

**ThrasherAnalytics.com**

**BI-WEEKLY RESEARCH & ANALYSIS**

Sector Rotation: February	
Technology	XLK
Financial	XLF
Communications	XLC

Fixed Income Rotation: Q1	
20+ Treasury	TLT
Aggr Bond	AGG

Index & Sector Adaptive Trend Models		
	Up Trend	Down Trend
SPX	X	
QQQ	X	
IWM	X	
XLF	X	
XLY	X	
XLK	X	
XLV	X	
XLU	X	
XLP	X	
XLI	X	
XLRE	X	
XLE		X
XLB	X	

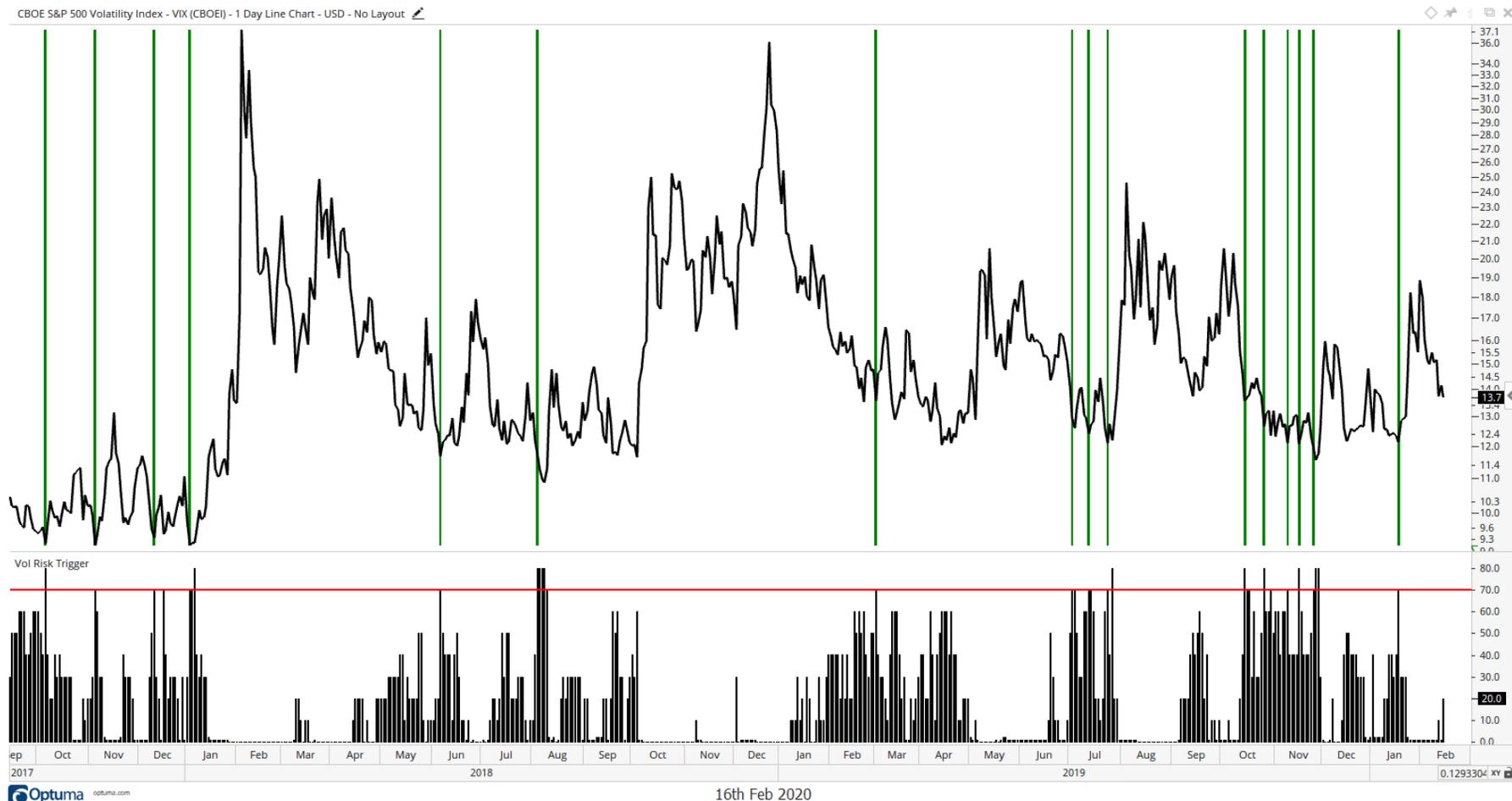
Daily Sentiment Index		
	% Bullish	5-day MA
S&P 500	76%	77%
Nasdaq 100	77%	80%
Nikkei	75%	80%
VIX	14%	13%
10yr Treasury	60%	59%
5yr Treasury	53%	53%
CRB Index		
Gold	83%	81%
U.S. Dollar	86%	88%

\*Green <25% Red >80%

Notable Breadth Data:	
SPX >50MA	65.54%
SPX >200MA	66.93%
Nasdaq >50MA	81.55%
Nasdaq >200MA	84.47%

■	Sector	> 50MA	> 200MA	1wk Perf ▼	1mo Perf	3mo Perf	12mo Perf
✓	SPDR Real Estate Select Sector Fund ETF	True	True	4.86%	7.61%	9.18%	20.38%
✓	SPDR Consumer Discretionary Select Sector Fund ETF	True	True	2.63%	3.94%	8.7%	20.47%
✓	SPDR Utilities Select Sector Fund ETF	True	True	2.62%	8.33%	12.35%	26.74%
✓	SPDR Technology Select Sector Fund ETF	True	True	2.28%	7.24%	17.82%	47.62%
✓	SPDR Communication Services Select Sector ETF	True	True	1.93%	2.52%	10.43%	23.84%
✓	S & P 500 Stock Index	True	True	1.58%	2.95%	9.16%	23.11%
✓	SPDR Industrial Select Sector Fund ETF	True	True	1.18%	1.44%	3.59%	13.32%
✓	SPDR Energy Select Sector Fund ETF	False	False	1.11%	-8.79%	-8.45%	-16.12%
✓	SPDR Health Care Select Sector Fund ETF	True	True	0.86%	0.84%	8.91%	13.62%
✓	SPDR Consumer Staples Select Sector Fund ETF	True	True	0.82%	2.69%	5.68%	20.34%
✓	SPDR Financial Select Sector Fund ETF	True	True	0.81%	1.07%	5.06%	20.44%
✓	SPDR Materials Select Sector Fund ETF	True	True	0.7%	0.68%	0.17%	12.58%

Real Estate and Consumer Disc. were the best performing sectors last week.



The VRT remains below its trigger threshold as the VIX works its way back lower from hitting 19 on the previous spike. The indicator has begun to show signs of life, rising to 20 (70 is the trigger threshold for an expectation of higher volatility). This week we get VIX expiration on Weds. and option expiration on Friday. Volatility has remained elevated above its prior low, even with equities hitting fresh highs.

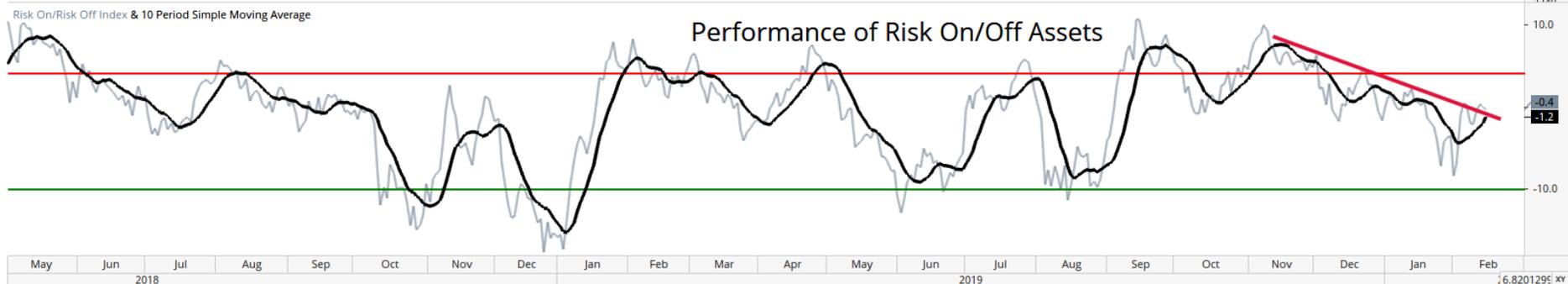
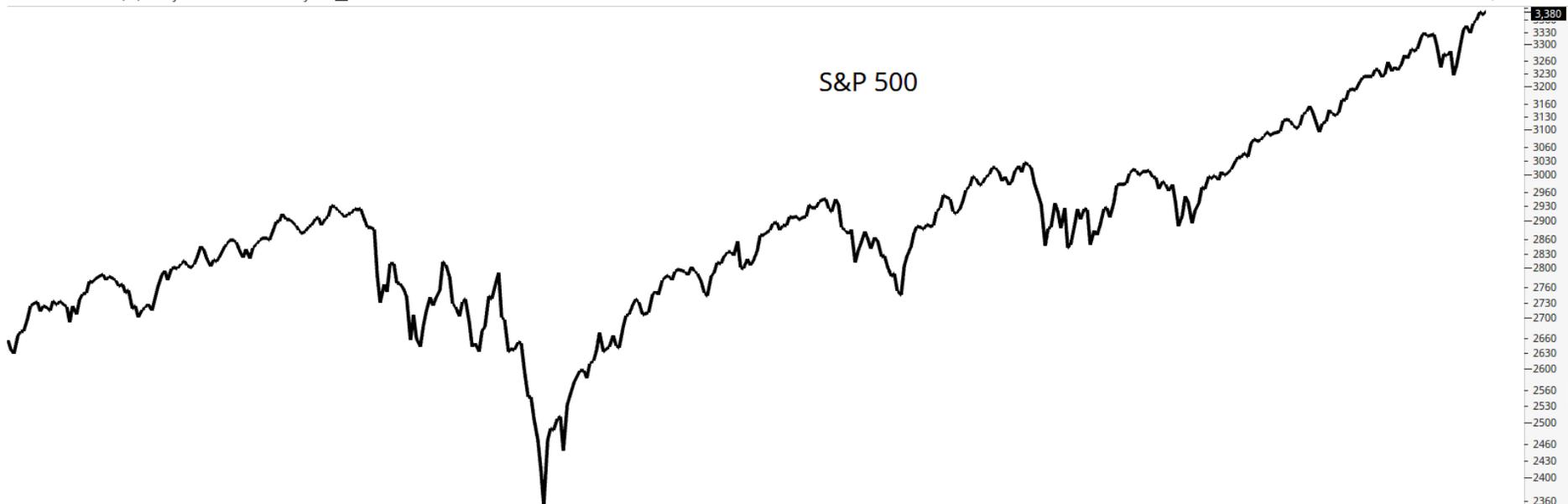


The S&P 500 continued to edge out new highs, albeit at a slugs pace - 1-2 points at a time each day. The major spots on the chart I'm focusing on are momentum and volume. The RSI remains in a bearish divergence with price, stuck under 66 on Friday's close after repeated moves above 70 in the last three months. Volume, as shown in the bottom panel, has also been steadily declining on the latest rally off the short-term January low. Ideally, we'd see volume expand with the index hitting higher-highs, a sign that more buyers are entering the market and showing supportive signs of the trend. Unfortunately that's not been the case in recent weeks. In my letter last week I noted the growing list of divergences, we can now add volume as one of them. I'll be updating several of the previously mentioned divergences in this week's letter as well.



Last week I discussed several divergences in the market as price was moving higher. One of those as the % of stocks above their 50-day Moving Average. The chart to the left shows the S&P 500, Dow Industrial, and Nasdaq with each of their respective 50-day MA Breadth indicators. As you can see, it's not just the SPX with narrowing participation, it's the Dow and Nasdaq too. Since the January low, we just aren't seeing the same level of participation by individual stocks in moving higher. Inherently, on Friday as QQQ and SPX ticked higher, their breadth readings worsened.

S&P 500 INDEX - SPX (WV) - 1 Day Line Chart - USD - No Layout



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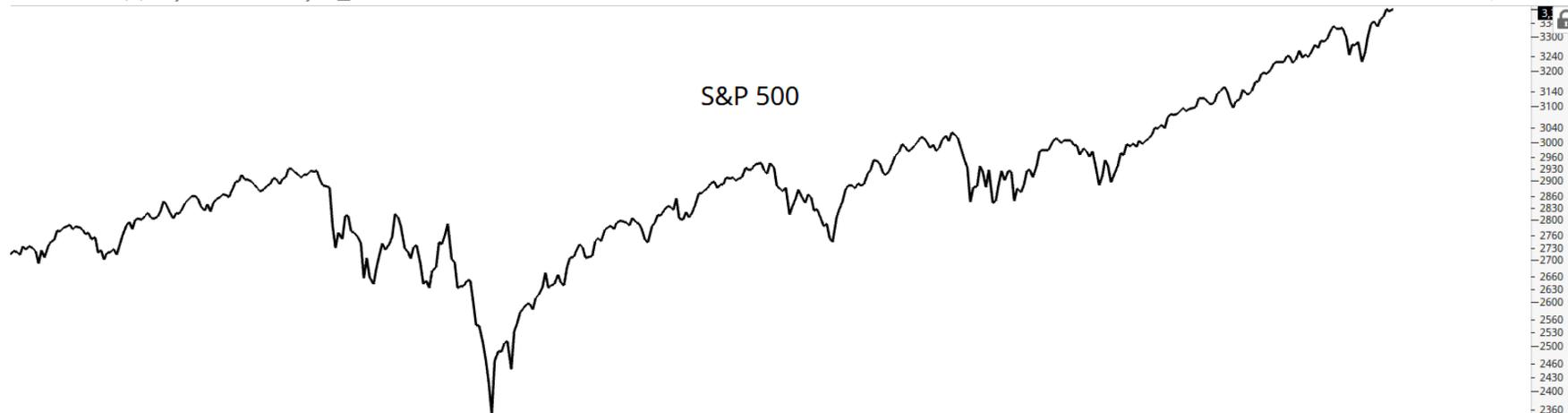
16th Feb 2020

16.8201295 xv

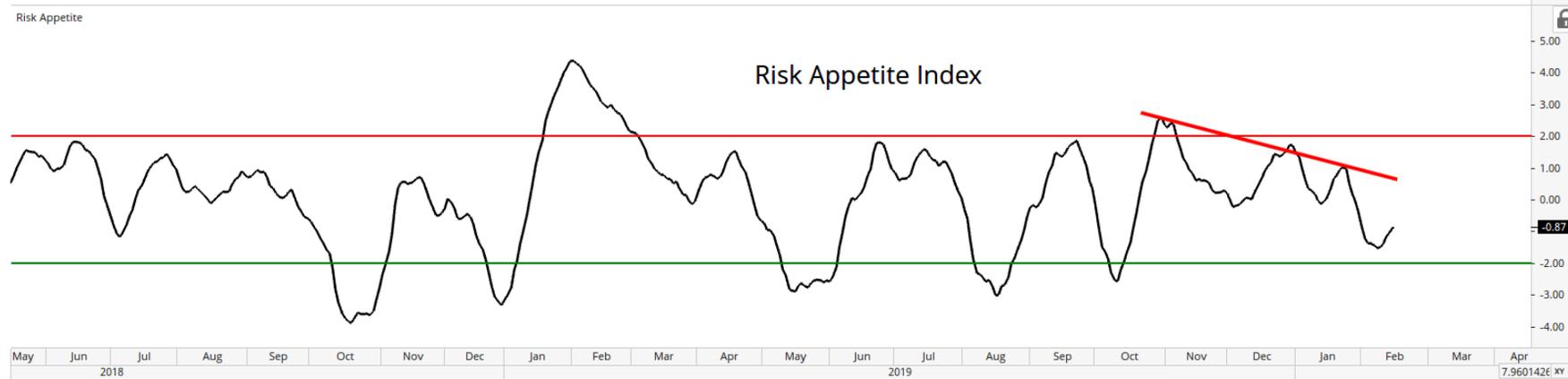
The Performance of Risk On/Off Assets also continues to diverge from price. Where buyers are focusing their attention is not on the traditional 'risk on' type assets such as High beta (a future chart in this letter).

