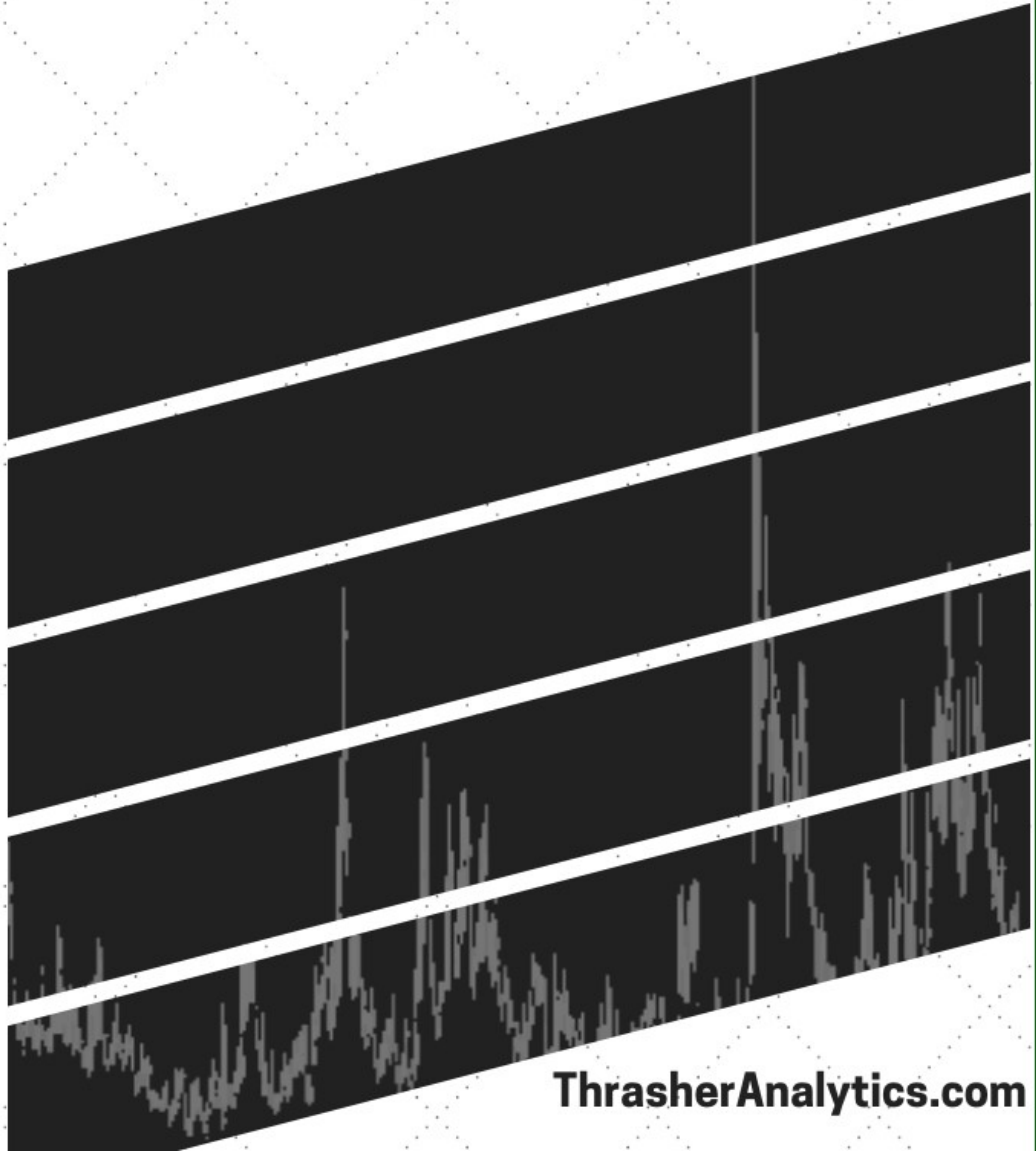




WEEKLY RESEARCH & ANALYSIS



[ThrasherAnalytics.com](http://ThrasherAnalytics.com)

Sector Rotation: April	
Technology	XLK
Health Care	XLV
Consumer Staples	XLP

Fixed Income Rotation: Q2	
Emerging Mkt Sovereign	PCY
Convertible Bond	CWB

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

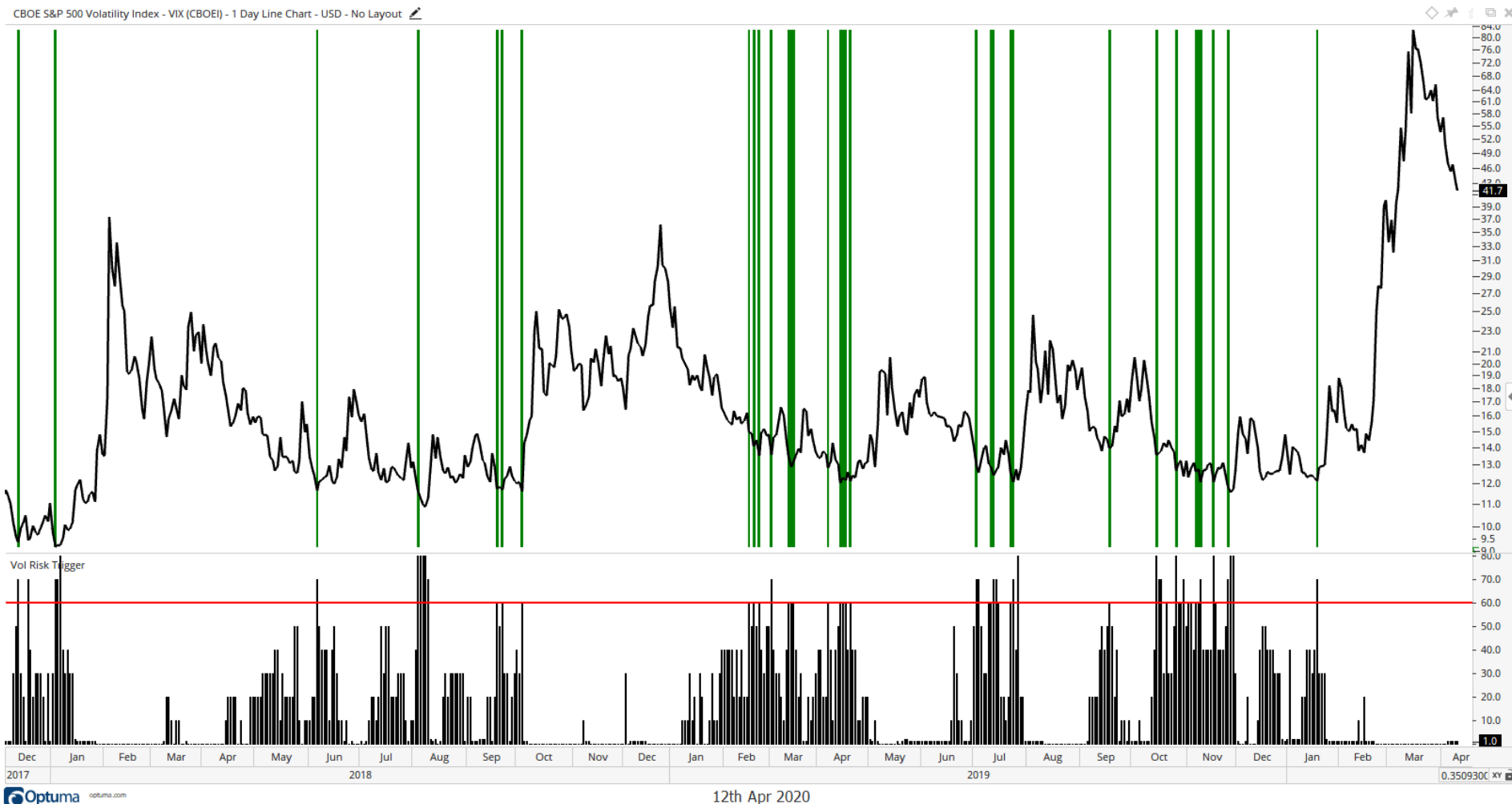
Daily Sentiment Index		
	% Bullish	5-day MA
S&P 500	44%	33%
Nasdaq 100	43%	35%
Nikkei	47%	35%
VIX	56%	60%
10yr Treasury	56%	61%
5yr Treasury	63%	67%
CRB Index	30%	34%
Gold	87%	83%
U.S. Dollar	66%	72%

*\*Green<25% Red>80%*

Notable Breadth Data:	
SPX >50MA	21.98%
SPX >200MA	17.62%
Nasdaq >50MA	30.10%
Nasdaq >200MA	30.10%

