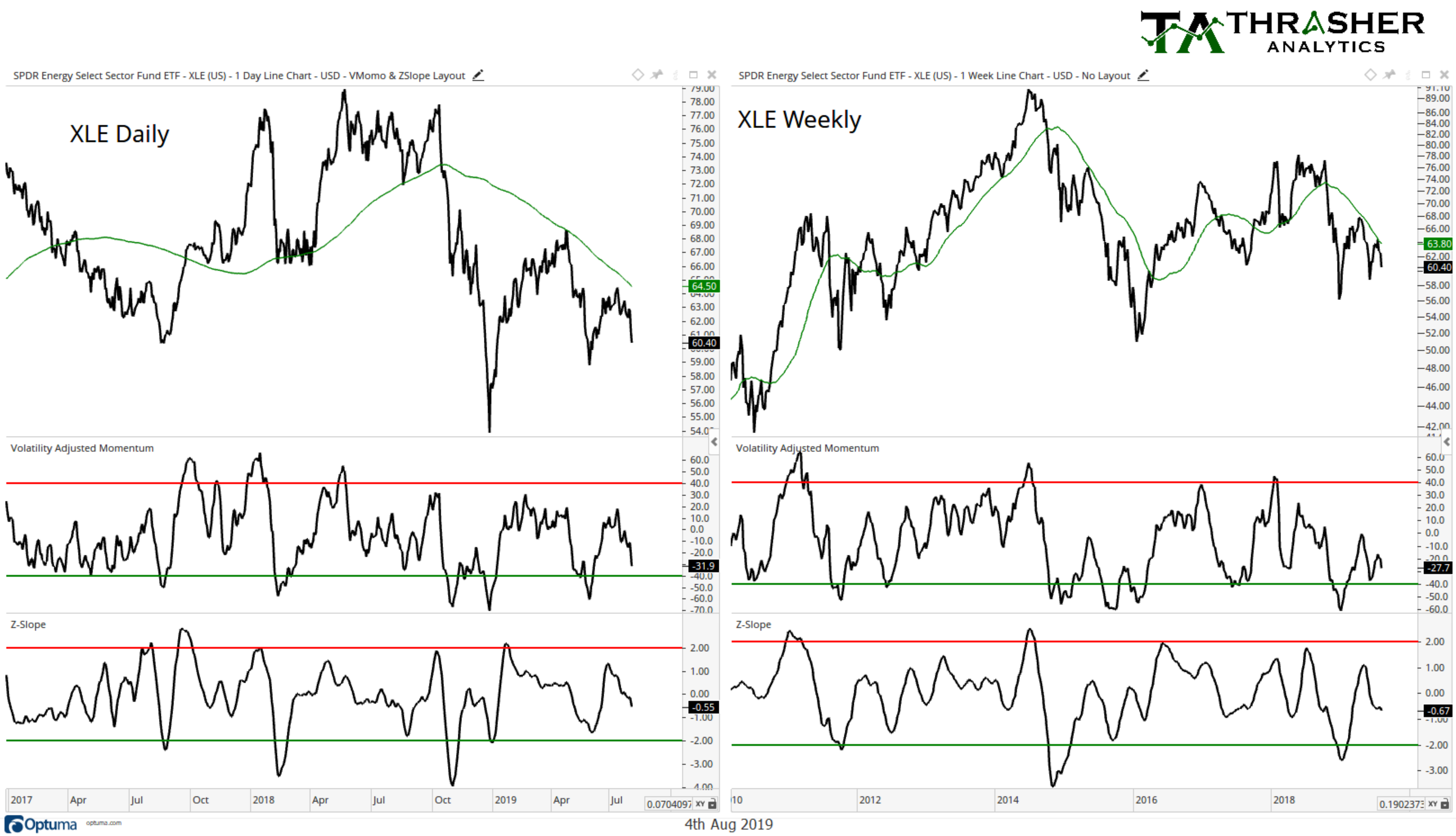


Neutral readings for both VaM and Z-slope.