S&amp;P 500 INDEX - SPX (WI) - 1 Day Line Chart - USD - No Layout

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Risk Appetite

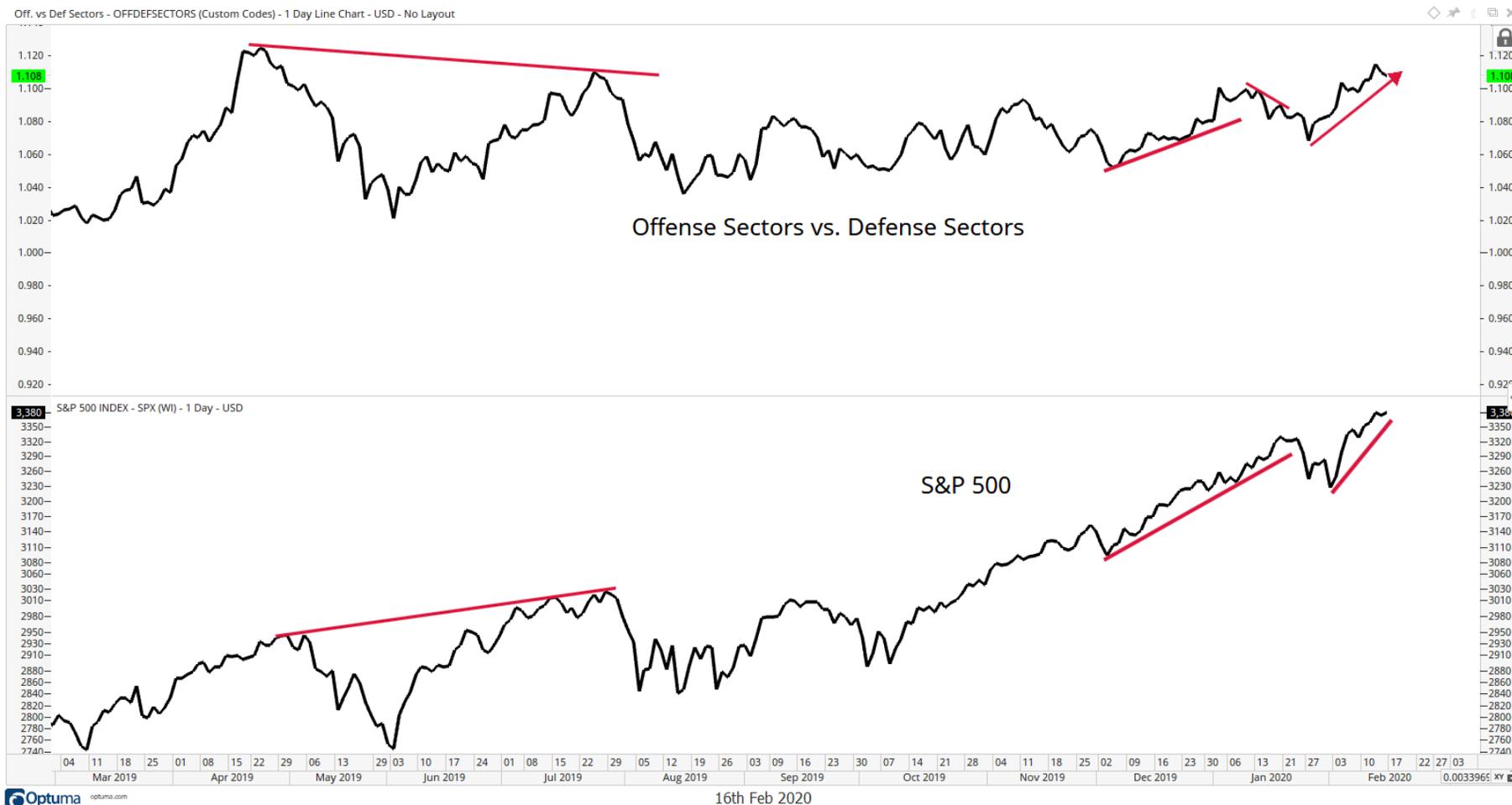


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The Risk Appetite Index (RAI) continues to be in a bearish divergence with price. It did see a slight up move last week, but its still well off its high and has created two lower-highs since the October high. As before several other declines in stock prices, the RAI can diverge for several weeks if not months as the data begins to drip away from being bullish. I don't view the RAI as a timing tool but as a way of evaluating market structure and getting a broad view of the appetite for risk within the market. It's as if having a full plate of food to eat vs. a single cracker. Both provide nutrients but the crack can only sustain you for so long. That's where we are in this market, we've got a crack - a set of leaders which I'll discuss later in the letter - but that's about it, we don't have broad participation in risk-taking.

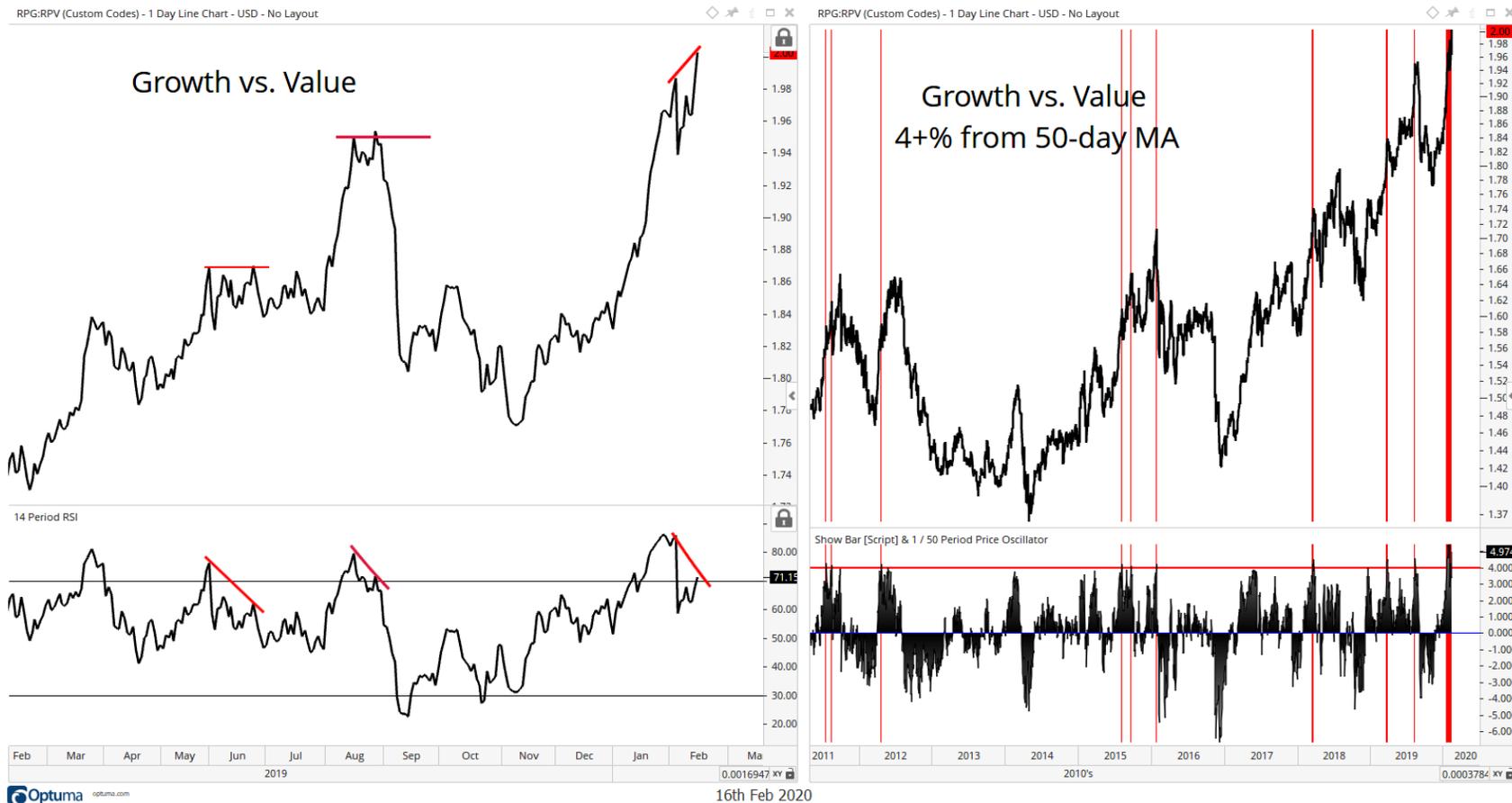


From a sector perspective, things look bullish and confirming of the up trend in the broad index. Traders are continuing to bid higher sectors like technology but they are also pushing higher the ‘safe haven’ sectors like real estate and utilities. The move in these rate-sensitive sectors I believe is more a result of a reaction in fixed income and the preference for U.S. dollar assets that have some form of yield, no matter how small in a world of negative interest rates. But as a whole, the sector landscape looks positive.



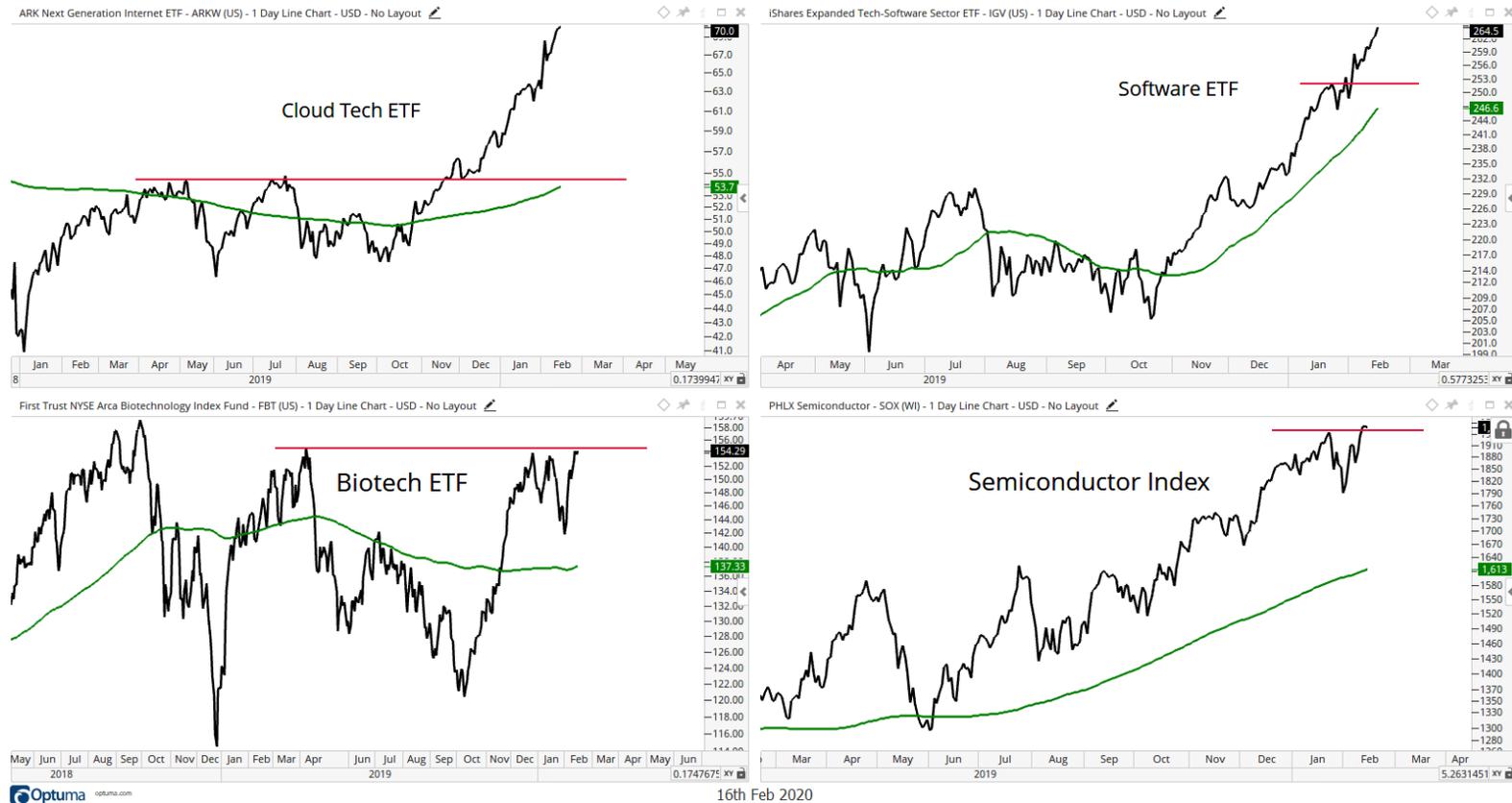
As I've written several times, it's not a declining put/call ratio that concerns me, but actually when it rises that begins to raise a yellow flag on the market. When price is rising I'm encouraged by traders buying calls, that's a good thing right?! Of course it is, you want more buyers coming to the market to push price higher. It's when that trend changes and the preference starts to be puts instead of calls that shows bullish demand for equities may be languishing. That's why we often see the put/call ratio begin to rise ahead of a price peak. Since the January dip, the p/c ratio has been falling once again after seeing near-record lows in January. Last week the 5-day avg of the ratio began to inch up just a few points. It's still quite early to call it a trend change, but we did see a firming up of the put/call ratio and I'll be watching if that continues this week as more traders pick up puts in the face of a rising equity index.





The above chart is the one I used just before Growth peaked relative to value last summer. I highlighted the diverge in breadth and the large spread between the ratio and its 50-day Moving Average. I then wrote to you that on the weekly chart we didn't see a break of the bullish range in momentum, keeping me cautious from moving too far into the 'death of the growth trend' camp in September and October like most in our industry. That was the right play as growth regained control and has been extremely strong for the last several months.