Sector	> 50MA	> 200MA	1wk Perf ▼	1mo Perf	3mo Perf	12mo Perf
SPDR Real Estate Select Sector Fund ETF	False	False	20.24%	-0.70%	-7.16%	-2.01%
SPDR Materials Select Sector Fund ETF	False	False	17.77%	5.98%	-14.04%	-10.45%
SPDR Financial Select Sector Fund ETF	False	False	16.67%	2.50%	-24.39%	-11.47%
SPDR Consumer Discretionary Select Sector Fund ETF	False	False	13.43%	-0.70%	-16.02%	-8.73%
SPDR Utilities Select Sector Fund ETF	False	False	13.26%	-4.14%	-5.29%	5.19%
SPDR Energy Select Sector Fund ETF	False	False	12.47%	-0.09%	-43.62%	-49.45%
SPDR Industrial Select Sector Fund ETF	False	False	10.72%	-3.88%	-24.14%	-16.42%
S & P 500 Stock Index	False	False	10.4%	1.58%	-14.81%	-3.07%
SPDR Technology Select Sector Fund ETF	False	False	8.77%	3.70%	-9.91%	12.33%
SPDR Health Care Select Sector Fund ETF	True	False	8.29%	2.96%	-7.73%	3.37%
SPDR Communication Services Select Sector ETF	False	False	8.25%	0.15%	-15.91%	-3.7%
SPDR Consumer Staples Select Sector Fund ETF	False	False	5.84%	-1.24%	-7.29%	4.27%

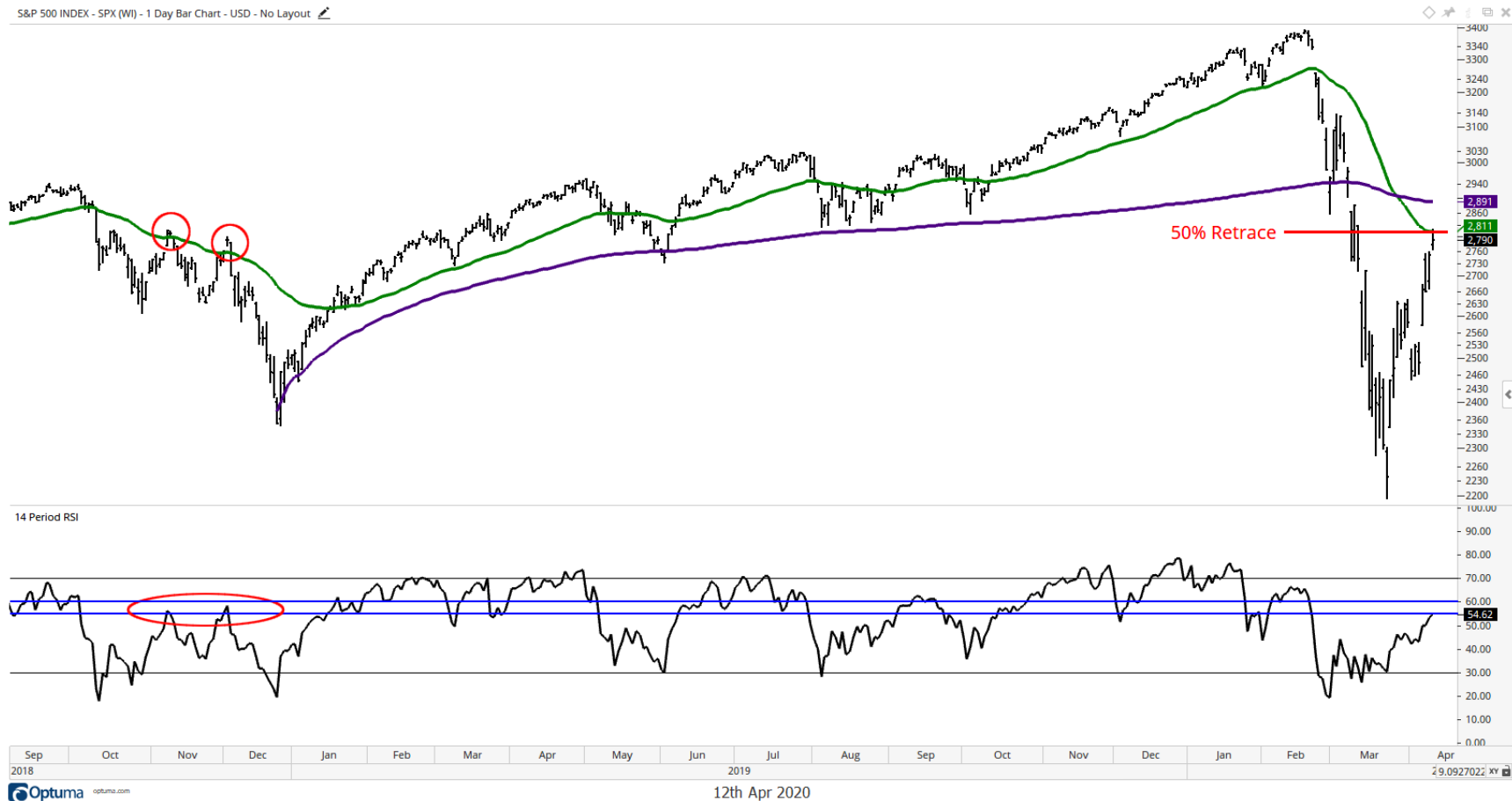
Use Code or Name to add an item to the watchlist



The VIX has continued to move lower but still remains above its 2018 high. While the entire volatility curve moved lower last week, the main focus of the decline was in the front portion of the VIX curve. However, we still remain in backwardation, with the front of the curve holding above the remaining contracts, but the spread continues to come in, a positive sign that traders are becoming less 'fearful' for the future.