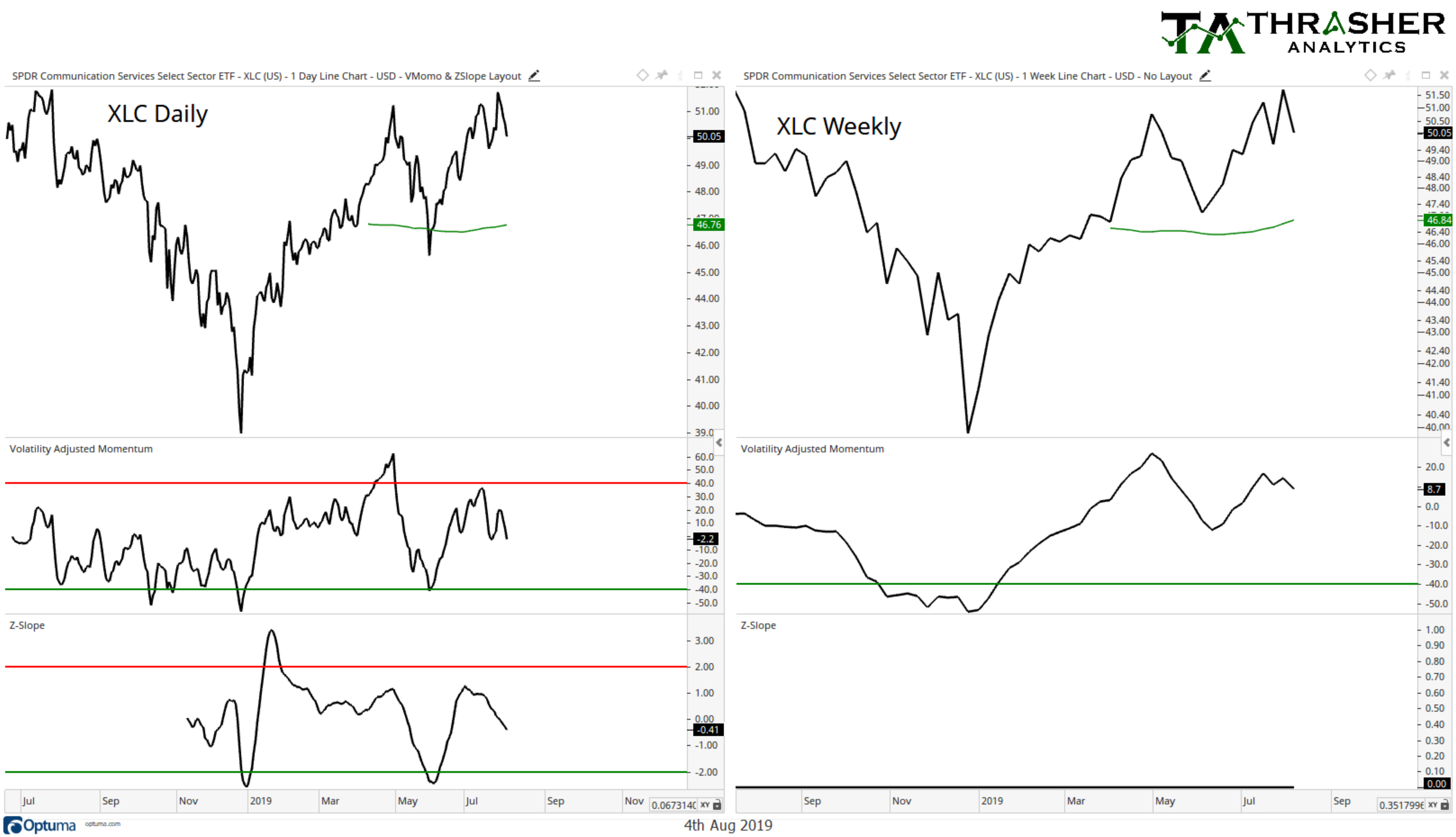


Neutral readings for both VaM and Z-slope.

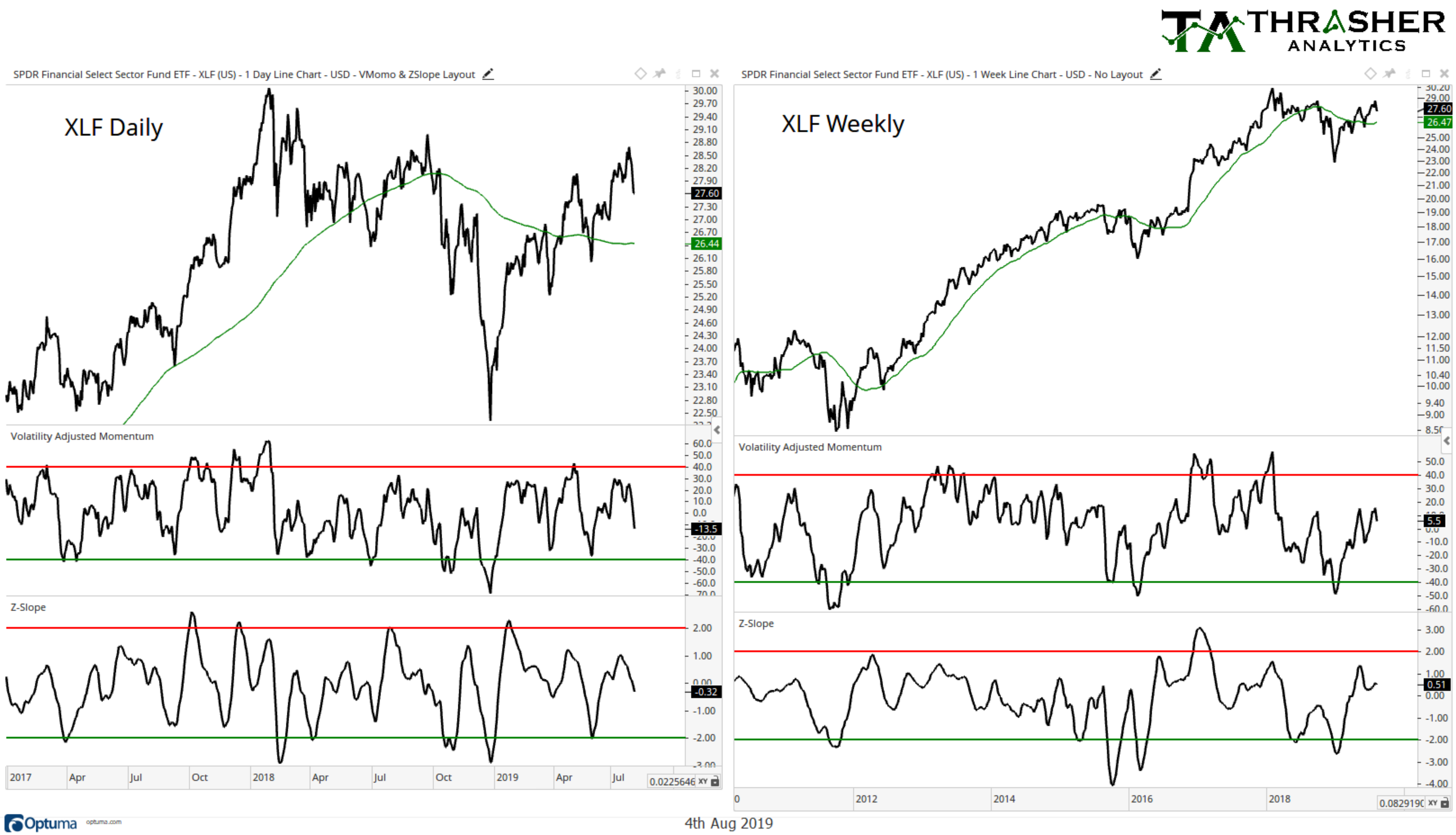
Neutral readings for both VaM and Z-slope.