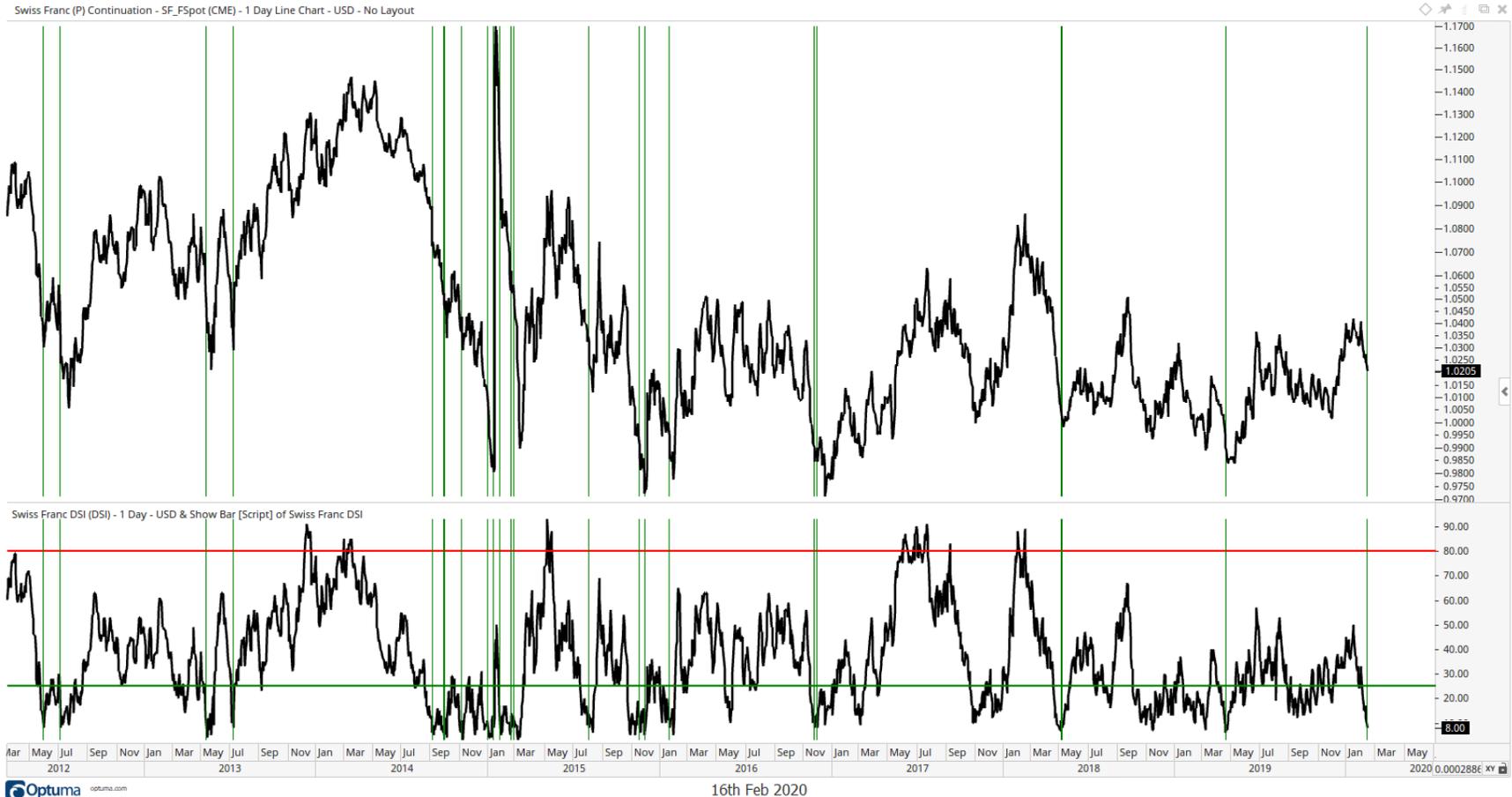
We are now back again with a divergence in momentum (left chart) and more than 4% above the ratio's moving average, which as you can see by the vertical red lines, has led to a reversal in the ratio several times over the last ten years. While I don't want to jump too far ahead of this trend change, I'm watching if we see the ratio between RPG and RPV create a false breakout above the prior January high, moving back under 1.98 as confirmation that value may make a run at a leadership position.



It's important to now watch what pockets of the market are showing leadership. This is a subjective mission, but I believe the above four industries are the current leaders: cloud tech, software, biotech, and semiconductors. Three of the four are tech-related and the leadership role of semiconductors is one I've discussed ad nauseum in this letter so it shouldn't come as too much of a surprise. It's these four charts that I'll be watching for any future signs of weakness. When leadership begins to break down we either have 1. a change in leadership as traders shift focus or 2. a correction in the broad market which resulted in the cracks forming in the strongest corners of the market.

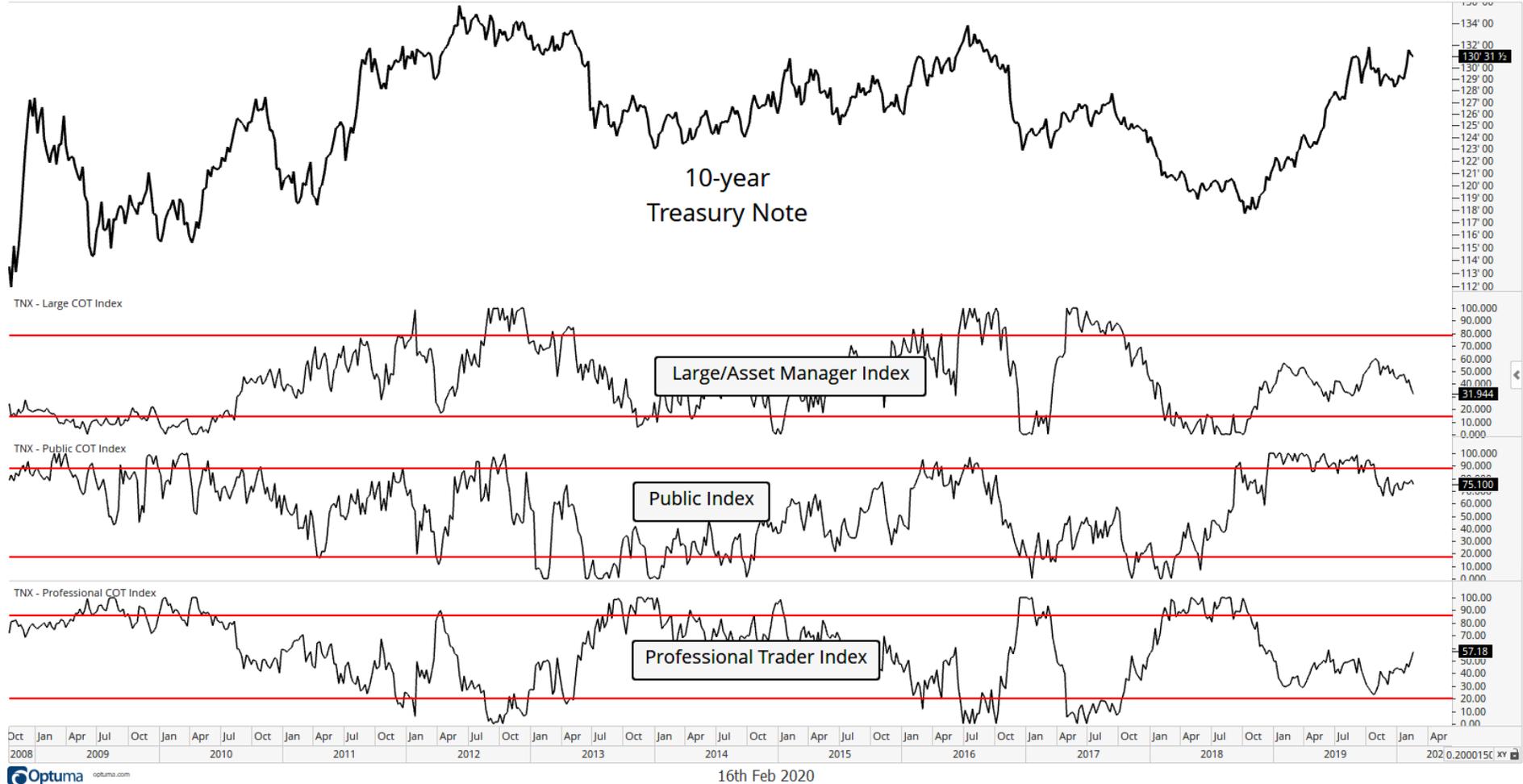


When the broad market is rallying, we often see traders show a preference for higher-beta stocks. As they ratchet up their risk exposure, stocks with high betas outperform. The green line on the chart below shows the relative performance of the High Beta ETF (SPHB) vs. the S&P 500, which often holds a strong correlation to the S&P 500. As the index goes higher, so does the outperformance of high beta. But that relationship has begun to break down as the relative performance of SPHB has been in a down trend since we started the new year. This has sent the 3-month correlation to the lowest level since October 2018. This is not a bullish sign for risk appetite.

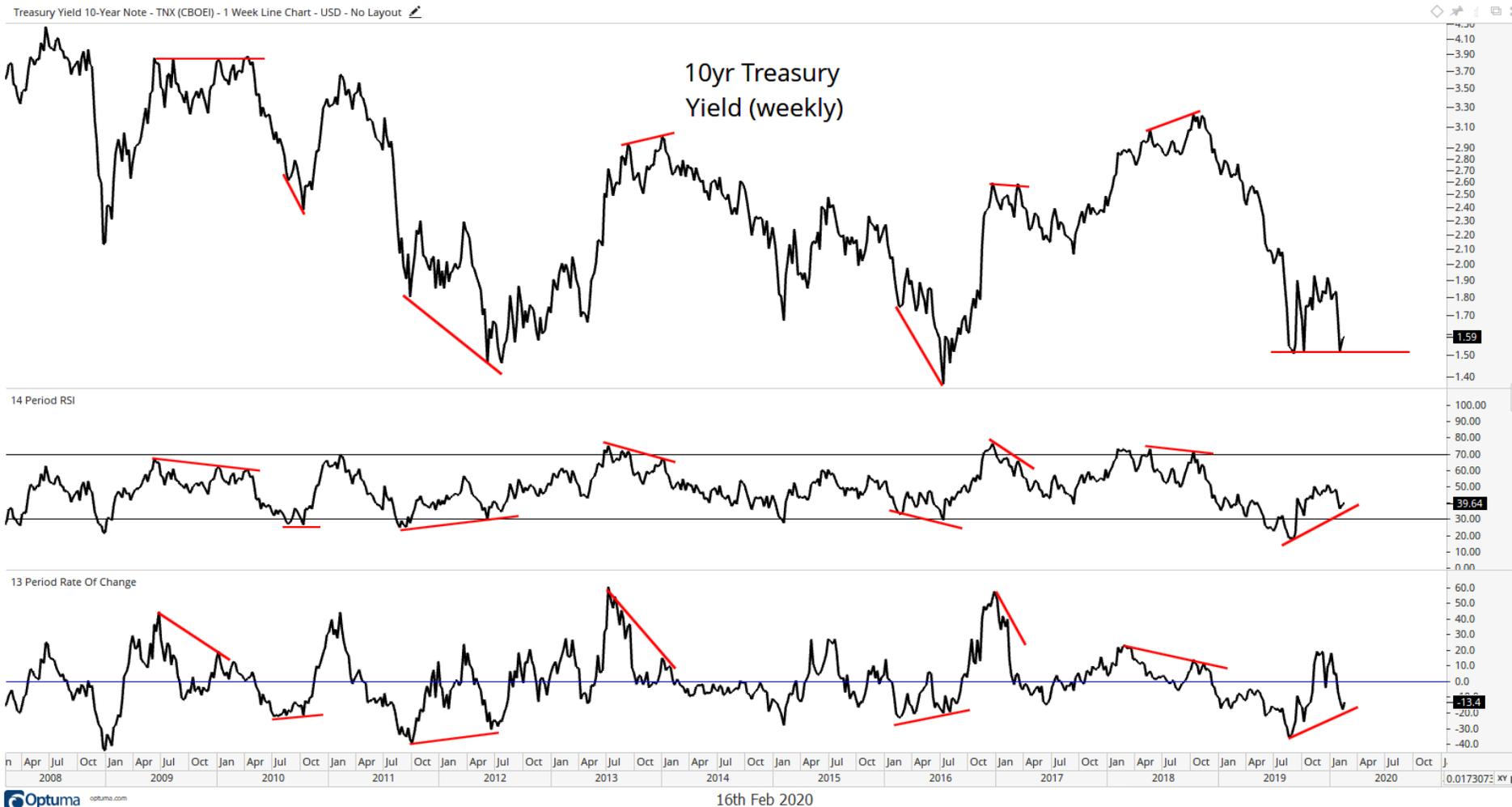


As traders across the globe rush to buy anything with a U.S. dollar sign, sending U.S. equities, currency, and bonds higher, European and Asian currencies have been on the decline. This has sent the Daily Sentiment Index (DSI) % bullish scores into the signal digits. One currency that stands out to me is the Swiss Franc. Switzerland has had just a single case of coronavirus (one ten year old boy who has been quarantined). Q3 GDP grew stronger-than-expected in Q3 last year and is expected to be strong in full year 2020, 74% of the economic activity is the service sector, leaving them less impacted by a global industrial slow down as a result of the Coronavirus. Even though they are less sensitive to global factors, their DSI is now at just 8% bullish, which as shown by the green vertical lines, has marked or been very close to major lows in the currency. This makes me bullish on the Franc over the next several months and may be a place investors turn now that Italy, France, and Germany all saw GDP contraction in Q4 '19 diminishing the prospects for a strong Euro.

10 Year U.S. Treasury Notes - TYSpot (CBOT) - 1 Week Line Chart - USD - No Layout



Above is the 10-year Treasury Note and the three categories of COT data. Large, public, and professional traders. Typically the “professional” trader is the ‘smart money,’ when they are long, Treasury’s often bottom and when they get very bearish, they top out. The same but in reverse for the public and large/asset manager traders. Interestingly, professional traders have been getting more bullish on Treasury’s as they move back near the high-end of their multi-year range. They don’t seem to be concerned that price is nearing potential resistance or think Treasury’s have run too far too fast. This tells me we may not be done seeing Treasury’s rally.



On the other side of the coin from the last chart, which was bullish on Treasury prices (and thus bearish on yield) we now have the chart of the 10-year Yield, which has found support at the prior low of 1.5%. This support finds confirmation in a bullish divergence in both the RSI momentum indicator and the 13-week Rate of Change. Many times in the last decade we've seen divergence, either bullish or bearish, market reversals in the Treasury Yield. So right now 1.5% is support until proven otherwise. As I showed on the last chart, Professional Traders don't think this support will hold, so I'm watching for conformation of that. The strength in the U.S. dollar also would suggest a preference of US\$ assets, including bonds which could apply pressure to that 1.5% level.