S&P 500 INDEX - SPX (W) - 1 Day Bar Chart - USD - No Layout

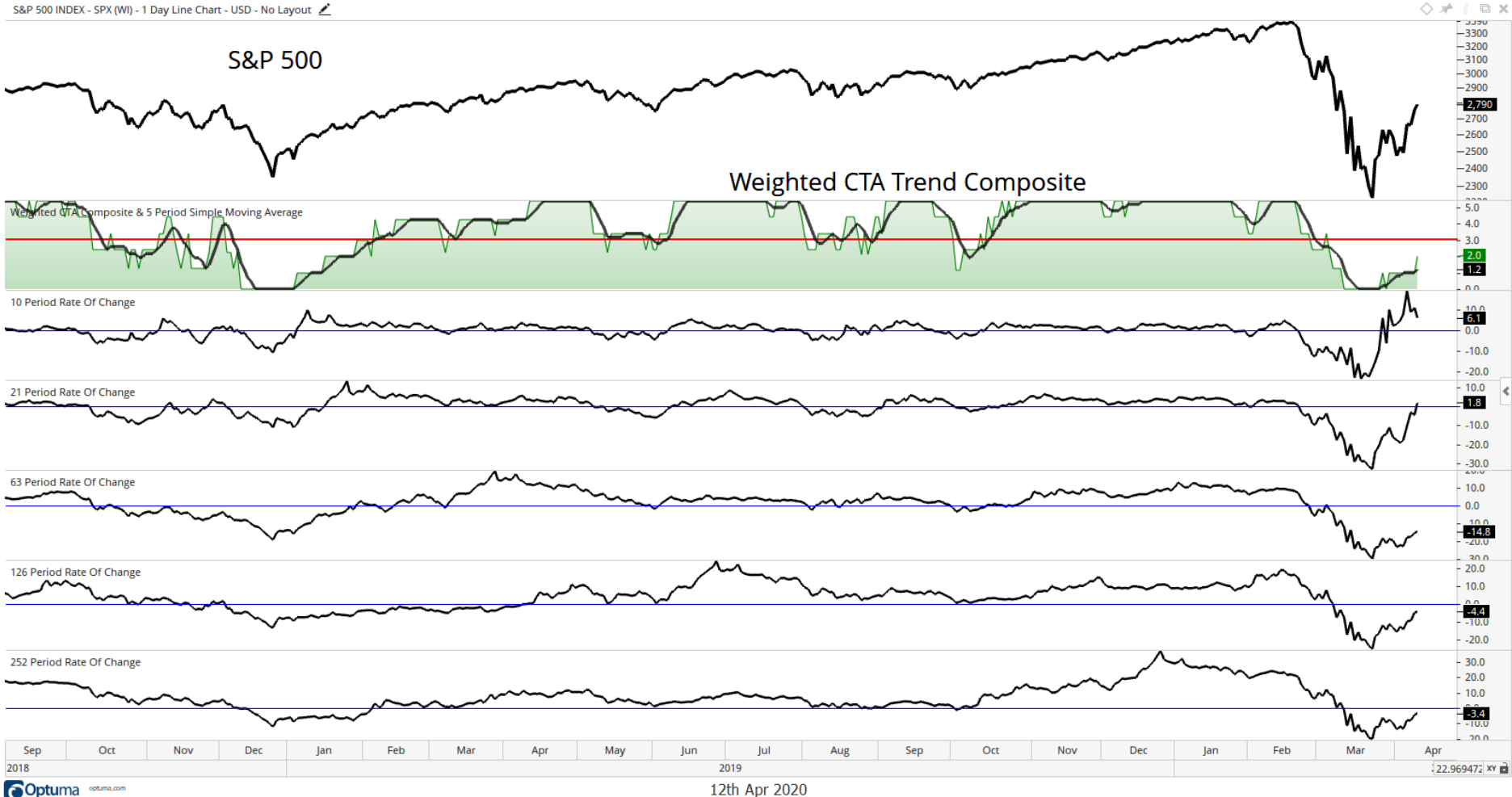


The title of this week’s letter is, “Make it or Break It” because equity prices have risen to a point that we will either see them roll over, marking this as a bear market rally, or establish further strength and give evidence that we’ve set a v-shaped bottom. The 14-day RSI has rallied to 54, which was the area that was resistance during the counter-trends in Q4 ‘18 (red circle in bottom panel). This area of momentum often marks the high-end of a bearish range, so if we see it break above here, then that range may have ended. On the daily chart of S&P 500, price sits just below a bevy of potential (key word!) resistance levels. First, the 50-day exponential moving average (green line), which was resistance in Q4 18, then we have the VWAP off the Dec. ‘18 low (purple line), and finally the 50% retracement (red line) of the current down trend. Historically 50% retracements put an end to many bear market rallies and its interesting that the 50-EMA was important in the last major down turn. I’ll be watching each of these this week. A break above would be very bullish in my opinion as I expect a fair amount of supply to be sitting near these levels, ready to push prices lower so if the bulls hold their ground, that will be very telling in who holds the reigns in this market right now.

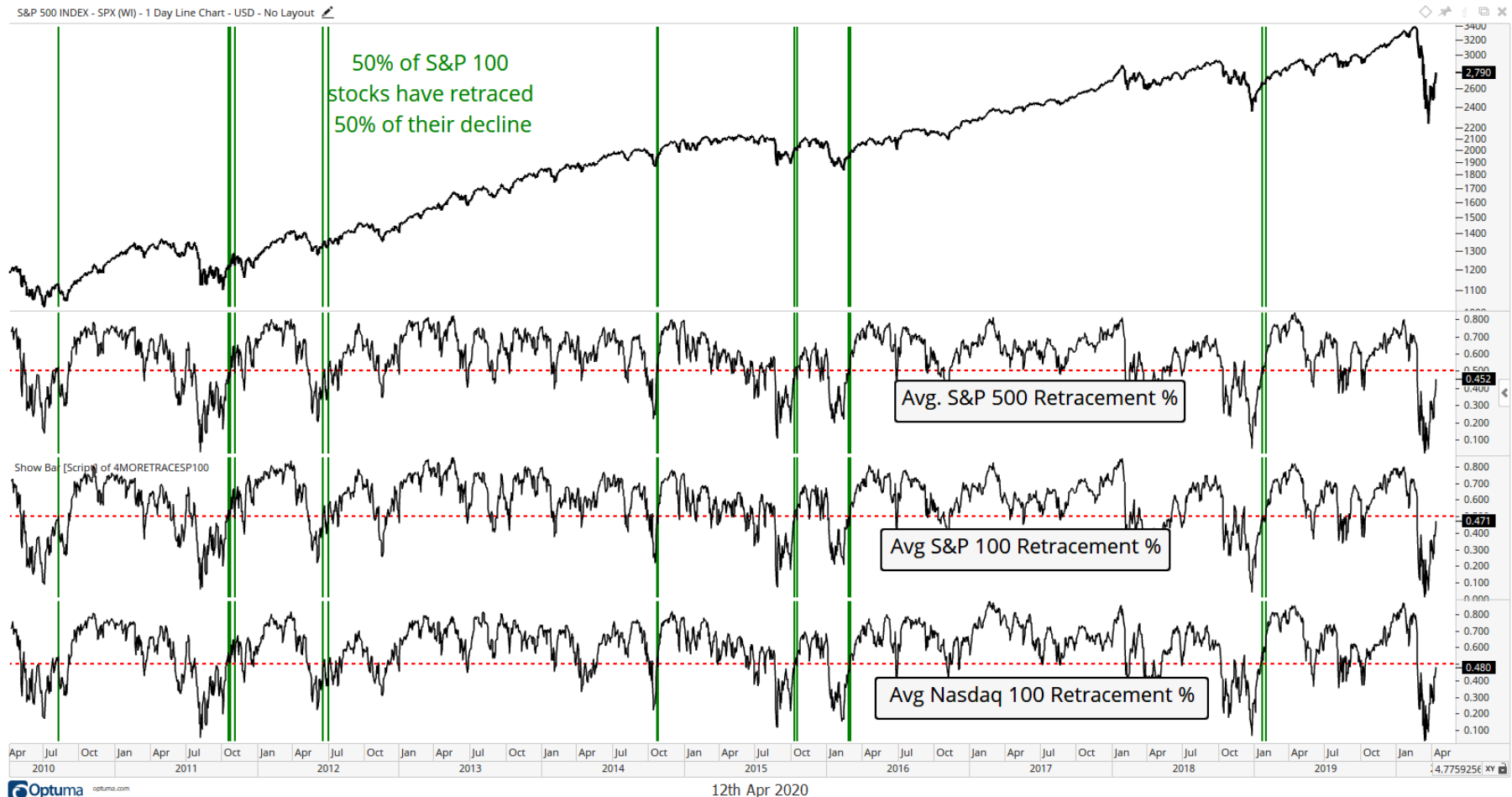
iShares Russell 2000 ETF - IWM (US) - 1 Day Line Chart - USD - No Layout



The Russell 2000 (small cap index) also has seen a rally in price back to potential resistance levels for this week. First we have the 2015 high and second the 2018 low. I expect both of these levels to be heavily watched by market participants this week.

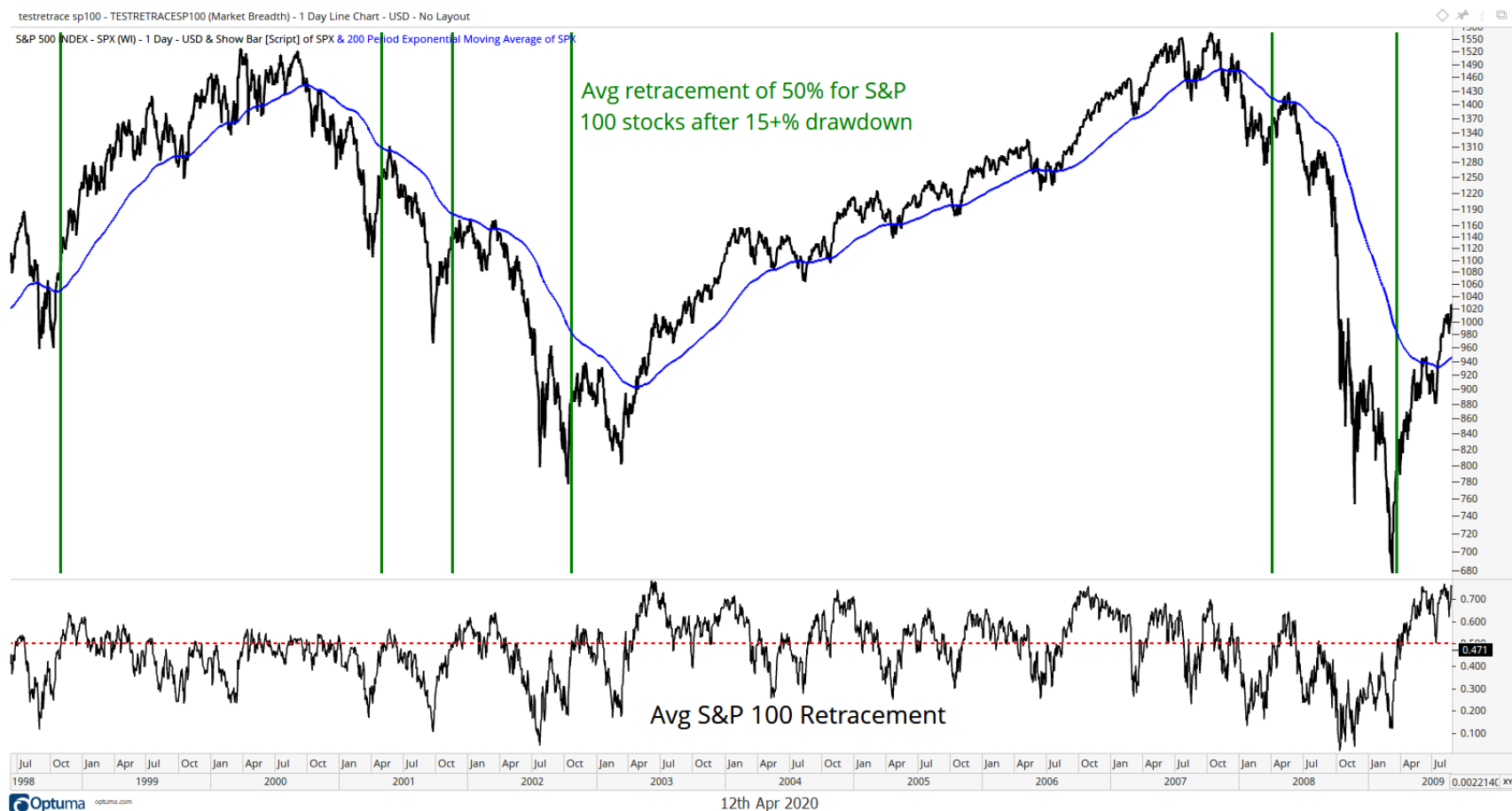


Above is my weighted CTA Trend Composite, and its individual components. This is simply a trend model with various lookback periods, showing which (if any) are positive. Typically when multiple lookback trends are positive, then CTA funds increase their equity risk exposure. As of Friday, the 10-day, and 1-month trends were positive, with 3-month, 6-month, and 1-year still negative. This leaves the composite still ‘under weight’ stocks.