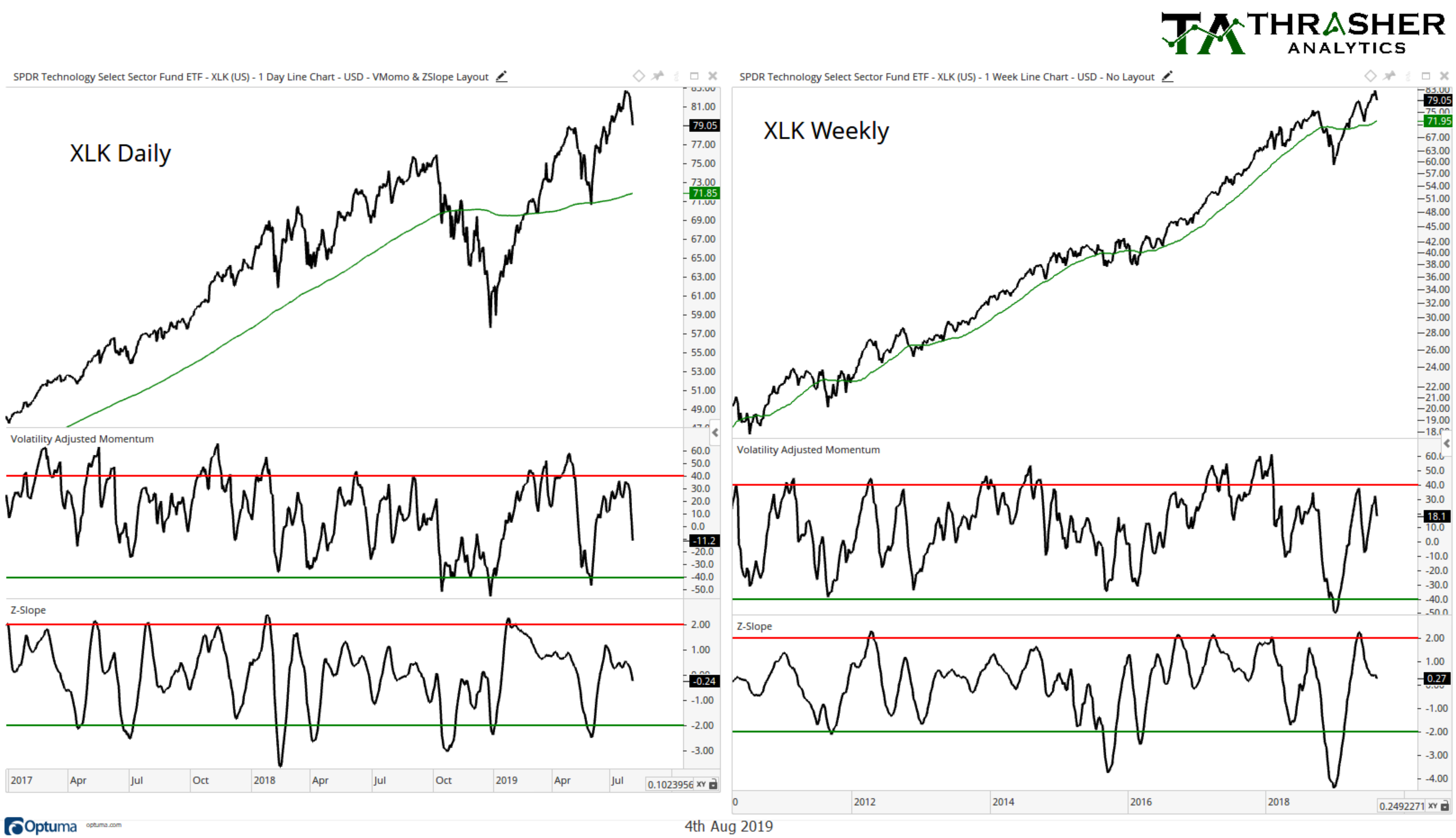
Neutral readings for both VaM and Z-slope. Daily VaM is moving closer to ‘oversold’ level.



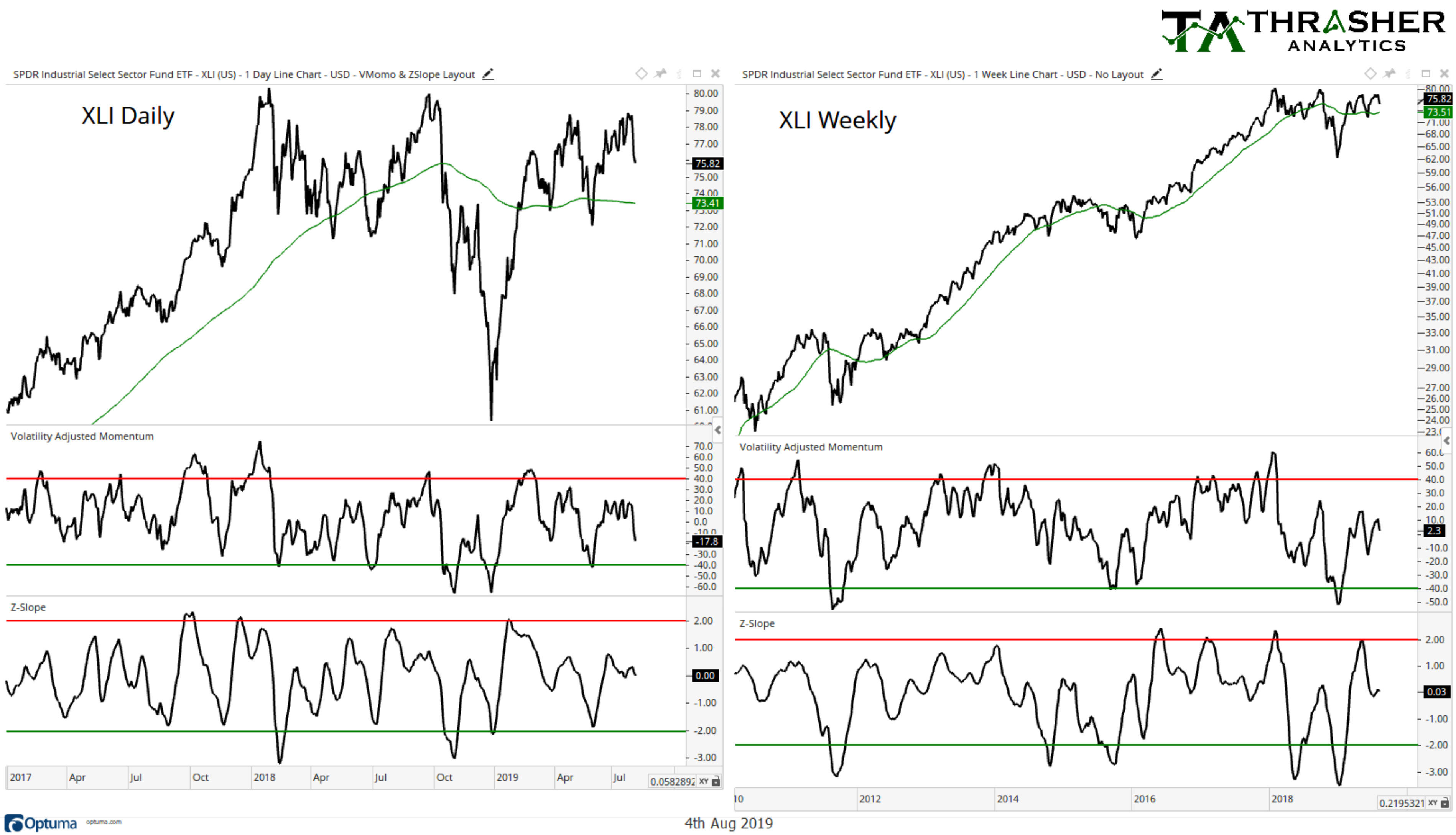
Neutral readings for both VaM and Z-Score.