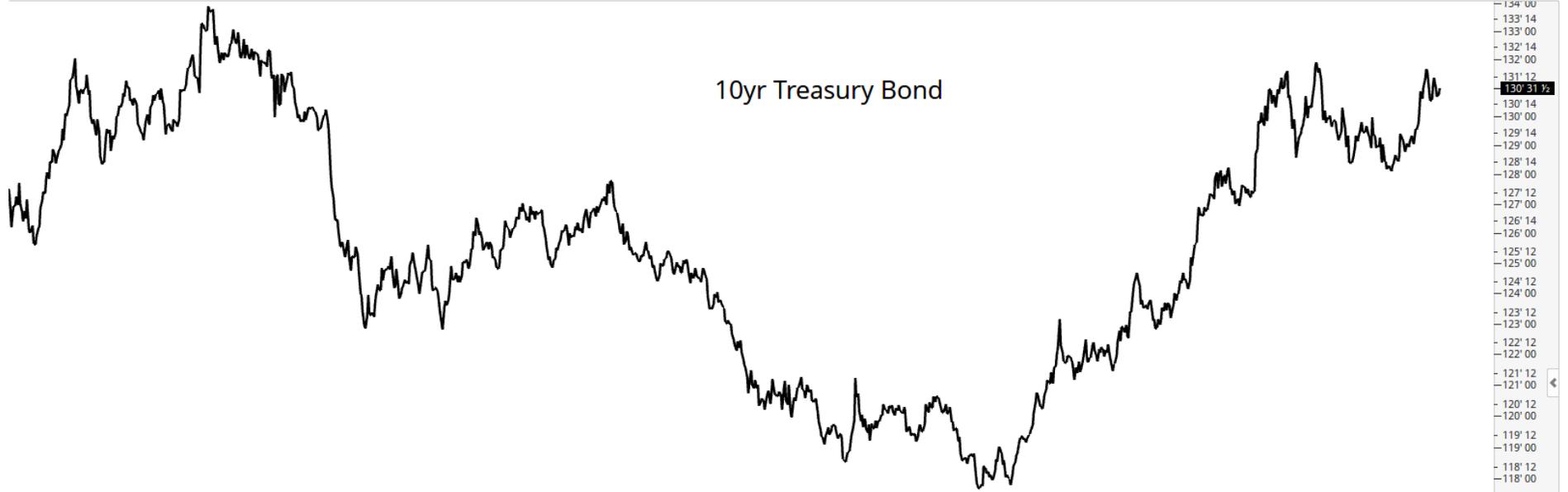
<input type="checkbox"/>	Market	% Bullish <sup>▲</sup>	5MA	History
<input type="checkbox"/>	Euro DSI	7	9.4	
<input type="checkbox"/>	Swiss Franc DSI	8	12.4	
<input type="checkbox"/>	VIX DSI	14	12.8	
<input type="checkbox"/>	Australian Dollar DSI	15	16.6	
<input type="checkbox"/>	Lean Hog DSI	17	12.2	
<input type="checkbox"/>	Corn DSI	18	21.6	
<input type="checkbox"/>	Orange Juice DSI	20	23.6	
<input type="checkbox"/>	Natural Gas DSI	20	17	
<input type="checkbox"/>	Heating Oil DSI	27.00	21.4	
<input type="checkbox"/>	Crude Oil DSI	30.00	21.8	
<input type="checkbox"/>	Cattle DSI	33.00	22.6	
<input type="checkbox"/>	Copper DSI	38.00	35.60	
<input type="checkbox"/>	Coffee DSI	38.00	28.20	
<input type="checkbox"/>	British Pound DSI	40.00	38.40	
<input type="checkbox"/>	CRB Index DSI	41.00	33.80	
<input type="checkbox"/>	New Zealand Dollar DSI	46.00	46.60	
<input type="checkbox"/>	Gasoline DSI	52.00	46.60	

<input type="checkbox"/>	Code	% Bullish <sup>▲</sup>	5MA	History
<input type="checkbox"/>	Cotton DSI	53.00	57.40	
<input type="checkbox"/>	5YR DSI	53.00	53.20	
<input type="checkbox"/>	Wheat DSI	58.00	58.60	
<input type="checkbox"/>	10Y DSI	60.00	59.40	
<input type="checkbox"/>	EuroDollar DSI	63.00	63.60	
<input type="checkbox"/>	Cocoa DSI	65.00	64.80	
<input type="checkbox"/>	Silver DSI	66.00	63.20	
<input type="checkbox"/>	Platinum DSI	70.00	70.80	
<input type="checkbox"/>	Nikkei DSI	75.00	79.60	
<input type="checkbox"/>	SPX DSI	76.00	77.00	
<input type="checkbox"/>	Palladium DSI	77.00	77.20	
<input type="checkbox"/>	Nasdaq DSI	77.00	79.80	
<input type="checkbox"/>	Sugar DSI	78.00	83.2	
<input type="checkbox"/>	Lumber DSI	81	82.8	
<input type="checkbox"/>	Gold DSI	83	81	
<input type="checkbox"/>	Mexican Peso DSI	84	86.6	
<input type="checkbox"/>	US Dollar DSI	86	87	

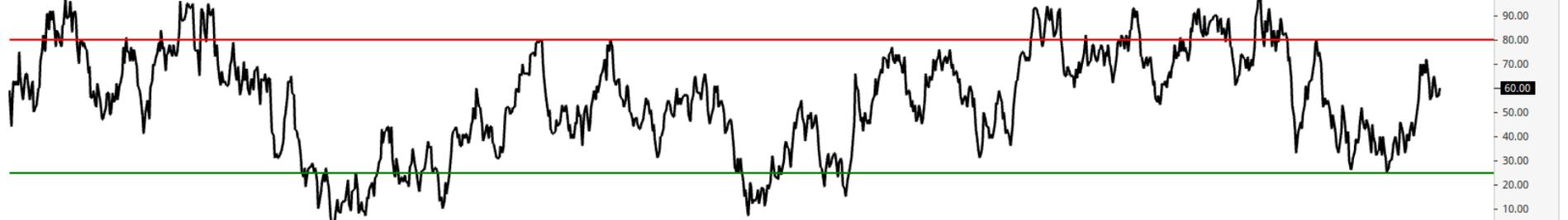
Type Code or Name to add an item to the watchlist

Above is the DSI score for each of the futures markets.

10 Year U.S. Treasury Notes - TYSpot (CBOT) - 1 Day Line Chart - USD - No Layout



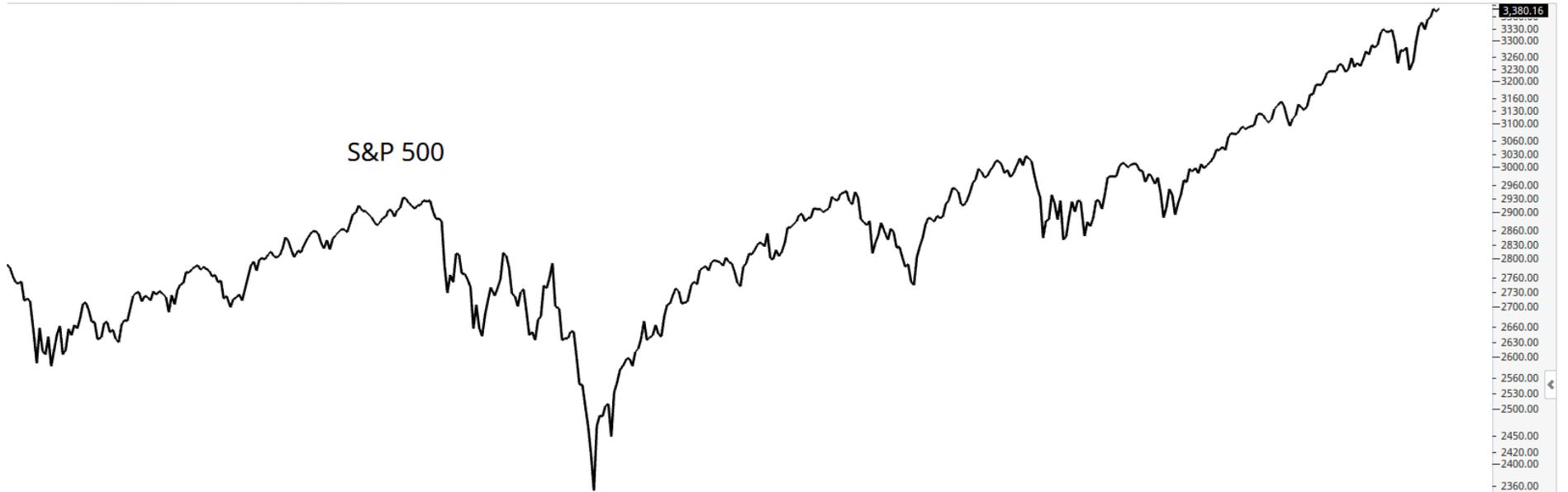
10Y DSI (DSI) - 1 Day - USD



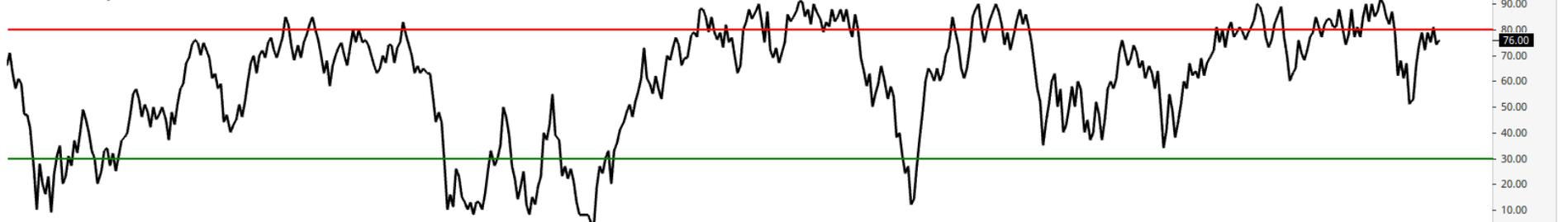
Dec 2015 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2016 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2017 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2018 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2019 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2020 | 16th Feb 2020 | 20.0455071 xy



S&P 500 INDEX - SPX (WI) - 1 Day Line Chart - USD - No Layout



SPX DSI (DSI) - 1 Day - USD

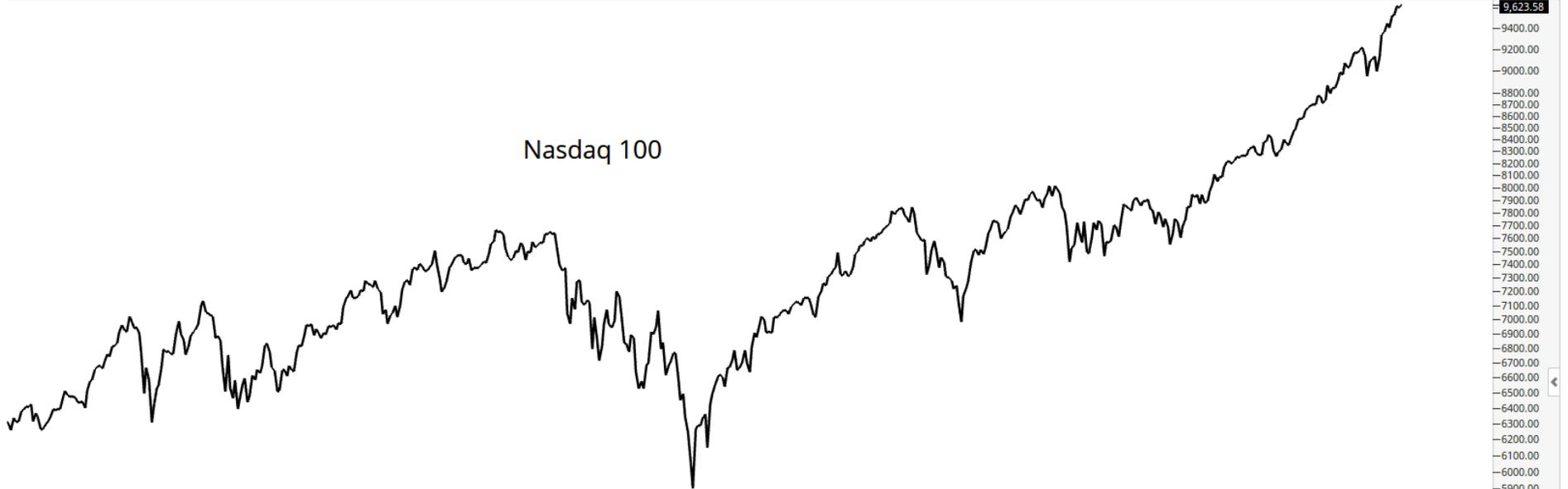


Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar 2018 2019 16th Feb 2020 206,2664534 XY





NASDAQ 100 Index - NDY (WI) - 1 Day Line Chart - USD - No Layout



Nov 2017 Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar 2018 2019 20,18.976544 xy

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Gold Futures - GCSpot (NYMEX) - 1 Day Line Chart - USD - No Layout



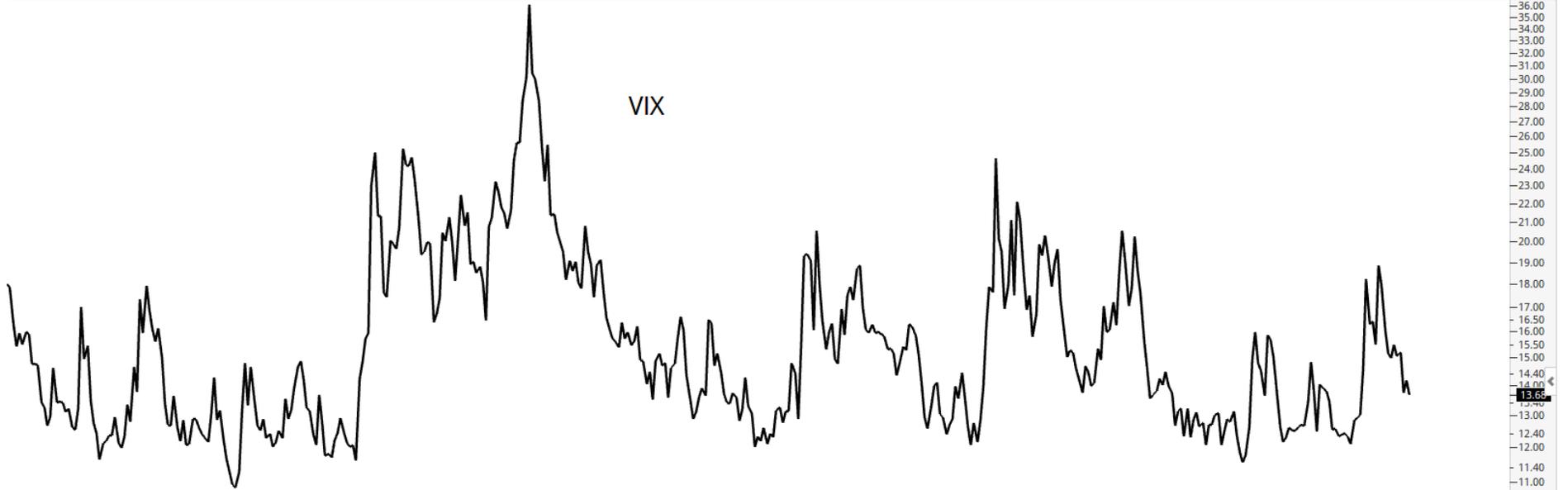
Gold DSI (DSI) - 1 Day - USD



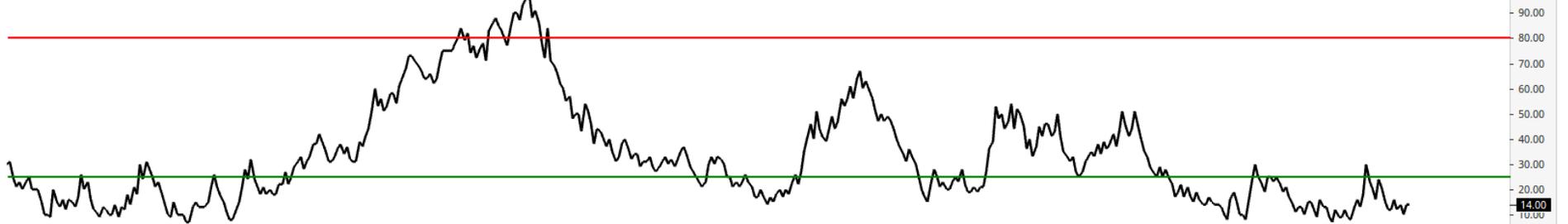
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CBOE S&P 500 Volatility Index - VIX (CBOEI) - 1 Day Line Chart - USD - No Layout



VIX DSI (DSI) - 1 Day - USD



Apr May Jun Jul Aug Sep Oct Nov Dec 2018 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar 2019 0.161654E xy



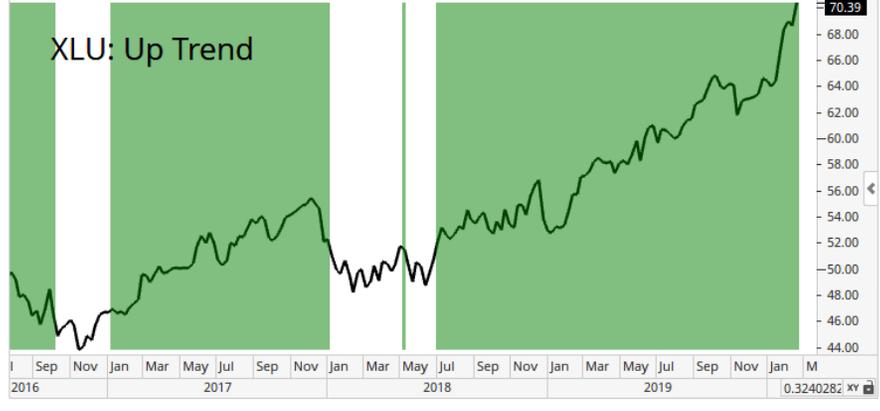


SPX, XLF, XLY, and XLK are all in up trends.