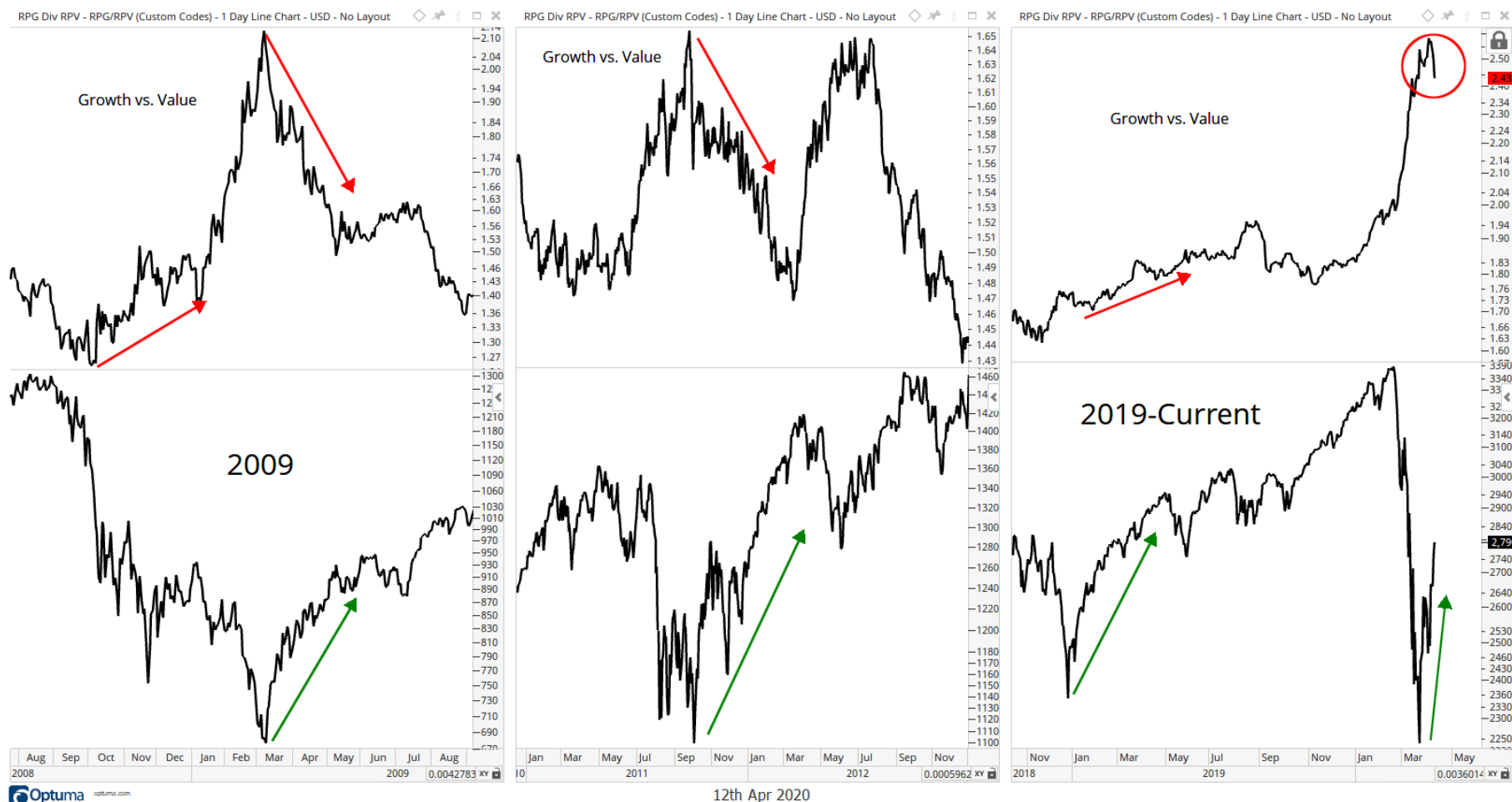


In a past letter I wrote of the two key pieces of data I was watching to gain confidence in a low or near a low had been found in this bear market. I'd like to add to that list, including an additional breadth component of the average retracement for the S&P 100. This looks how the average amount of the prior down trend that the stocks have retracement, or gained back. The above chart shows these levels for the S&P 500, S&P 100, and Nasdaq 100. The green vertical lines show when the average S&P 100 stock has retraced 50% of their prior down trend, a bullish sign that stock breadth has improved. As you can see, this has occurred after a final low has been formed in the past 10 years have major drawdowns. Importantly, it did not occur during an initial counter-trend rally, but instead after a final low (regardless of a W- or V-shaped bottom). We currently sit at 47% of stocks have retraced at least half of their down trend, so if we see continued strength this week then this figure could move above the 50% threshold. On the next page I'll show the dot-com and 2008 bear markets with this breadth tool.