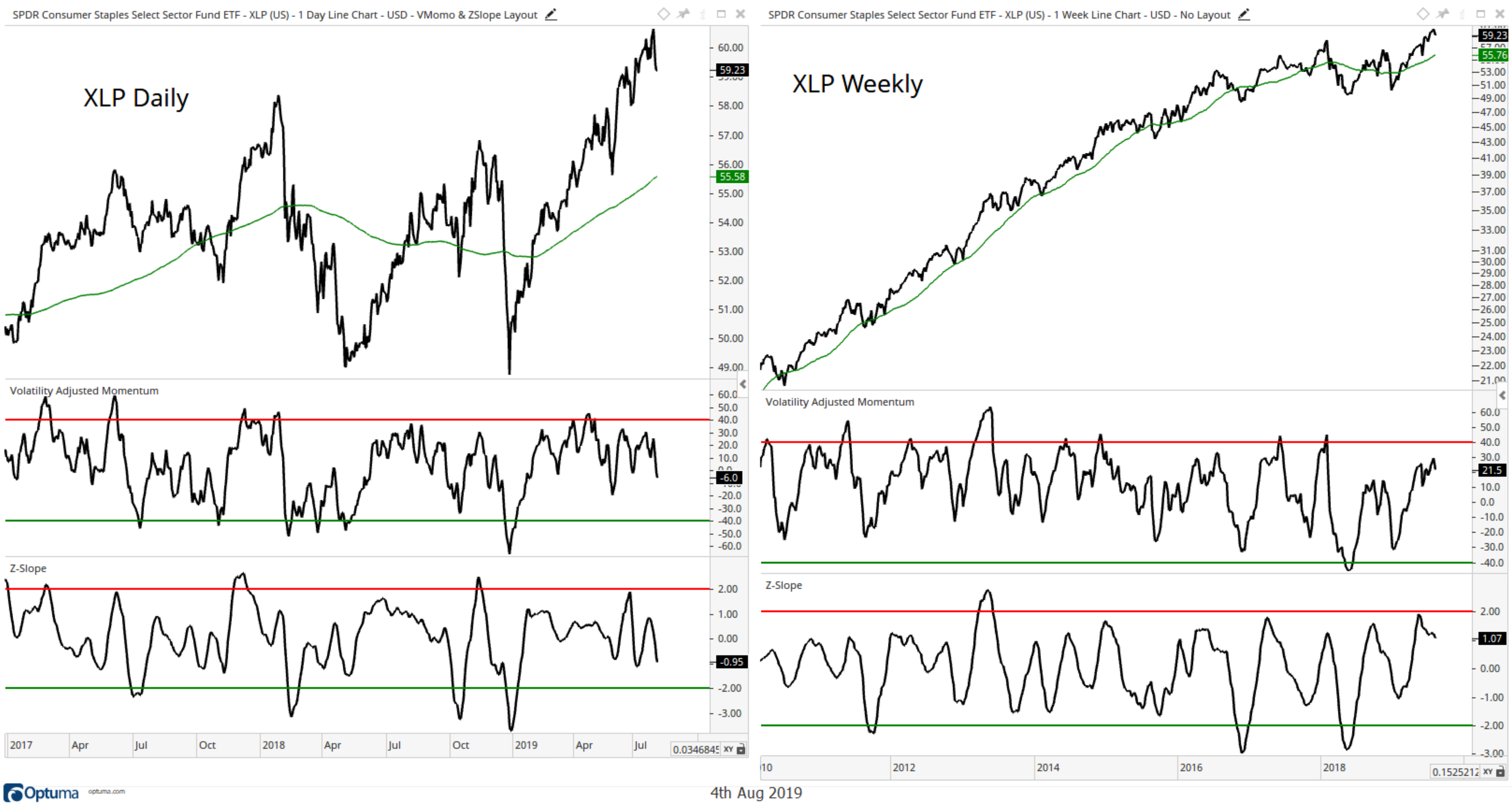
Neutral readings for both VaM and Z-Score.



Neutral readings for both VaM and Z-slope.