SPDR Health Care Select Sector Fund ETF - XLV (US) - 1 Week Line Chart - USD - No Layout



SPDR Utilities Select Sector Fund ETF - XLU (US) - 1 Week Line Chart - USD - No Layout



SPDR Consumer Staples Select Sector Fund ETF - XLP (US) - 1 Week Line Chart - USD - No Layout



SPDR Industrial Select Sector Fund ETF - XLI (US) - 1 Week Line Chart - USD - No Layout



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



QQQ, XLRE, XLB , and XLE are in up trends. XLE has a new positive trend reading, hopefully we see it hold on.

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.

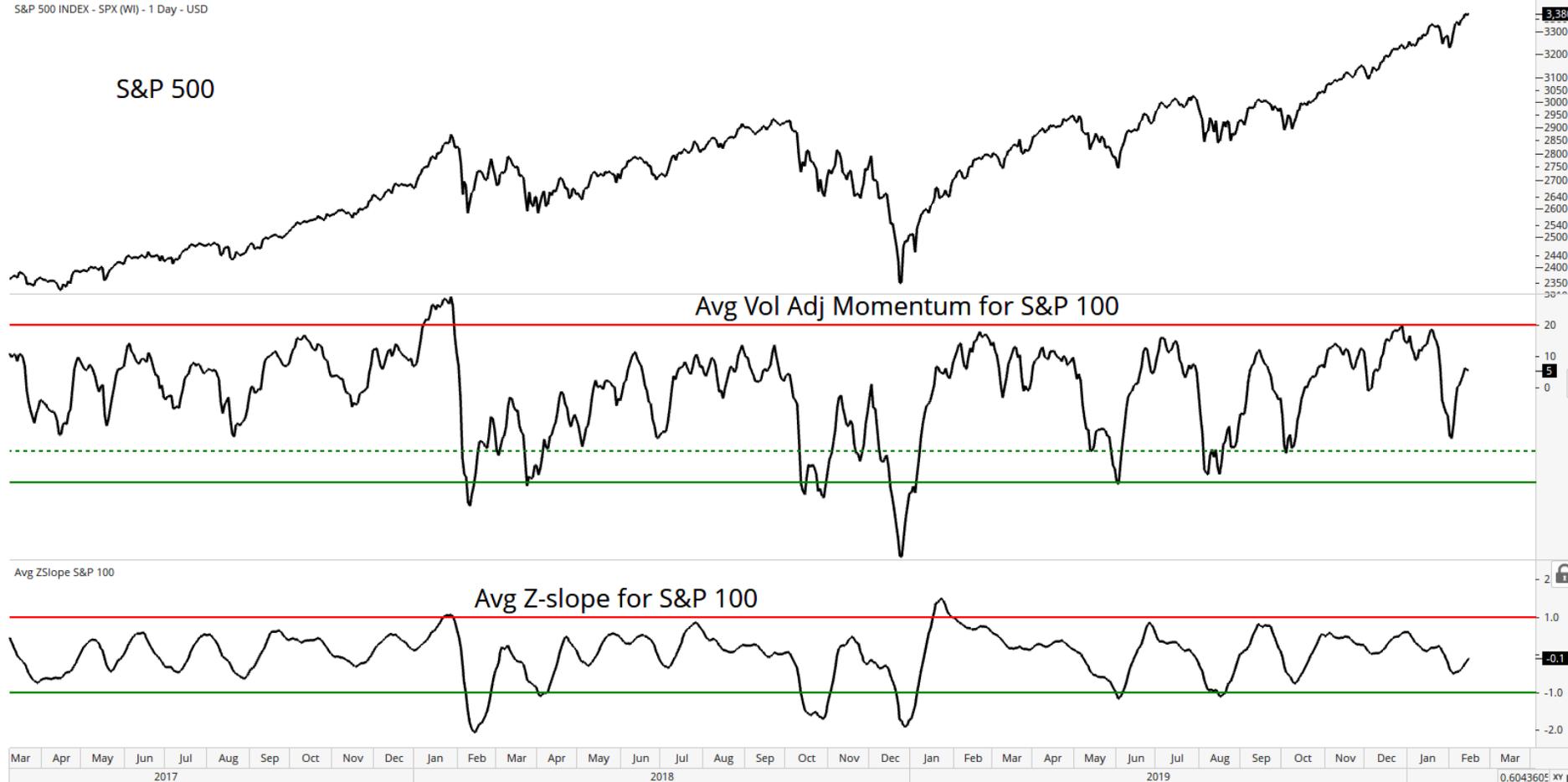
**Volatility-Adjusted Momentum (VaM):** This is a spin on the traditional measures of momentum, taking into account the volatility of the underlying asset into the calculation. By adjusting for volatility we can get a better look at potential mean-reversion signals when risk/reward becomes unbalanced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



Vol Momo - VOLMOMOSP100 (Market Breadth) - 1 Day Bar Chart - USD - No Layout

S&P 500 INDEX - SPX (WI) - 1 Day - USD

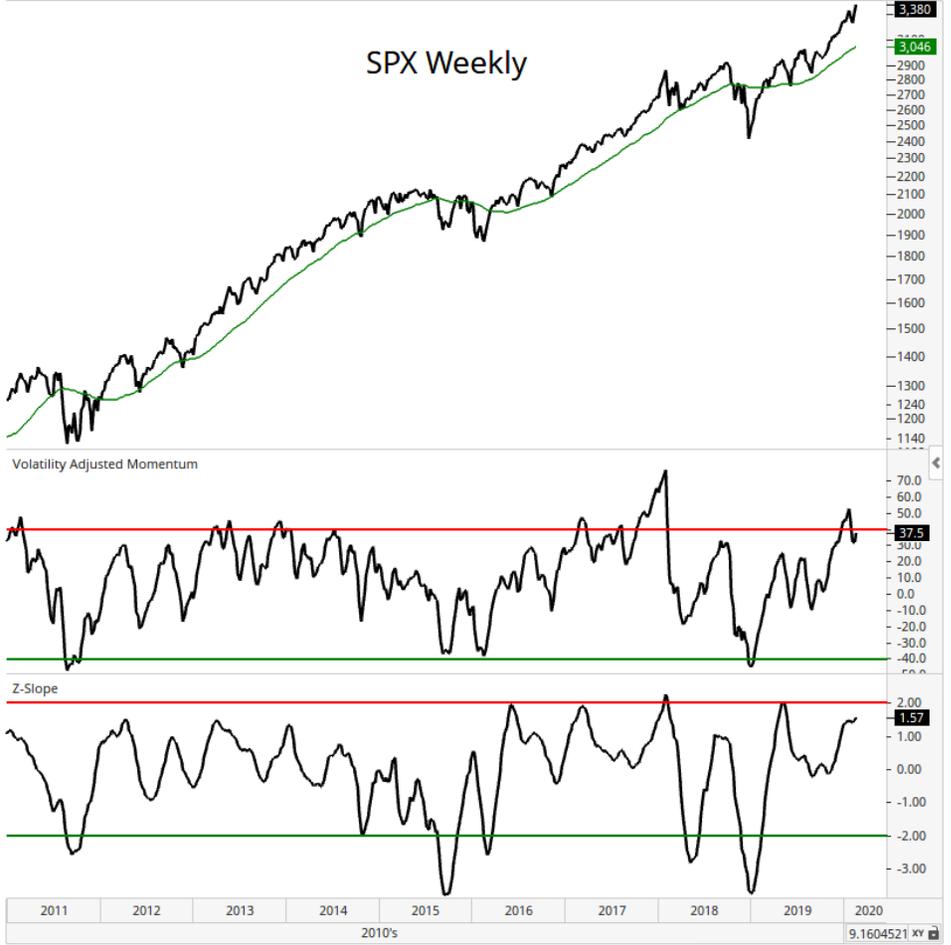


Above are the average Volatility Adjusted Momentum Indicator (VaM) and Z-slope scores for the S&P 100.

S&P 500 INDEX - SPX (WI) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



S&P 500 INDEX - SPX (WI) - 1 Week Line Chart - USD - No Layout





iShares Russell 2000 ETF - IWM (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

iShares Russell 2000 ETF - IWM (US) - 1 Week Line Chart - USD - No Layout



Invesco QQQ Trust - QQQ (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

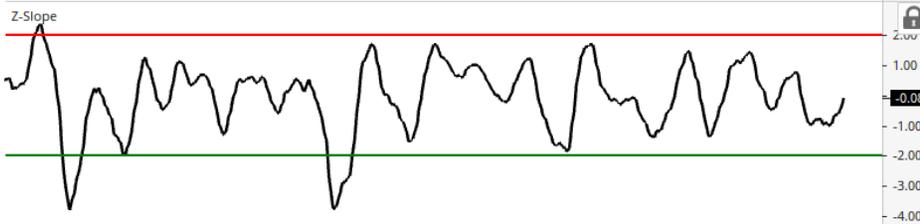
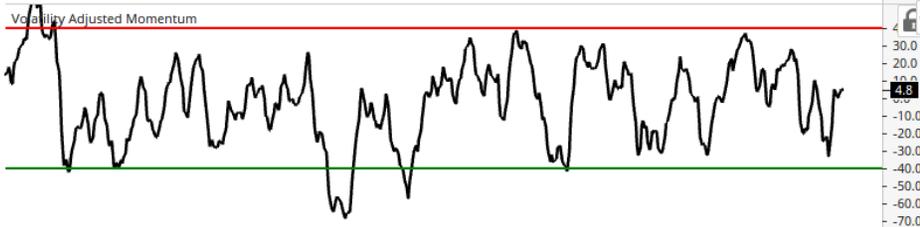


Invesco QQQ Trust - QQQ (US) - 1 Week Line Chart - USD - No Layout



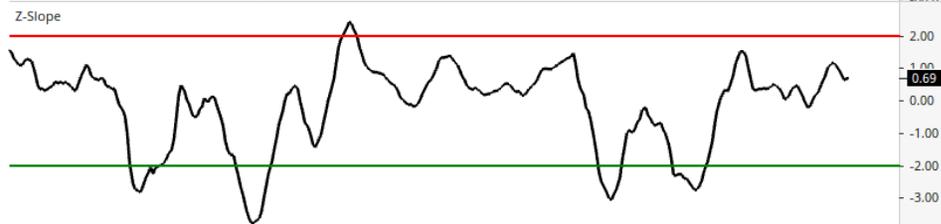
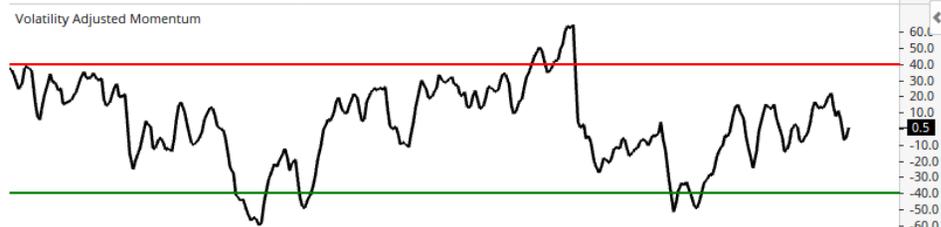


SPDR Materials Select Sector Fund ETF - XLB (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



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SPDR Materials Select Sector Fund ETF - XLB (US) - 1 Week Line Chart - USD - No Layout



13 2014 2015 2016 2017 2018 2019 0.1594767 xy

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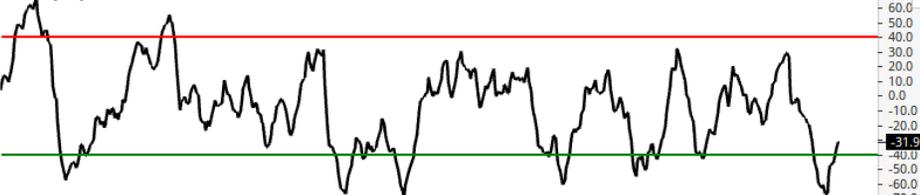
SPDR Energy Select Sector Fund ETF - XLE (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



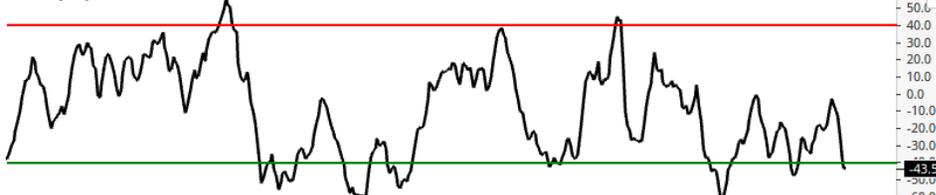
SPDR Energy Select Sector Fund ETF - XLE (US) - 1 Week Line Chart - USD - No Layout



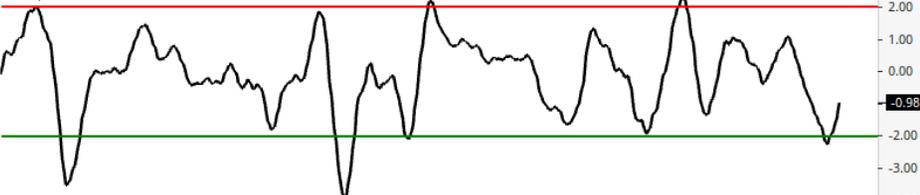
Volatility Adjusted Momentum



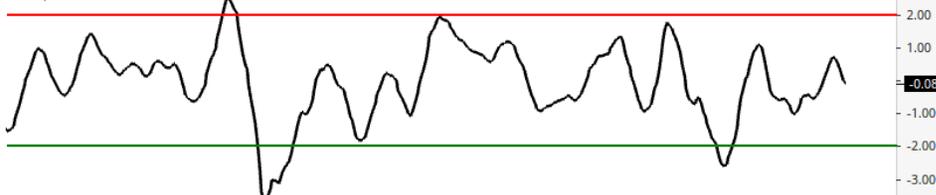
Volatility Adjusted Momentum



Z-Slope



Z-Slope



Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Ma 017 2018 2019 0.0921876 xy

2012 2013 2014 2015 2016 2017 2018 2019 2020 0.1910081 xy

SPDR Communication Services Select Sector ETF - XLC (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



SPDR Communication Services Select Sector ETF - XLC (US) - 1 Week Line Chart - USD - No Layout



SPDR Financial Select Sector Fund ETF - XLF (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

SPDR Financial Select Sector Fund ETF - XLF (US) - 1 Week Line Chart - USD - No Layout