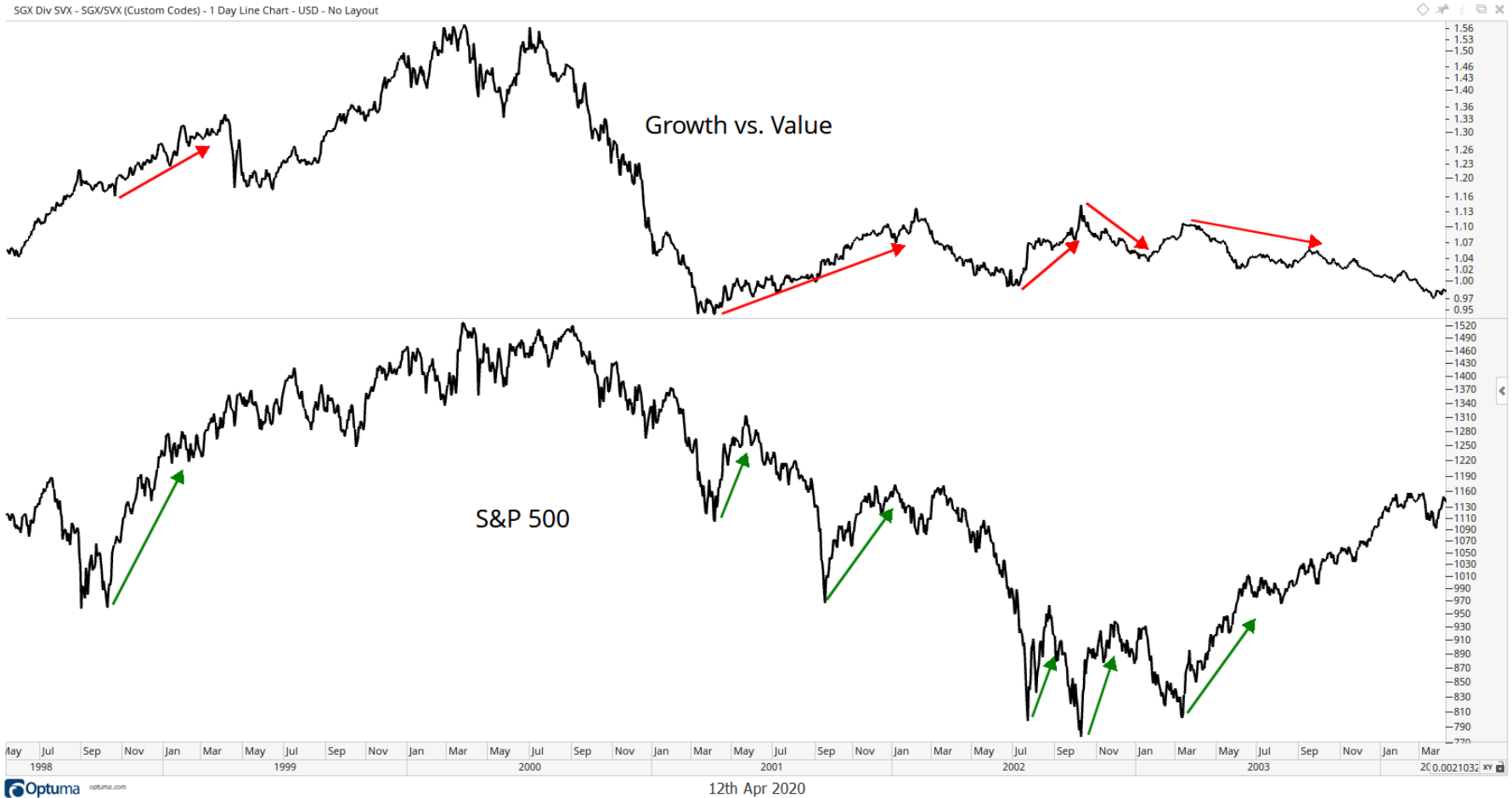




Above is the same chart as the prior page but looking at the last two major bear markets and I've just shown the breadth tool for the S&P 100. You'll see this bullish flip in breadth occurred after the 1998 correction after the test of the initial low. Then twice during the dot-com and once in the 2008 bear markets before the final lows. What I find very interesting about these 'false' positives is that price rallied up to their 200-day Exponential Moving Average each time and failed. Breadth had improved based on the individual stocks retracement, but the S&P 500 was unable to show strength at the long-term moving average. However, at the '02 and '09 bottoms, SPX had no trouble breaking above the 200-day MA to start the new up trends. Right now the 200-EMA sits about 6.5% above Friday's closing level so if stocks do continue to strength and the breadth indicator moves north of 50% then we could very easily see a test of the 200-day EMA very soon as well. That is, if they do continue to strength—as I showed on the first page, there's significant possible resistance it must battle with first.



The strength of the growth vs. value trend has been extremely impressive. But that trend began to turn lower once the broad market began to show signs of bottoming and moving higher. This turn to favor value over growth is a bullish development and one found in most market bottoms. The chart above shows 2009, 2011, and the last two years. You'll see that during the counter-trend rallies in '08 growth still showed strength but at the final '09 low, value took the driver seat. The same thing happened at the '11 low. That pattern broke in 2018 as growth continued to lead after the December bottom. I believe it's too early to say that we've seen a peak in growth just yet, but the move to favor value last week is encouraging and one to continue to watch for signs of confidence that the bullish rotation back to value is taking place. I'll look at this ratio again on the next page for the '98 and 2002 bear markets as well.

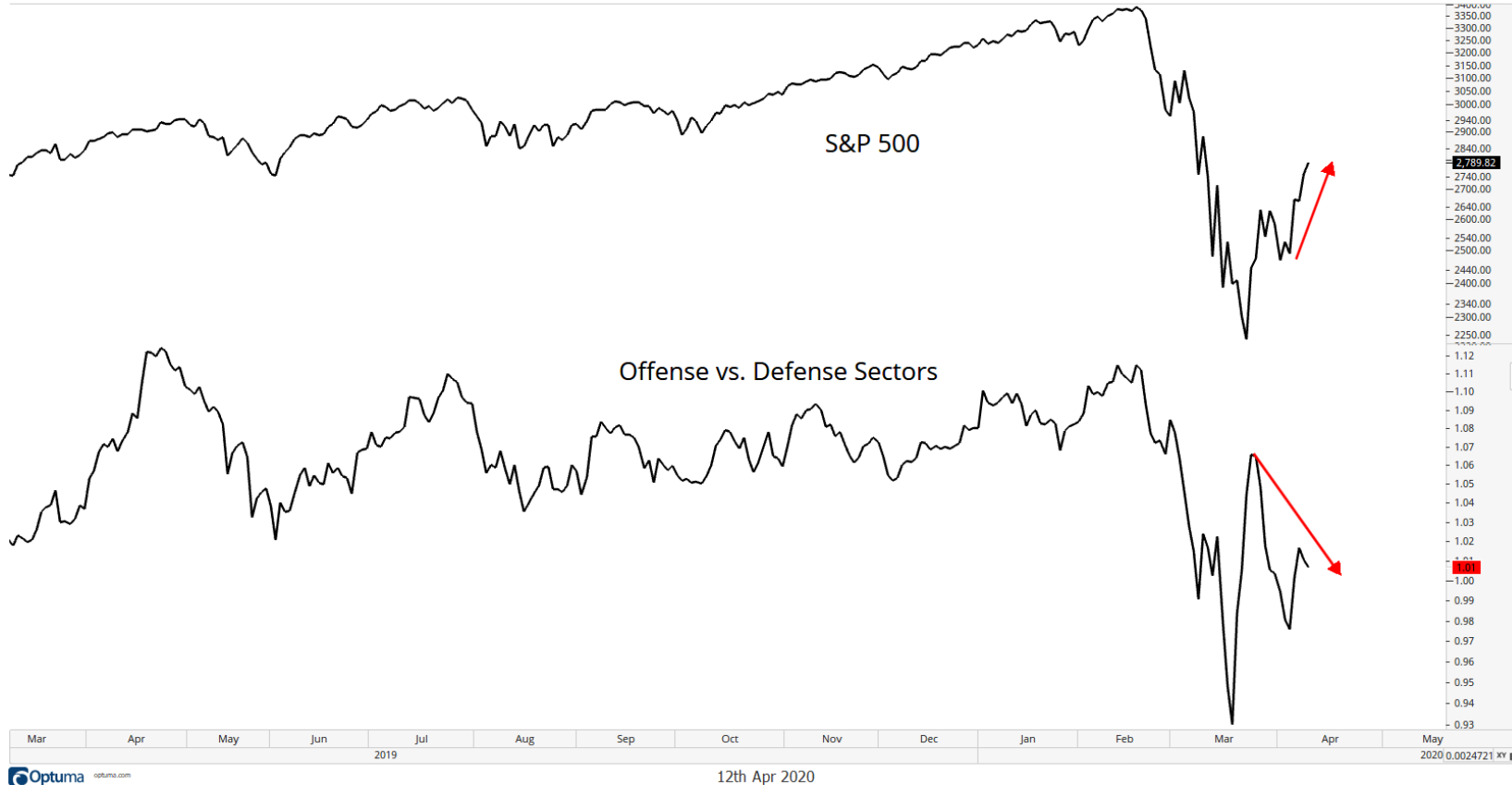


Above we have the growth vs. value ratio again but for 1998 through 2003. Like in 2018, growth continued to show leadership after the 1998 low but things got shifty during the 2001-2002 bear market. Counter-trends favored growth until we got the 2002 low when the trend shifted to favor value, which then continued for the next year.

What we've seen right now is a small shift to value but its largely been in the most beaten up stocks, I want to see if value leadership broadens out to favor not just the destroyed stocks of this bear market like airlines and cruise companies. This would be a bullish development.



Off. vs Def Sectors - OFFDEFSECTORS (Custom Codes) - 1 Day Line Chart - USD - No Layout



While value is showing signs of life, from a sector leadership stand point the drivers continue to largely be defensive. After the initial March low we saw a nice bounce in offensive leadership but that soon exhausted and defensive sectors began to lead once again, leaving us with a lower high in the ratio as shown on the chart above.

1 Day - S&P 500 Stock Performance - No Layout

Name	Ticker	1 Day Change	5 Day Change	1 Month Change	3 Month Change	
- 5 Day Change 10th Decile			AVG: 30.12%	AVG: -5.52%	AVG: -39.28%	
<input type="checkbox"/>	American Express Co.	AXP	2.98%	23.89%	-0.55%	-23.81%
<input type="checkbox"/>	American International Group Inc	AIG	9.99%	24.89%	-18.16%	-49.23%
<input type="checkbox"/>	Boeing Co.	BA	3.38%	23.18%	-19.70%	-54.86%
<input type="checkbox"/>	Capital One Financial Corp.	COF	5.98%	36.83%	-15.84%	-41.36%
<input type="checkbox"/>	Dow Inc	DOW	5.09%	30.43%	30.62%	-29.95%
<input type="checkbox"/>	DuPont de Nemours Inc	DD	4.94%	25.44%	11.24%	-33.09%
<input type="checkbox"/>	Ford Motor Co.	F	6.76%	23.17%	-8.98%	-42.01%
<input type="checkbox"/>	General Motors Company	GM	4.02%	32.27%	-7.46%	-31.41%
<input type="checkbox"/>	Metlife Inc	MET	5.95%	26.42%	6.49%	-32.29%
<input type="checkbox"/>	Simon Property Group, Inc.	SPG	8.36%	54.90%	-32.84%	-52.74%
+ 5 Day Change 9th Decile			AVG: 20.09%	AVG: 6.13%	AVG: -34.98%	
+ 5 Day Change 8th Decile			AVG: 14.55%	AVG: 4.15%	AVG: -14.43%	
+ 5 Day Change 7th Decile			AVG: 11.85%	AVG: -0.93%	AVG: -14.89%	
+ 5 Day Change 6th Decile			AVG: 10.26%	AVG: 1.74%	AVG: -13.91%	
+ 5 Day Change 5th Decile			AVG: 8.31%	AVG: 0.36%	AVG: -13.61%	
+ 5 Day Change 4th Decile			AVG: 7.13%	AVG: 5.65%	AVG: -15.49%	
+ 5 Day Change 3rd Decile			AVG: 5.82%	AVG: 5.37%	AVG: -7.33%	
+ 5 Day Change 2nd Decile			AVG: 3.97%	AVG: 3.55%	AVG: -9.87%	
- 5 Day Change 1st Decile			AVG: -0.07%	AVG: -1.08%	AVG: -9.01%	
<input type="checkbox"/>	Allergan PLC	AGN	0.62%	2.62%	-1.78%	-5.42%
<input type="checkbox"/>	Colgate-Palmolive Co.	CL	-0.44%	2.55%	1.47%	0.07%
<input type="checkbox"/>	Conoco Phillips	COP	-2.66%	2.57%	6.66%	-47.43%
<input type="checkbox"/>	Gilead Sciences, Inc.	GILD	-1.97%	-4.51%	-0.26%	11.65%
<input type="checkbox"/>	Lilly(Eli) & Co	LLY	-0.34%	2.50%	4.08%	7.22%
<input type="checkbox"/>	Netflix Inc	NFLX	-0.11%	0.17%	5.94%	10.45%
<input type="checkbox"/>	Philip Morris International Inc	PM	0.91%	1.35%	-5.64%	-14.66%
<input type="checkbox"/>	Procter & Gamble Co.	PG	-0.38%	0.23%	2.75%	-7.42%
<input type="checkbox"/>	Raytheon Co.	RTN	0.00%	-10.82%	-30.52%	-48.37%
<input type="checkbox"/>	Walmart Inc	WMT	-0.03%	2.65%	6.44%	3.78%