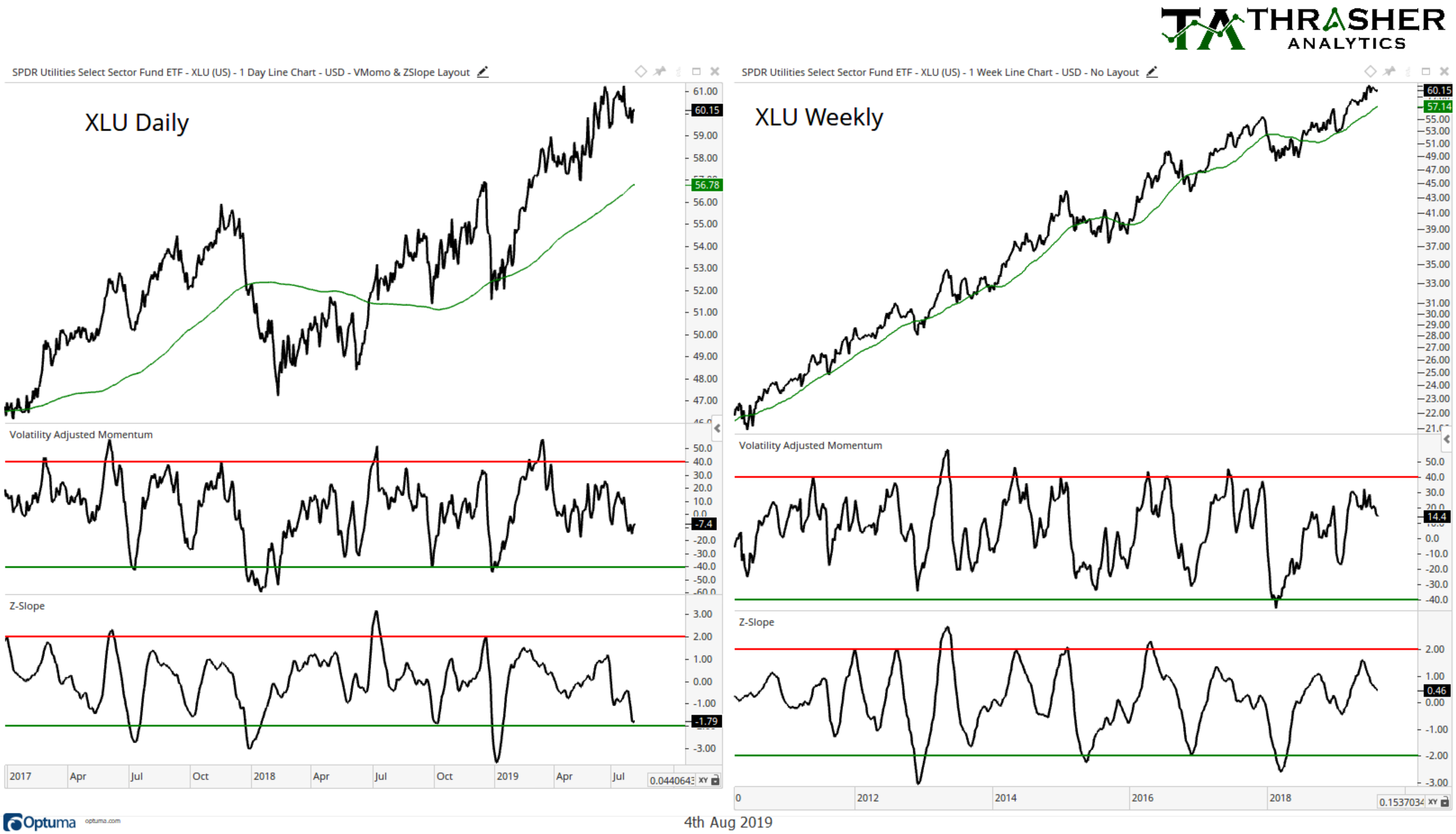


Neutral readings for both VaM and Z-slope.



Neutral readings for both VaM and Z-slope.

Neutral readings for both VaM and Z-slope.



4th Aug 2019

Neutral readings for both VaM and Z-slope.

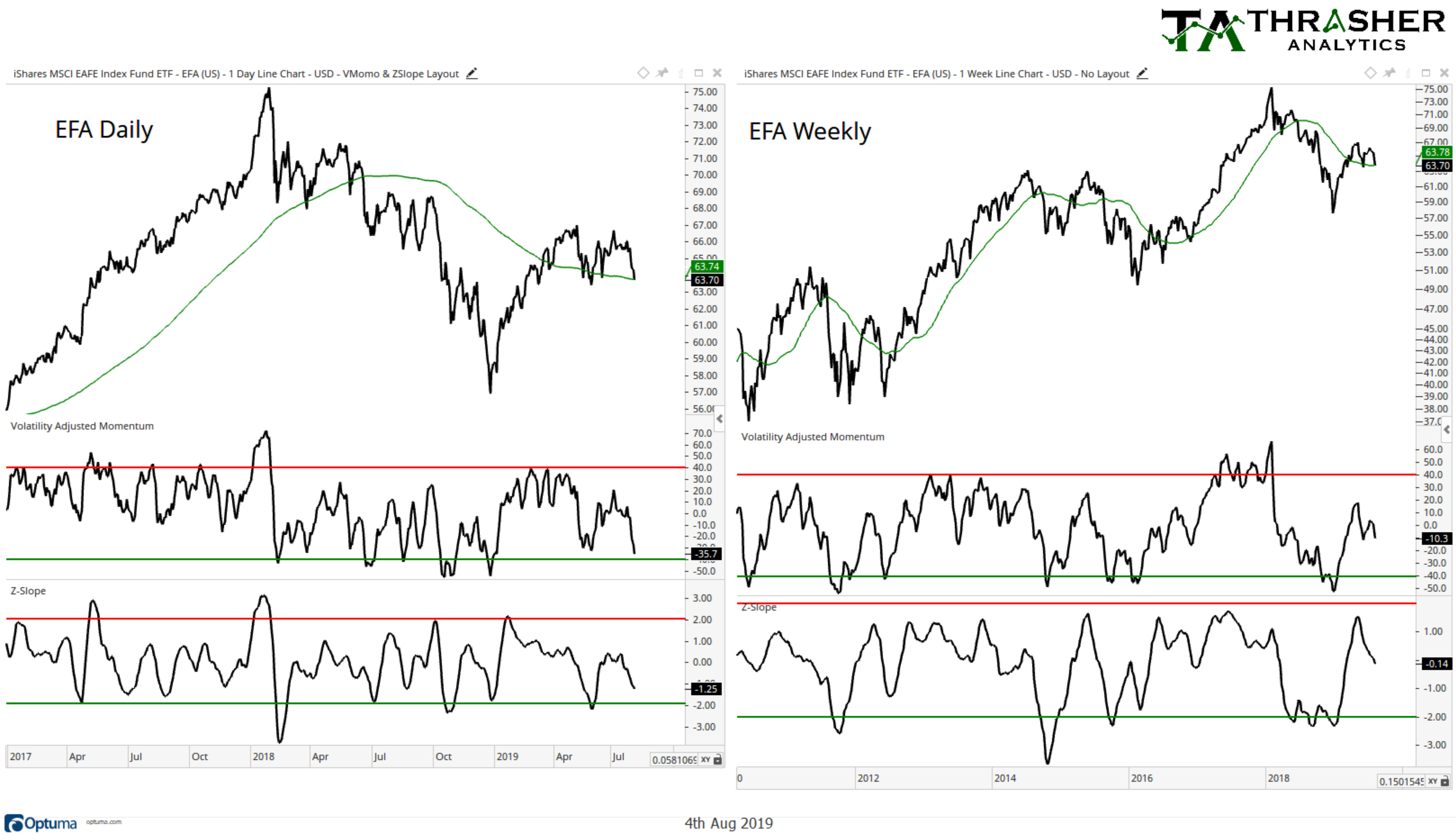
Optuma

4th Aug 2019

Neutral readings for both VaM and Z-slope.

4th Aug 2019

Neutral readings for both VaM and Z-slope.



Neutral readings for both VaM and Z-slope.

EEM

Neutral readings for both VaM and Z-slope.