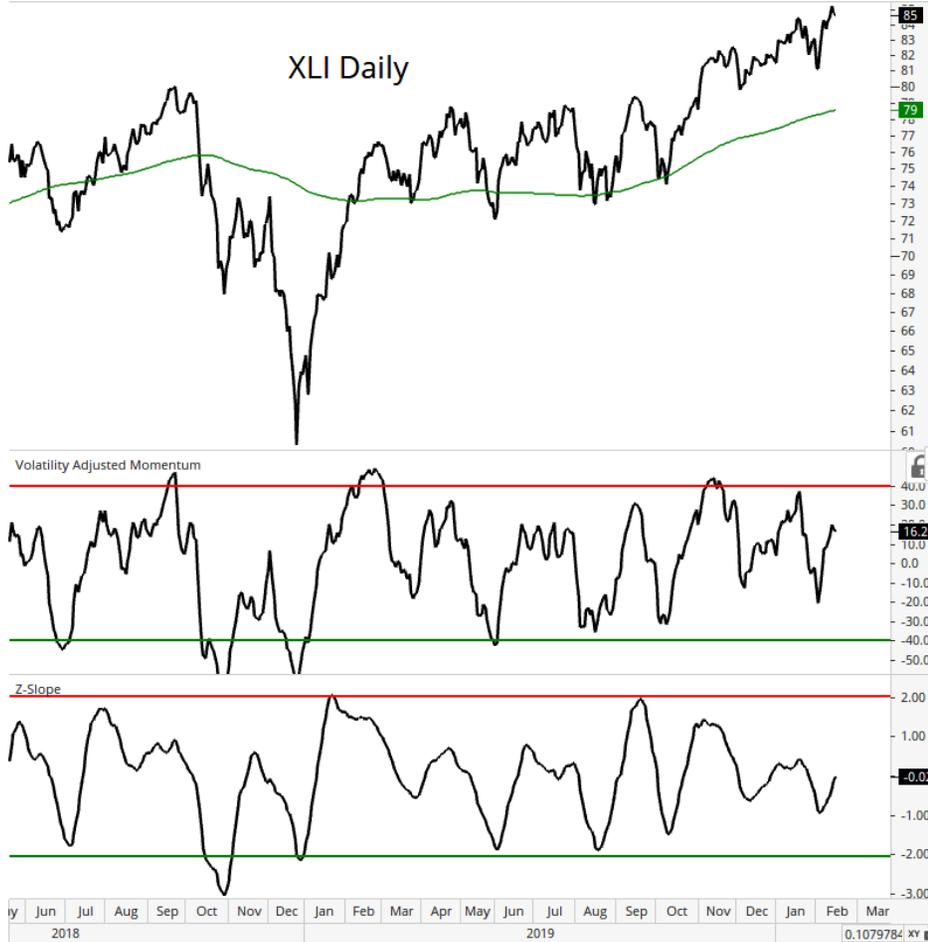
SPDR Technology Select Sector Fund ETF - XLK (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

SPDR Technology Select Sector Fund ETF - XLK (US) - 1 Week Line Chart - USD - No Layout



SPDR Industrial Select Sector Fund ETF - XLI (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

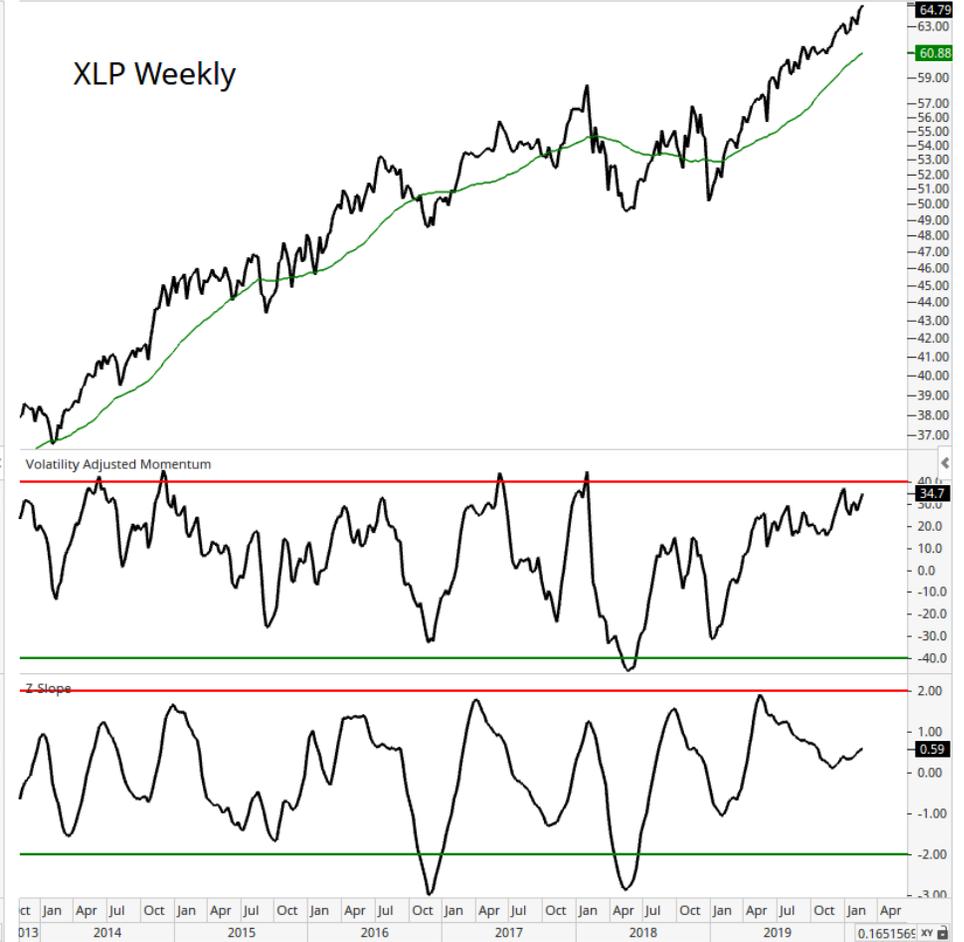
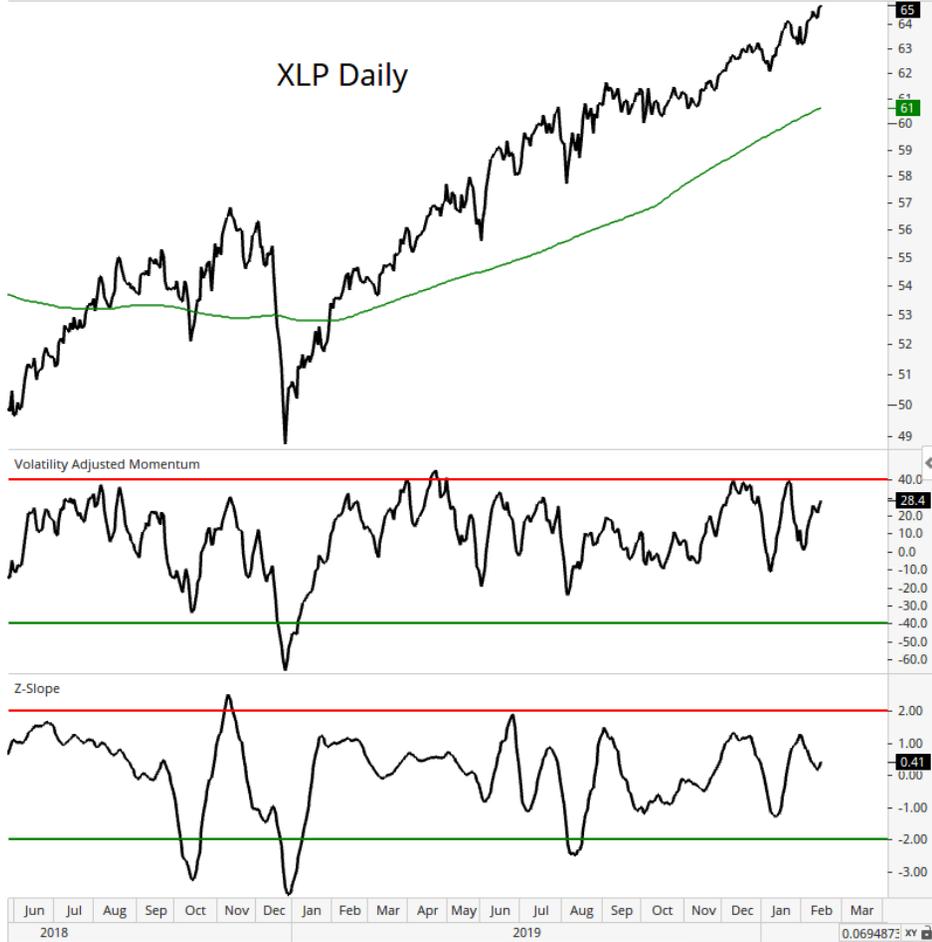
SPDR Industrial Select Sector Fund ETF - XLI (US) - 1 Week Line Chart - USD - No Layout





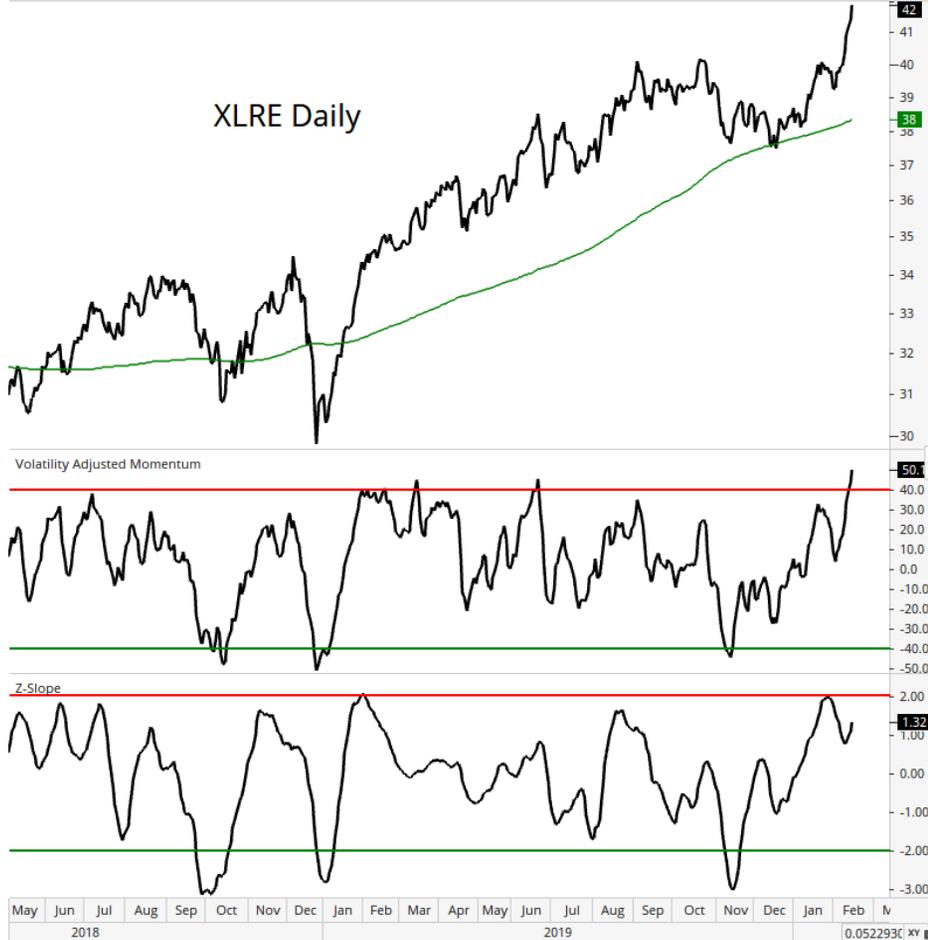
SPDR Consumer Staples Select Sector Fund ETF - XLP (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

SPDR Consumer Staples Select Sector Fund ETF - XLP (US) - 1 Week Line Chart - USD - No Layout



SPDR Real Estate Select Sector Fund ETF - XLRE (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

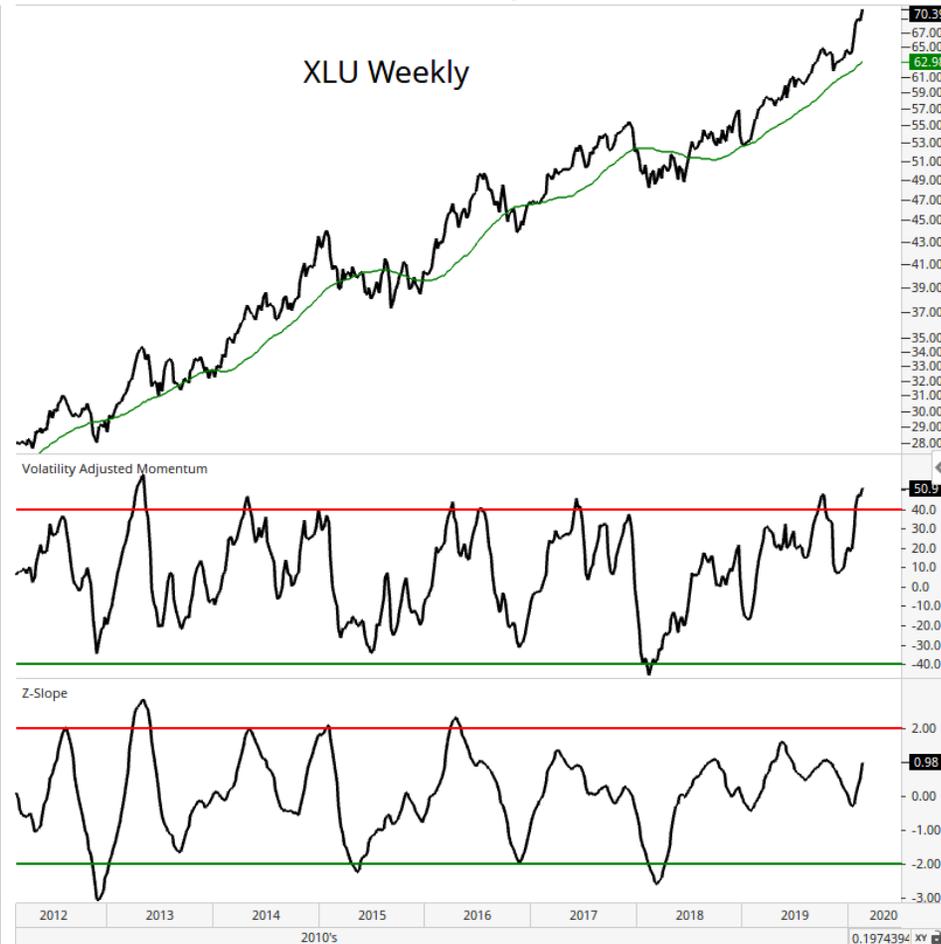
SPDR Real Estate Select Sector Fund ETF - XLRE (US) - 1 Week Line Chart - USD - No Layout



SPDR Utilities Select Sector Fund ETF - XLU (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



SPDR Utilities Select Sector Fund ETF - XLU (US) - 1 Week Line Chart - USD - No Layout



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SPDR Consumer Discretionary Select Sector Fund ETF - XLY (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

SPDR Consumer Discretionary Select Sector Fund ETF - XLY (US) - 1 Week Line Chart - USD - No Layout



SPDR Health Care Select Sector Fund ETF - XLV (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

SPDR Health Care Select Sector Fund ETF - XLV (US) - 1 Week Line Chart - USD - No Layout