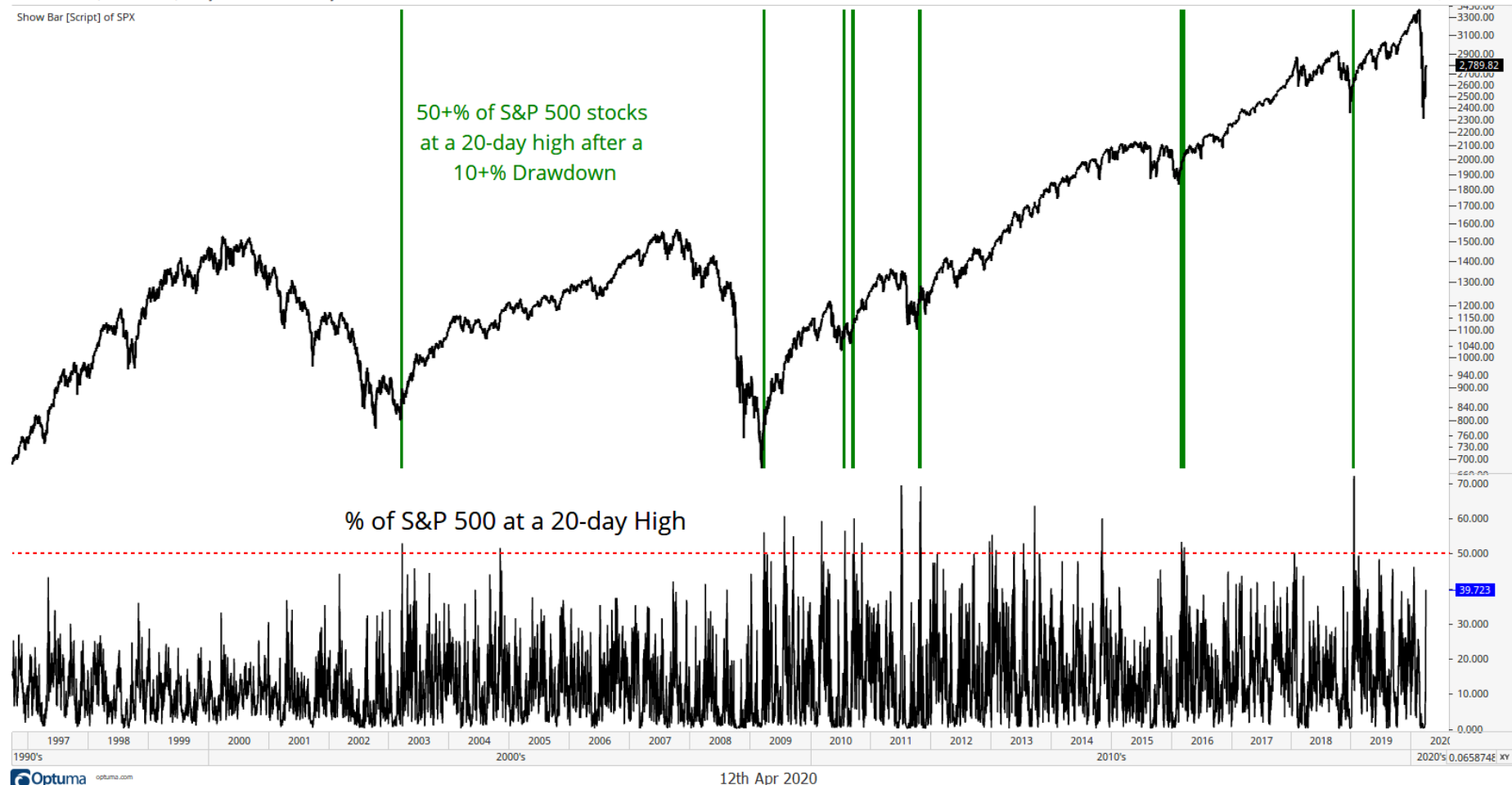
As I mentioned a few pages above, the most beaten down stocks have been shown the most interest by buyers over the last week. The chart to the left shows the S&P 500 broken down by decile based on their 5-day performance. Notice the best performers were the ones with the worst 3-month performance while the worst performing decile (at the bottom of the table) were some of the best performing stocks over the last 1- and 3-months.

I've expanded the top and bottom deciles to show just what stocks are included. The companies expected to be benefiting from the national 'lock down' (Netflix, Colgate, Walmart, etc.) were not shown the love during the bounce in the major indices last week. Meanwhile, the credit card companies, shopping malls and carmakers made up the bulk of the least for the best performing stocks after being sold down on average by 40% of the prior 3-months.

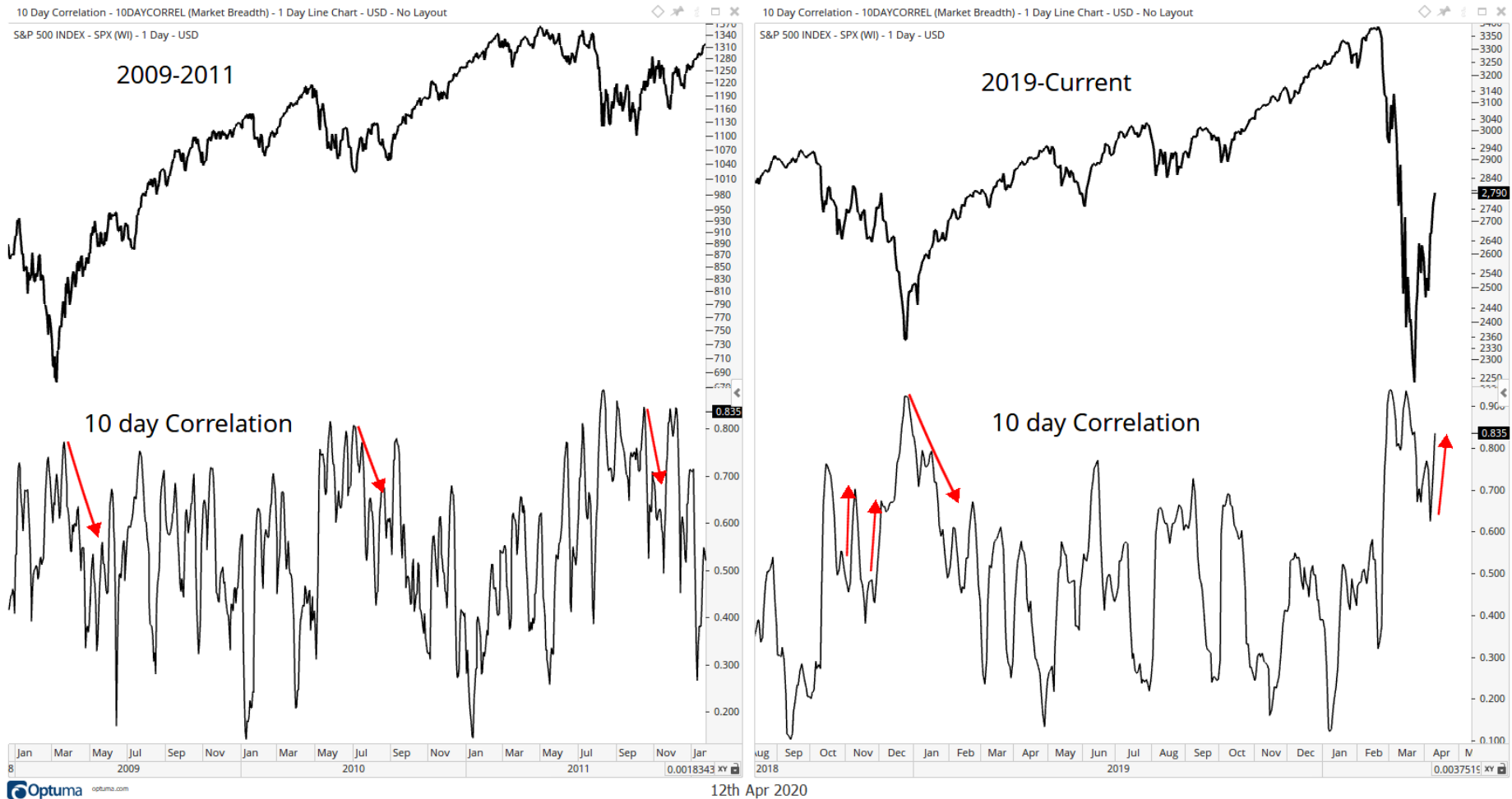
This suggests the move in stocks was potentially a short-covering rally or a 'dash for trash'. I'd like to see the buying expand beyond just the most beaten down corners of the equity market.