Neutral readings for VaM and daily Z-slope moving to 'overbought' level

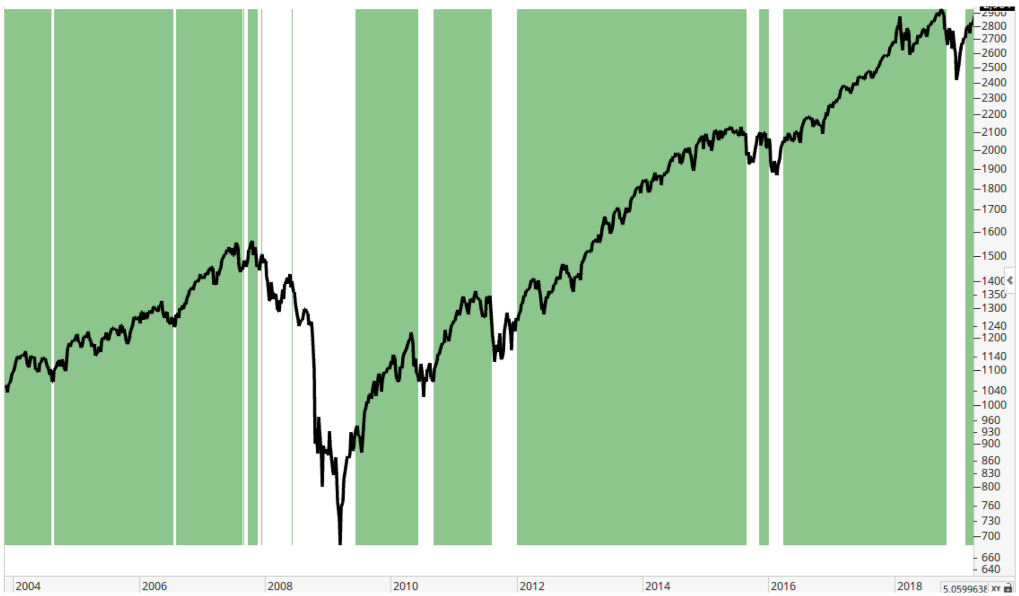
Neutral readings for VaM and daily Z-slope. Weekly VaM is ‘overbought’ and weekly z-slope is nearing ‘overbought’

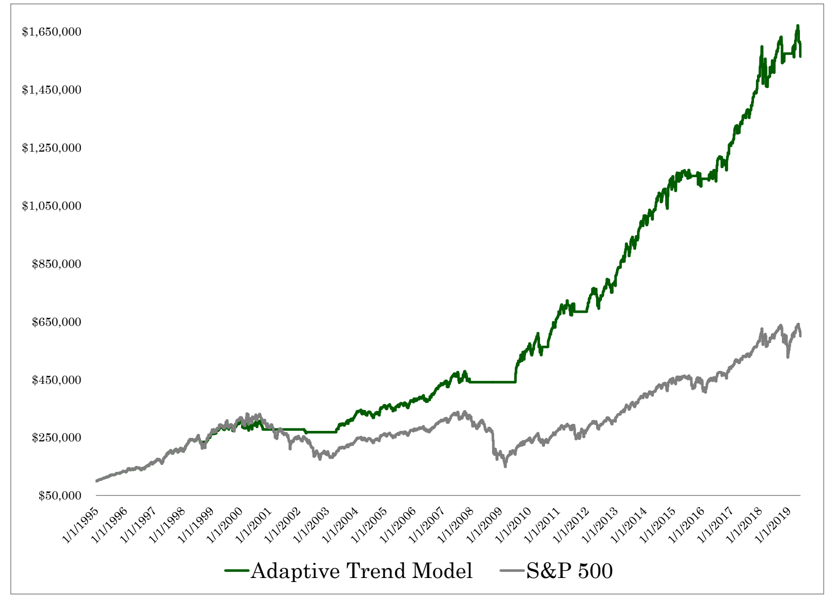
Neutral readings for both VaM and Z-slope.

Neutral readings for both daily VaM and Z-slope but weekly VaM and z-slope are both coming off ‘overbought’ levels.

Trend-based analysis is a process built on the idea of enduring minor pullbacks in the anticipating of avoiding protracted drawdowns in financial markets. With a focus on stepping out of the market during large down trends, the Thrasher Analytics Adaptive Trend Model (TAATM) pursues to minimize the “whipsaws” of signals during highly volatile periods of market activity. To accomplish this, TAATM incorporates multiple look-back time periods and incorporates volatility gauges in its evaluation of the equity market’s overall trend.

Thrasher Analytics analysis concludes the market’s trend is led by the resulting trend of its individual stocks. This means, if the majority of stocks are trending in one direction, then the broad index will be persuaded to follow that trend as well. By incorporating the individual stock trends, volatility, and multiple time periods, the TAATM provides a data-focused look at the overall trend of the U.S. equity market.



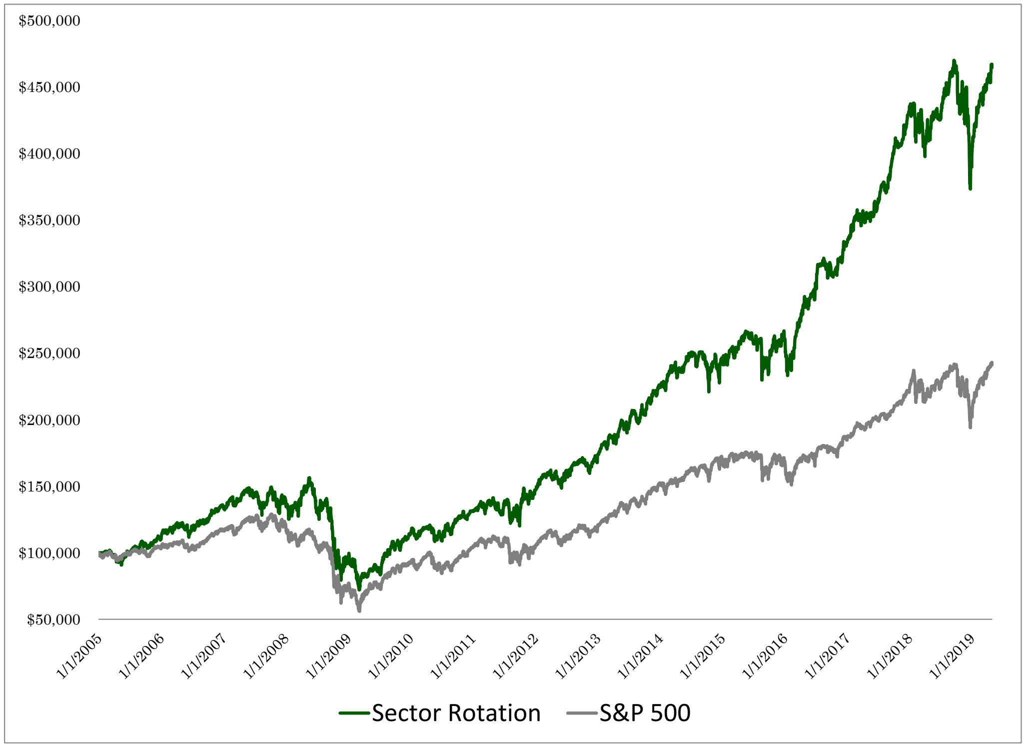


	Annualized Return	Annualized Volatility	Beta	Sharpe Ratio	Maximum Drawdown
Adaptive Trend	12.5%	10.3%	0.47	0.97	14.1%
S&P 500	8.9%	15.3%	1	0.42	56.6%

Provided charts, data, and descriptions are a result of a back test using historical market data. No representation is being made that the use of this strategy or any system or data will generate profits. The results do not represent actual results and actual results may significantly differ from the theoretical returns being presented.