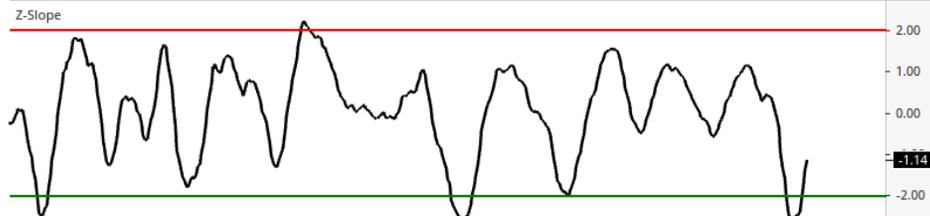
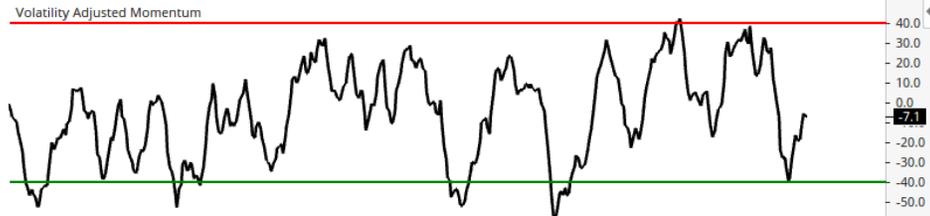
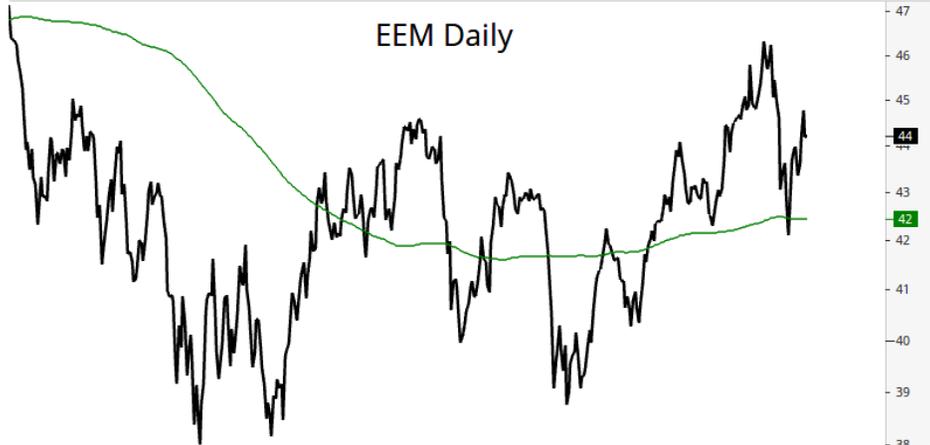




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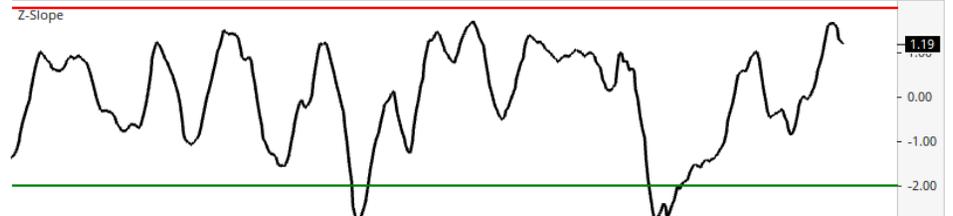
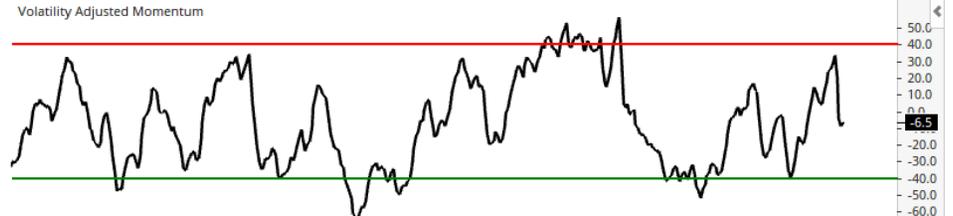


iShares MSCI Emerging Markets ETF - EEM (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar A 2018 2019 0.0393887 xy

iShares MSCI Emerging Markets ETF - EEM (US) - 1 Week Line Chart - USD - No Layout

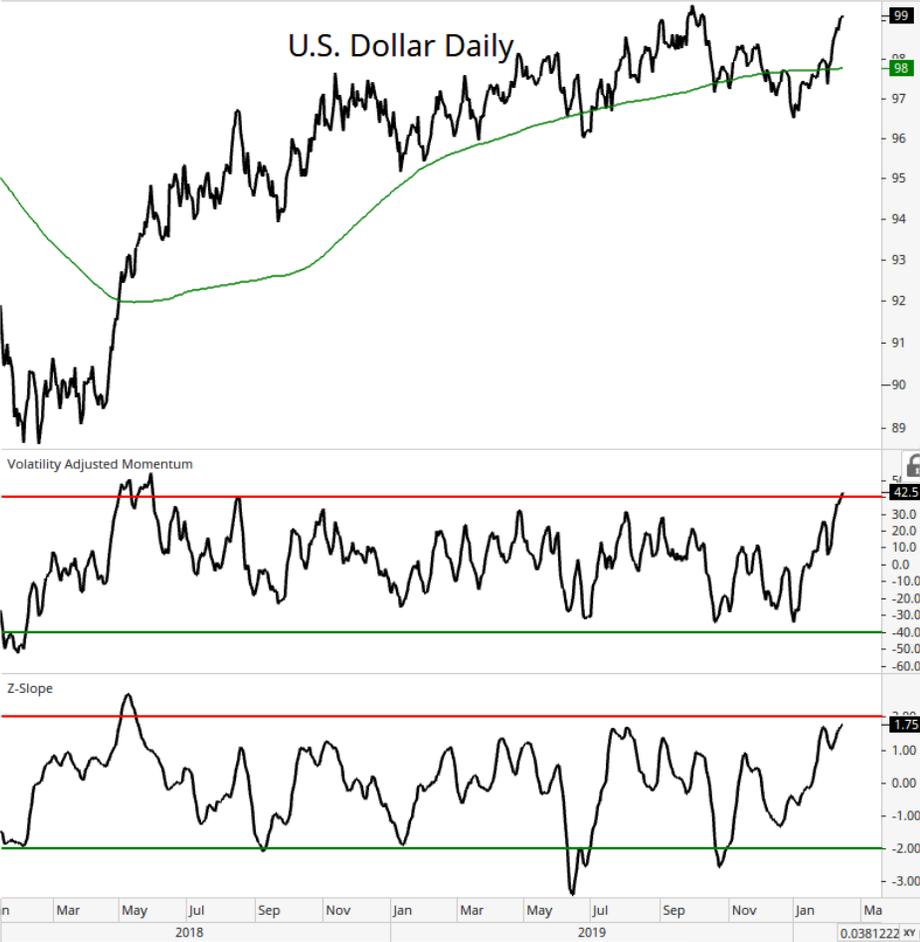


2012 2013 2014 2015 2016 2017 2018 2019 2020 2010's 0.1181144 xy

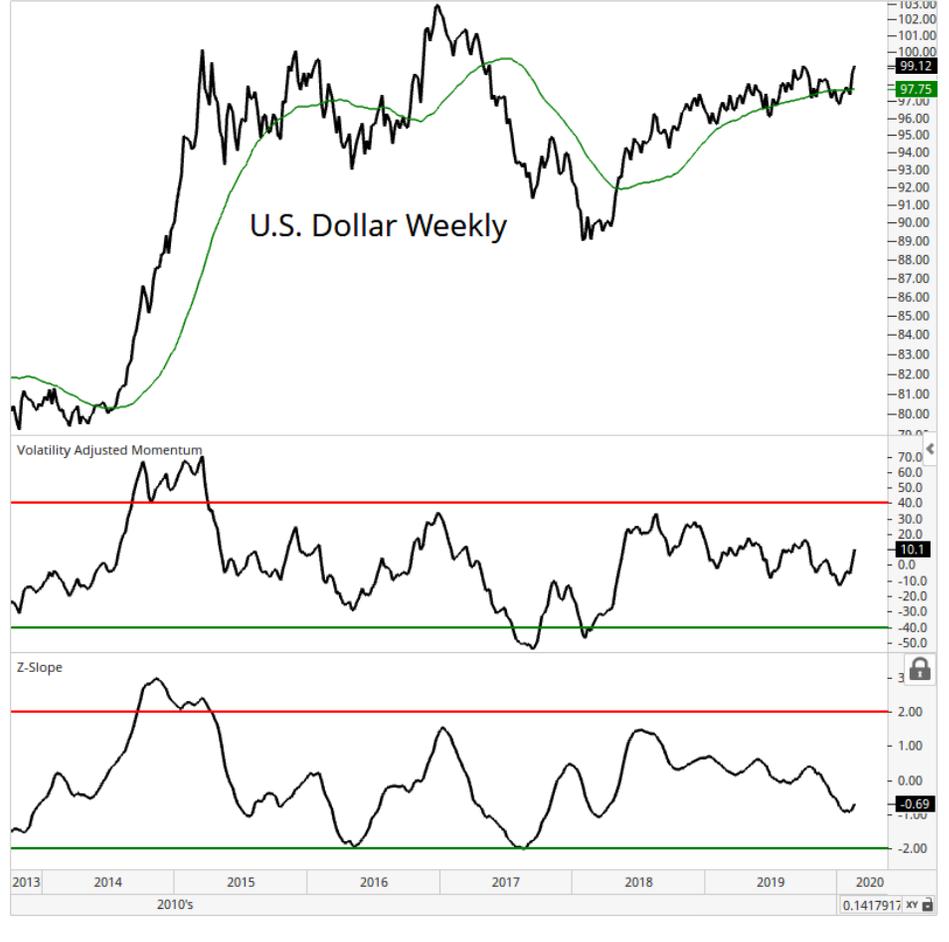


16th Feb 2020

US Dollar Index - DXY (W) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



US Dollar Index - DXY (W) - 1 Week Line Chart - USD - No Layout





Gold Futures - GCSpot (NYMEX) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

Gold Futures - GCSpot (NYMEX) - 1 Week Line Chart - USD - No Layout



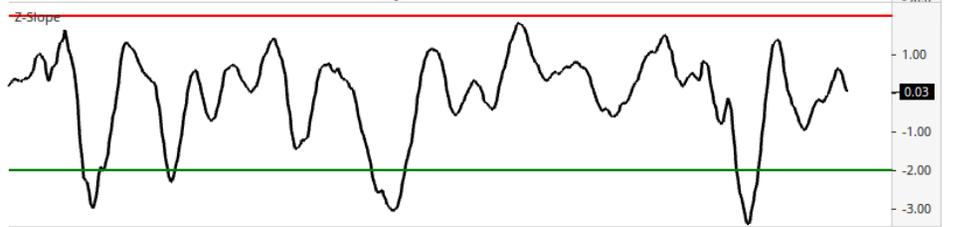
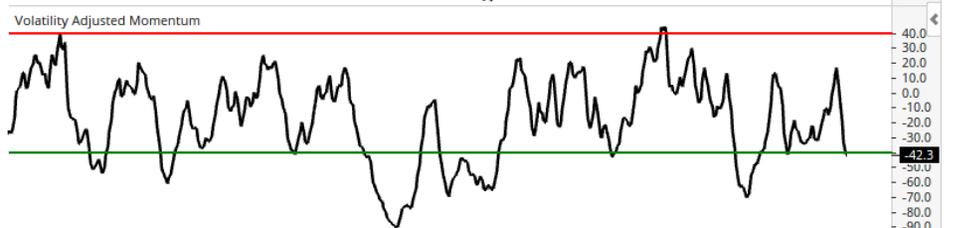
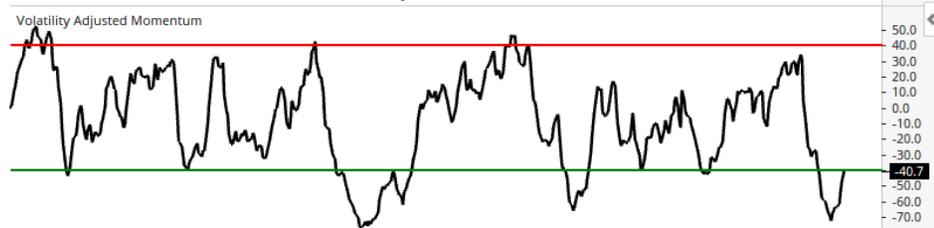
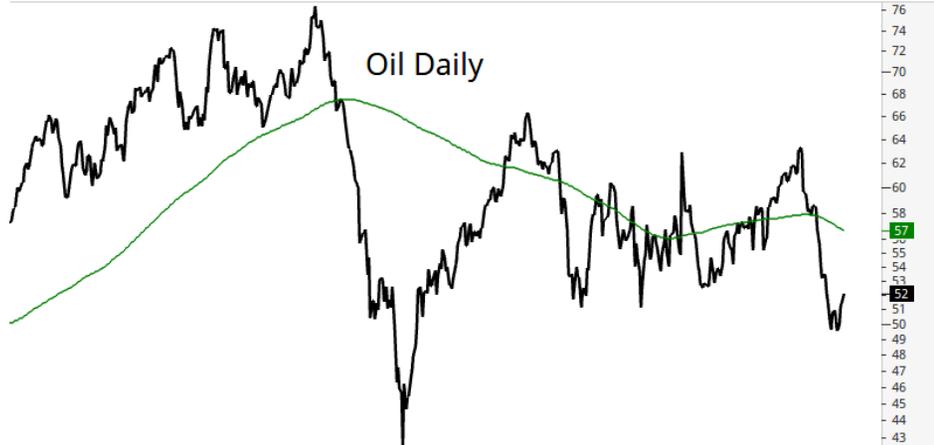
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Light, Sweet Crude Oil Futures - CL2Spot (Cmnty) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

Light, Sweet Crude Oil Futures - CL2Spot (Cmnty) - 1 Week Line Chart - USD - No Layout



Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Ma 0.118552e xy

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 0.328029e xy



iShares 20+ Year Treasury Bond ETF - TLT (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

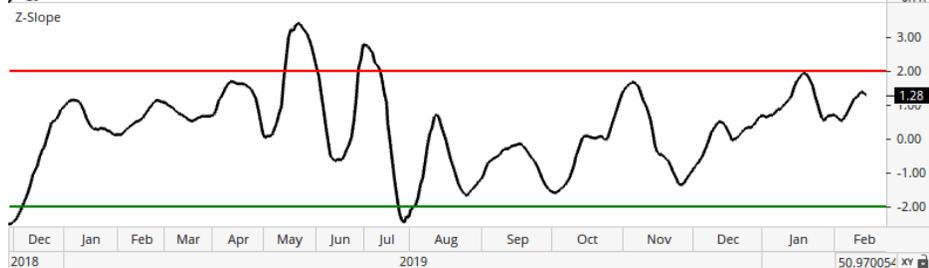
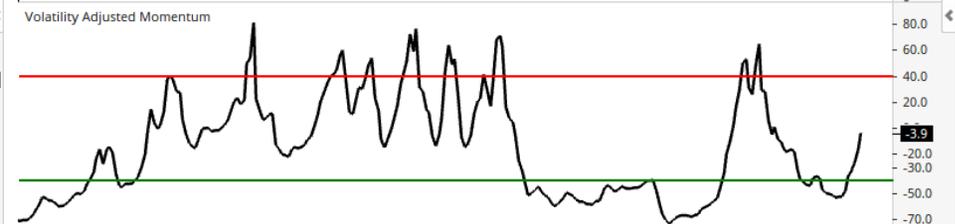
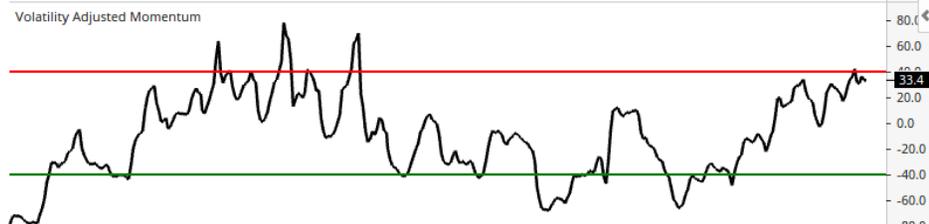
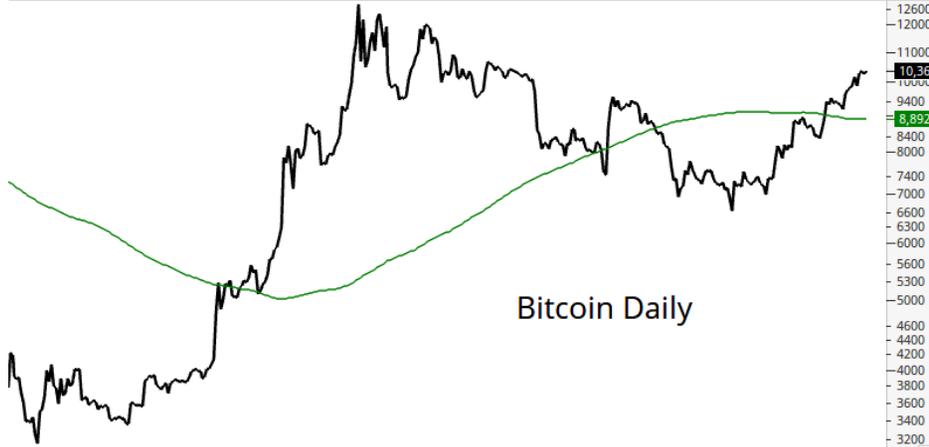
iShares 20+ Year Treasury Bond ETF - TLT (US) - 1 Week Line Chart - USD - No Layout