20DAYHIGHSPX (Market Breadth) - 1 Day Bar Chart - USD - No Layout

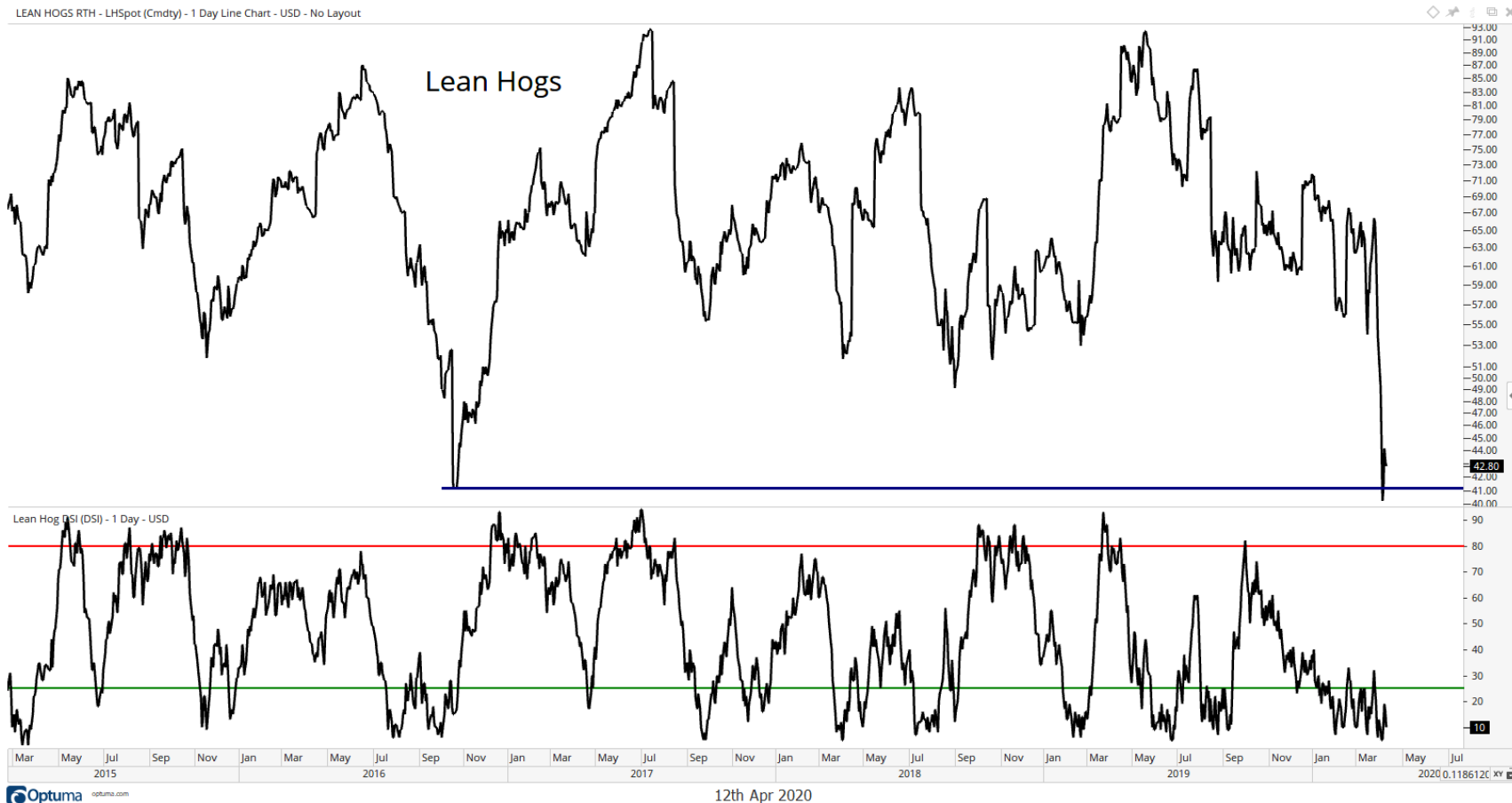
Show Bar [Script] of SPX



Ned Davis Research (NDR) has written in the past about their version of a ‘breadth thrust’ based on the percentage of S&P 500 stocks at a 20-day high, with the required threshold of 55%. The Above charts shows this figure but with a relaxed threshold of just 50%, meaning at least half of the stocks are at a 20-day high. You’ll notice this has been a fairly common occurrence after many major market lows (2002, 2009, 2010, 2011, 2016, 2018). What I also find interesting is this doesn’t just occur after counter-trend rallies but after the final low has been in place, as shown by the green vertical bars (I’ve screened out signals that did not occur after at least a 10% drawdown). NDR notes that going back to 1972 using their 55% threshold, stocks were higher 77% of the time 3-months later (N=26) by an average of 4.17%, nearly double the average 3-month return of the S&P 500. As of right now, we have not seen at least 50% of stocks hit a 20-day high, Friday saw just 39%.



Another reason I'm hesitant to believe we've seen the final low rather than just a bear market rally is based on the 2-week correlation of stocks. In a "healthy" market there's clear winners and losers as buyers are choosy with what they are acquiring. This activity sends the average stock correlation lower. But during panics, whether its panic buying or panic selling, stock correlation shoots up, as you can see on the chart above. During down trends, traders sell everything as they de-risk, causing stocks to move collectively in the same direction. When markets calm down and form a bottom, that correlation begins to move lower. We saw in at the '09, '10, and '11 lows as shown by the red arrows. But on the right chart we can see during the counter-trend rallies in 2018, correlation rose and then dropped at the final low. Today, we have correlation moving back up after its initial brief drop for a historic 0.93 reading (the highest in 20 years). This type of movement in correlation suggests we are in the middle of a counter-trend rally, not one by intentioned buyers.



Last week I mentioned the attractiveness of the agriculture space, specifically crops. Well over the weekend additional reports have come out about pork and beef production (or lack there of), with the potential to cause a drop in supply. [South Dakota instructed Smithfield Farms](#) to close one of their major pork production plants due to spread of the Coronavirus. This comes after Tyson Foods, Cargill, and the National Beef Packing Companies all closed their plants as well. The above chart shows the futures market for Lean Hogs, which has dropped to the 2016 low, likely on the expected fall in national and global demand. This has sent sentiment (bottom panel) near single digits of bullishness. If the major beef and pork producers are no longer providing supply, this could add to the inflation from agricultural products.