Please see complete disclosure for additional information.

Thrasher Analytics holds the belief, resulted from an in-depth examination of the performance of the primary S&P sectors, that they historically cycle through periods of strength and weakness. In order to move towards capturing the alpha from this rotation, a mean-reversion model is deployed with a monthly rebalance of the lowest scoring sectors. Using proprietary methods of systematic technical analysis, Thrasher Analytics sector rotation model focuses on equity sectors that are most heavily showing signs of volatility and trend exhaustion and likely to be exposed to a positive shift in investor sentiment. By pairing this mean reversion approach towards sectors with the Adaptive Trend Model for the broad index, a layer of risk management can be achieved through strategy diversification.

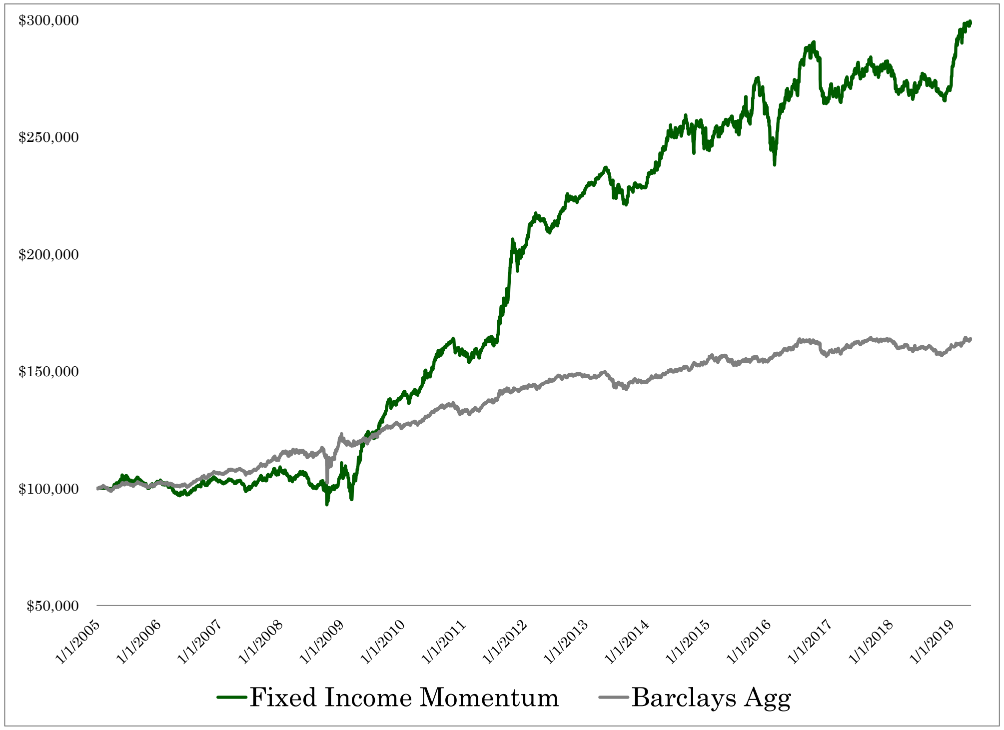


	Annualized Return	Annualized Volatility	Beta	Sharpe Ratio	Maximum Drawdown
Sector Rotation	12.7%	15.9%	0.96	0.64	53.9%
S&P 500	7.5%	14.8%	1	0.34	56.6%

Provided charts, data, and descriptions are a result of a back test using historical market data. No representation is being made that the use of this strategy or any system or data will generate profits. The results do not represent actual results and actual results may significantly differ from the theoretical returns being presented.

Please see complete disclosure for additional information.

If equities are the speedboats in the sea of financial markets then fixed income securities are the tanker ships. While stocks can move violently in both directions, Thrasher Analytics research has shown that fixed income markets historically show consistent trends. Because of the tanker-like movements displayed by bonds, a quarterly rebalance method is used for the Thrasher Analytics Fixed Income Momentum Model, with a pursuit focusing on the strongest performing corners of the fixed income market. By evaluating the risk adjusted momentum of both long- and short-term momentum, the Fixed Income Momentum Model also incorporates a proprietary indicator that acts as a throttle of the momentum score of each fixed income ETF. This indicator penalizes those ETFs that have moved too high and too fast in short-term trading while still allowing overall positive momentum to be the guiding principle of the model.