Bitcoin / US Dollar - XBTUSD (FX) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

Bitcoin / US Dollar - XBTUSD (FX) - 1 Week Line Chart - USD - No Layout



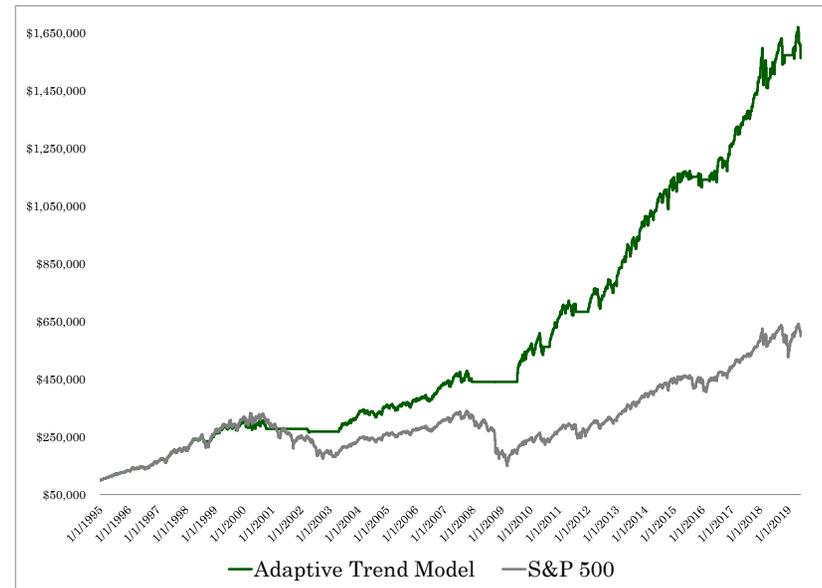
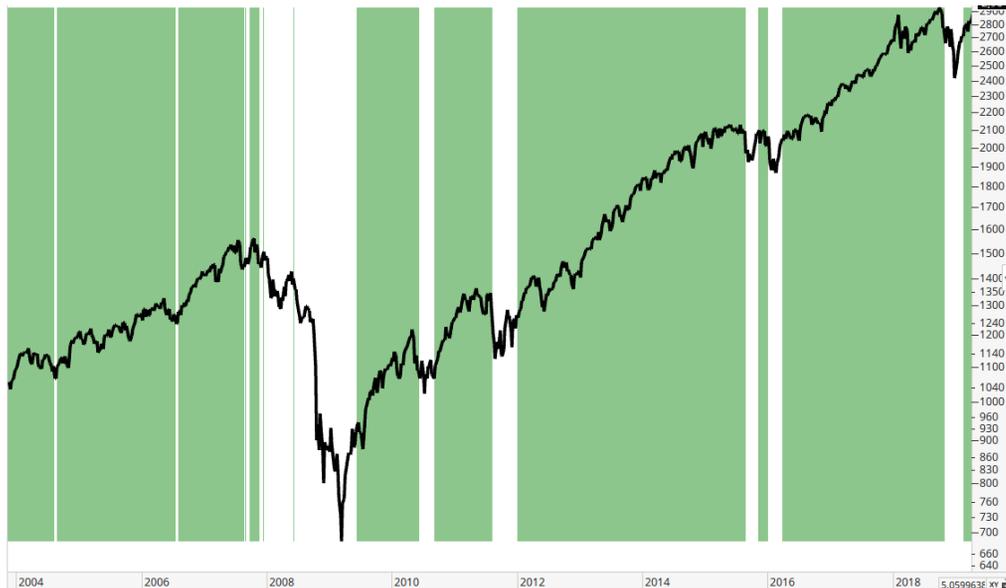
Optuma optuma.com 50.970054 xy

125.21185 xy

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**T**rend-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.

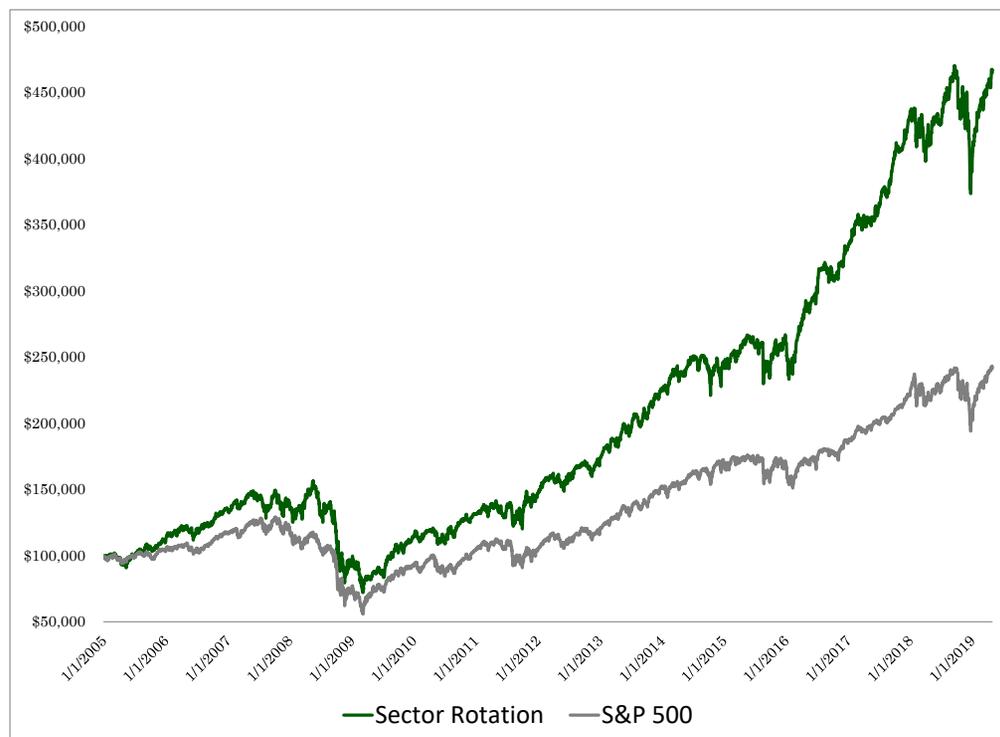


	<b>Annualized Return</b>	<b>Annualized Volatility</b>	<b>Beta</b>	<b>Sharpe Ratio</b>	<b>Maximum Drawdown</b>
<b>Adaptive Trend</b>	12.5%	10.3%	0.47	0.97	14.1%
<b>S&amp;P 500</b>	8.9%	15.3%	1	0.42	56.6%

*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.*

**T**hrasher 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.

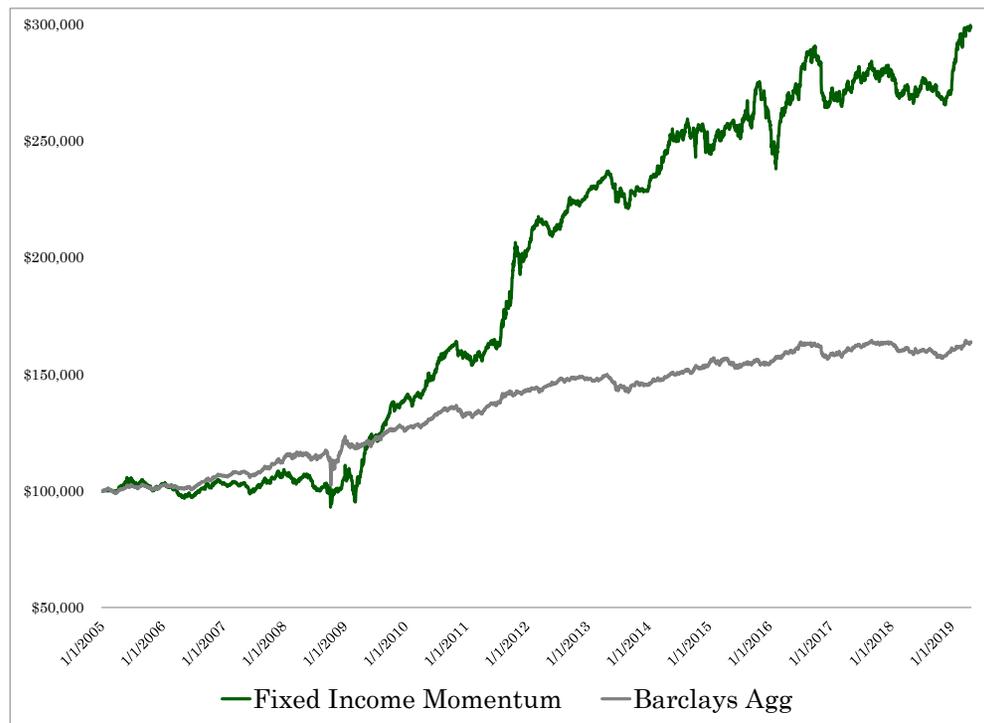


	<b>Annualized Return</b>	<b>Annualized Volatility</b>	<b>Beta</b>	<b>Sharpe Ratio</b>	<b>Maximum Drawdown</b>
<b>Sector Rotation</b>	12.7%	15.9%	0.96	0.64	53.9%
<b>S&amp;P 500</b>	7.5%	14.8%	1	0.34	56.6%

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*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.

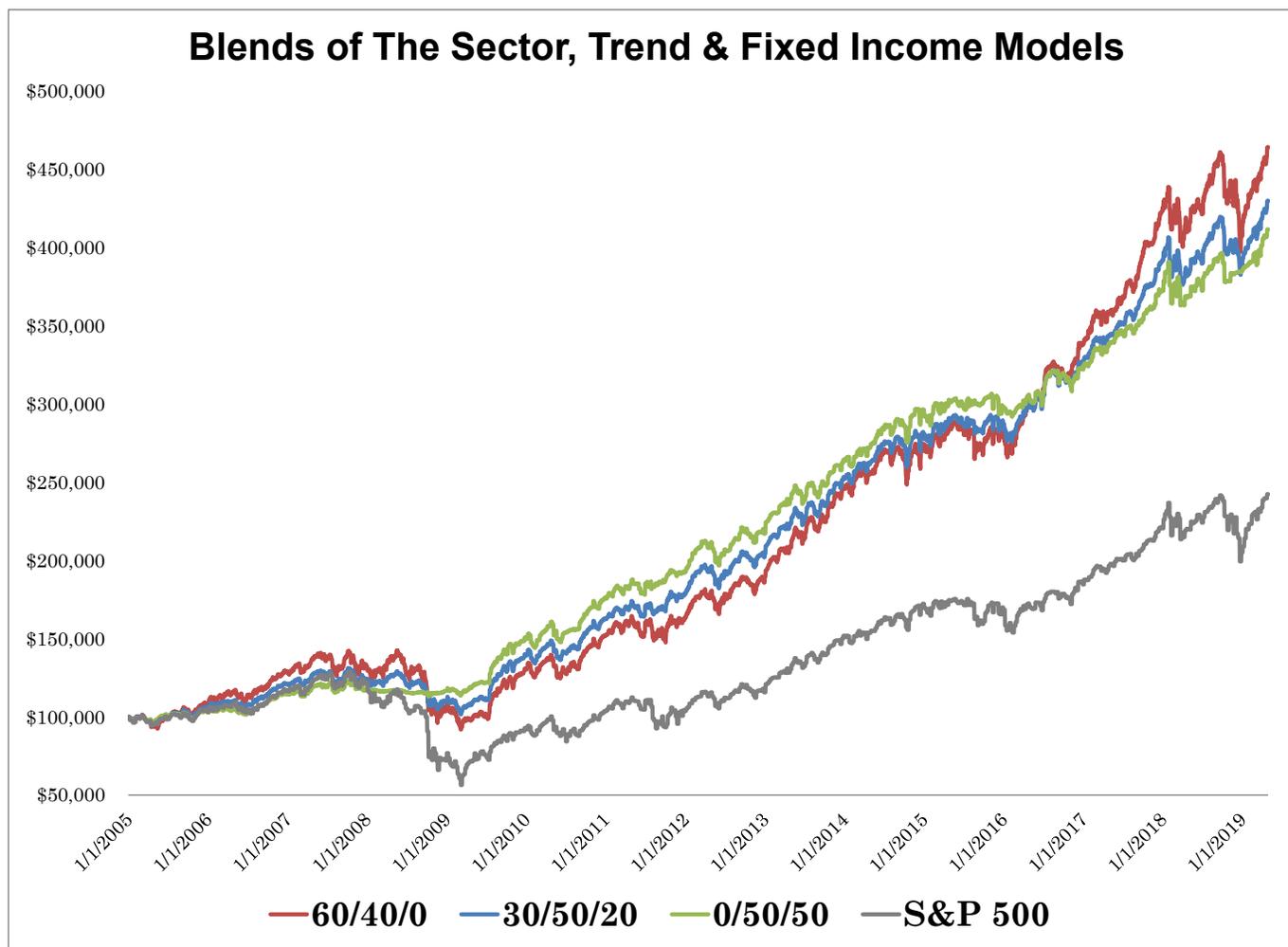


	<b>Annualized Return</b>	<b>Annualized Volatility</b>	<b>Beta</b>	<b>Sharpe Ratio</b>	<b>Maximum Drawdown</b>
<b>Fixed Income Momentum</b>	8.3%	8.2%	1.04	0.7	14.9%
<b>Barclays Agg</b>	3.6%	3.7%	1	0.29	11.0%

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**T**he 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.



The above chart shows examples of blending the sector, trend, and fixed income models . Ranging from an all equity approach of 60% in sector rotation, 40% trend and 0% in fixed income; 30% in sector rotation, 50% in trend, and 20% in fixed income; 0% in sector rotation, 50% in trend, and 50% in fixed income.

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<b>Trend</b> <b>(weekly)</b>	<b>Sector</b> <b>Rotation</b> <b>(monthly)</b>	<b>Fixed Income</b> <b>Momentum</b> <b>(quarterly)</b>
Positive	XLF XLK XLC	TLT AGG

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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.

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