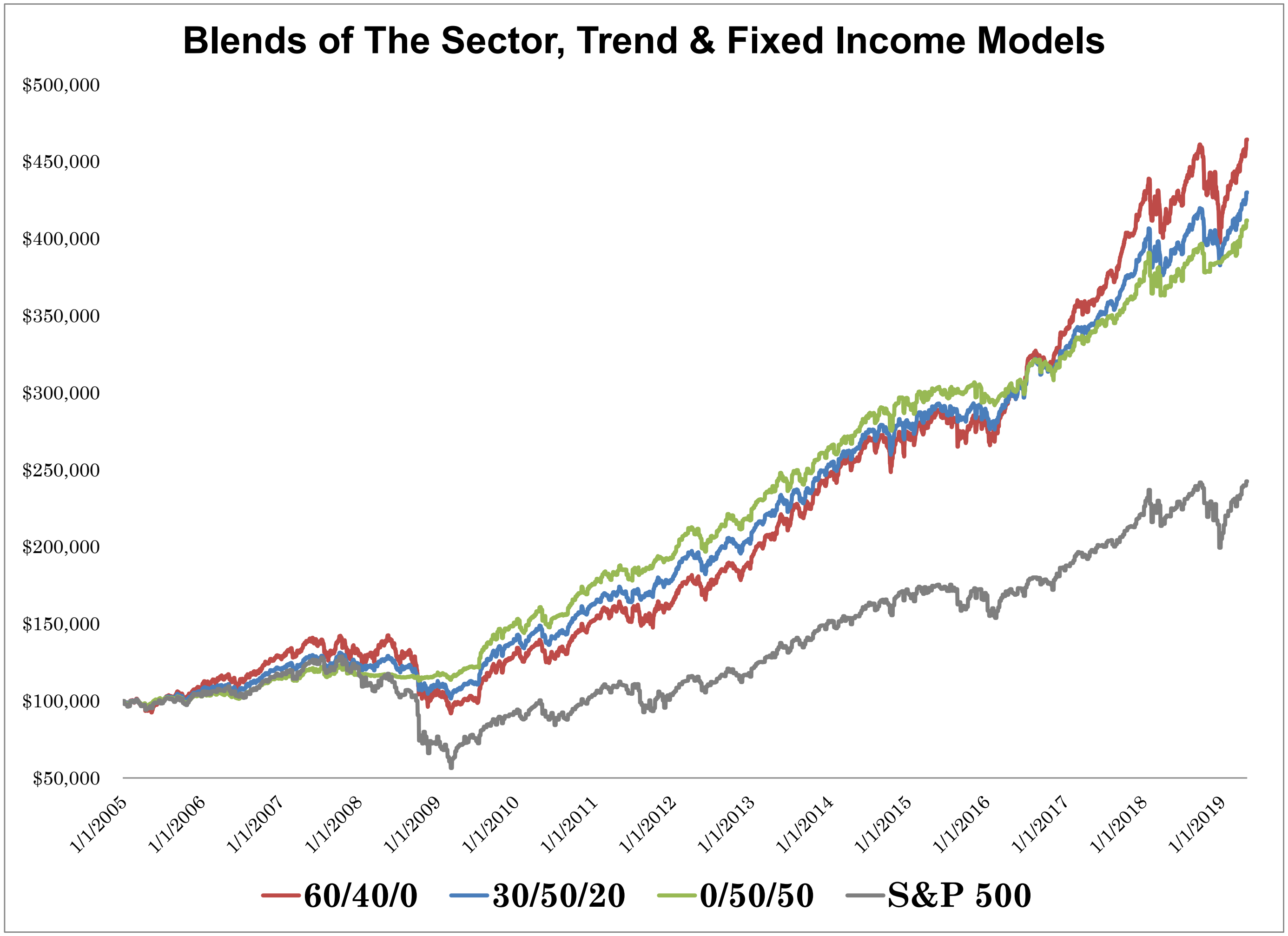
	Annualized Return	Annualized Volatility	Beta	Sharpe Ratio	Maximum Drawdown
Fixed Income Momentum	8.3%	8.2%	1.04	0.7	14.9%
Barclays Agg	3.6%	3.7%	1	0.29	11.0%

Provided charts, data, and descriptions are a result of a back test using historical market data. No representation is being made that the use of this strategy or any system or data will generate profits. The results do not represent actual results and actual results may significantly differ from the theoretical returns being presented.

Please see complete disclosure for additional information.

The concept of diversification is not new to financial markets. While many market participants focus on the diversification of the underlying holdings. This procedure is can be vastly skewed during periods of high market turmoil, in which correlations across asset classes tend to historically rise. Thrasher Analytics believes in diversifying in strategy styles. By using multiple investment philosophies, specifically trend following, mean-reversion, and momentum, a blended model is created that has the ability to adapt to changing market environments and volatility. For example, when equity markets show a strong trend preference, the adaptive S&P 500 trend following component benefits but if there's a shift favoring a range-bound market the sector rotation strategy based on mean-reversion should provide favorable performance.

THRASHER ANALYTICS



Provided charts, data, and descriptions are a result of a back test using historical market data. No representation is being made that the use of this strategy or any system or data will generate profits. The results do not represent actual results and actual results may significantly differ from the theoretical returns being presented.

Please see complete disclosure for additional information.

Trend (weekly)	Sector Rotation	Fixed Income Momentum
Positive	XLRE	JNK
	XLV	AGG
	XLP	

Provided charts, data, and descriptions are a result of a back test using historical market data. No representation is being made that the use of this strategy or any system or data will generate profits. The results do not represent actual results and actual results may significantly differ from the theoretical returns being presented.

Please see complete disclosure for additional information.

Back Test Disclaimer:

None of the content published by Thrasher Analytics LLC constitutes a recommendation that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person. No representation is being made that the use of this strategy or any system or trading methodology will generate profits and no offer to buy or sell securities is being made.

Back tested performance is NOT an indicator of future actual results. The results reflect performance of a strategy not [historically] offered to investors and do NOT represent returns that any investor actually attained. Back tested results are calculated by the retroactive application of a model constructed on the basis of historical data and based on assumptions integral to the model which may or may not be testable and are subject to losses.

Back tested performance is developed with the benefit of hindsight and has inherent limitations. Specifically, back tested results do not reflect actual trading or the effect of material economic and market factors on the decision-making process. Since trades have not actually been executed, results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity, and may not reflect the impact that certain economic or market factors may have had on the decision-making process. Further, back testing allows the security selection methodology to be adjusted until past returns are maximized. Actual performance may differ significantly from back tested performance.

The models, results, and data shown assumes that the markets were sufficiently liquid to permit the types of trading used in the model. A $6.95 per trade transaction fee was assumed during the back tested period but the results give no consideration to the effect of taxes of any kind. Because the trades assumed in Thrasher Analytics' presentations have not actually been executed, the results shown may have under- or over-compensated for the impact, if any, of certain market factors such as lack of liquidity or the ability to obtain the execution prices that have been assumed. The models developed and presented by Thrasher Analytics LLC require an historical period of data for parameter estimation prior to the actual commencement of the period shown in the model and in the back tested results. No representation is being made that any account will or is likely to achieve profit or loss similar to those shown in this or any other content produced by Thrasher Analytics LLC.

DISCLAIMER:

No reproduction, transmission, or distribution permitted without consent of Thrasher Analytics LLC ("Thrasher Analytics"). The material contained herein is the sole opinion of Thrasher Analytics.
This research has been prepared using information sourced believed to be reliable. Such information has not been independently verified and no guarantee, representation or warranty, express or implied, is made as to its accuracy completeness or correctness. It is intended for the sole use by the receipt to whom it has been delivered to Thrasher Analytics. The delivery of this report to any person shall not be deemed a recommendation by Thrasher Analytics to effect any transaction in any securities discussed herein. For more information please refer to our Terms & Service page of our website:
http://thrasheranalytics.com/terms-of-service-agreement.