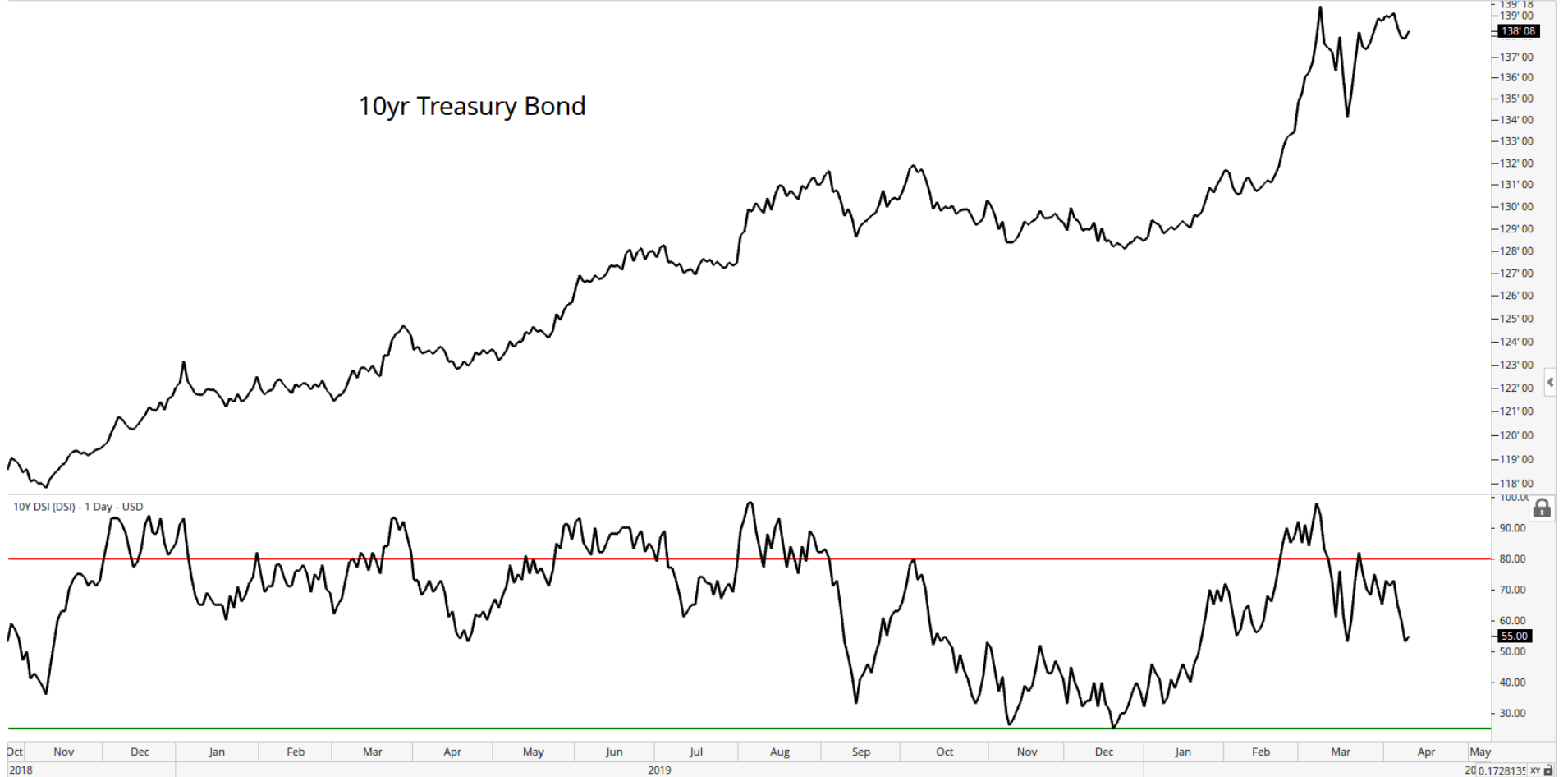
<input type="checkbox"/>	Market	% Bullish <sup>▲</sup>	5MA	History <sup>+</sup>
<input type="checkbox"/>	Lean Hog DSI	10	12.2	
<input type="checkbox"/>	Corn DSI	16	12.6	
<input type="checkbox"/>	Cattle DSI	22	17.8	
<input type="checkbox"/>	Sugar DSI	25	22.4	
<input type="checkbox"/>	Crude Oil DSI	26.00	33.20	
<input type="checkbox"/>	Cocoa DSI	26.00	28.20	
<input type="checkbox"/>	Natural Gas DSI	27.00	26.60	
<input type="checkbox"/>	Heating Oil DSI	29.00	32.80	
<input type="checkbox"/>	Mexican Peso DSI	30.00	22	
<input type="checkbox"/>	CRB Index DSI	30.00	33.60	
<input type="checkbox"/>	Orange Juice DSI	32.00	33.00	
<input type="checkbox"/>	Gasoline DSI	33.00	33.20	
<input type="checkbox"/>	Swiss Franc DSI	36.00	33.80	
<input type="checkbox"/>	Cotton DSI	36.00	28.80	
<input type="checkbox"/>	Euro DSI	38.00	35.00	
<input type="checkbox"/>	New Zealand Dollar DSI	40.00	31.80	
<input type="checkbox"/>	Lumber DSI	40.00	30.20	

<input type="checkbox"/>	Code	% Bullish <sup>▲</sup>	5MA	History <sup>+</sup>
<input type="checkbox"/>	Nasdaq DSI	43.00	35.00	
<input type="checkbox"/>	SPX DSI	44.00	33.00	
<input type="checkbox"/>	Copper DSI	44.00	35.00	
<input type="checkbox"/>	British Pound DSI	45.00	38.80	
<input type="checkbox"/>	Platinum DSI	46.00	39.40	
<input type="checkbox"/>	Silver DSI	47.00	38.80	
<input type="checkbox"/>	Nikkei DSI	47.00	34.60	
<input type="checkbox"/>	Coffee DSI	50.00	51.00	
<input type="checkbox"/>	Australian Dollar DSI	50.00	38.40	
<input type="checkbox"/>	Palladium DSI	51.00	45.80	
<input type="checkbox"/>	10Y DSI	55.00	61.20	
<input type="checkbox"/>	VIX DSI	56.00	60.40	
<input type="checkbox"/>	5YR DSI	63.00	67.00	
<input type="checkbox"/>	Wheat DSI	66.00	62.20	
<input type="checkbox"/>	US Dollar DSI	66.00	72.00	
<input type="checkbox"/>	EuroDollar DSI	70.00	71.60	
<input type="checkbox"/>	Gold DSI	87	83.2	

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

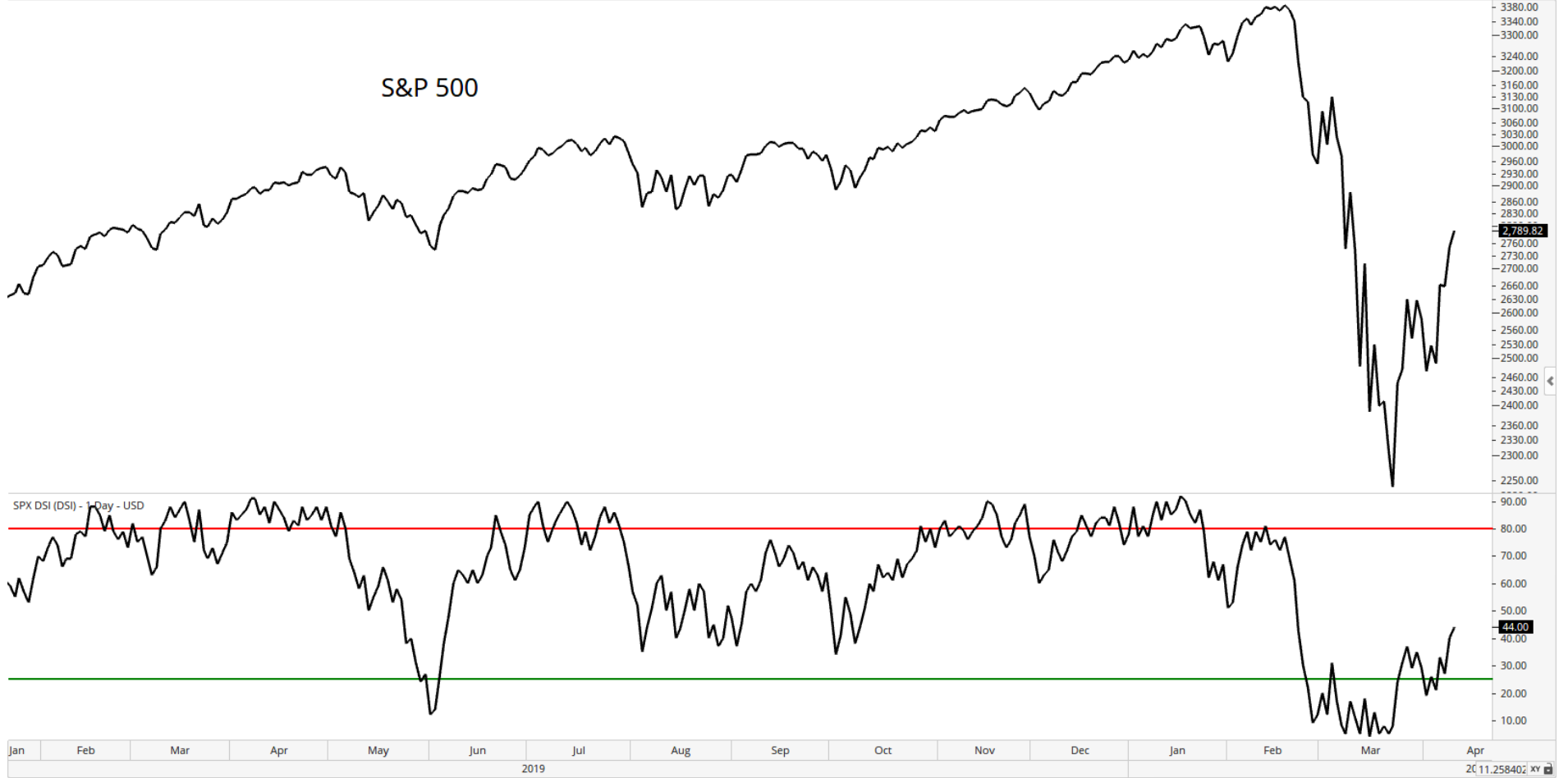


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12th Apr 2020

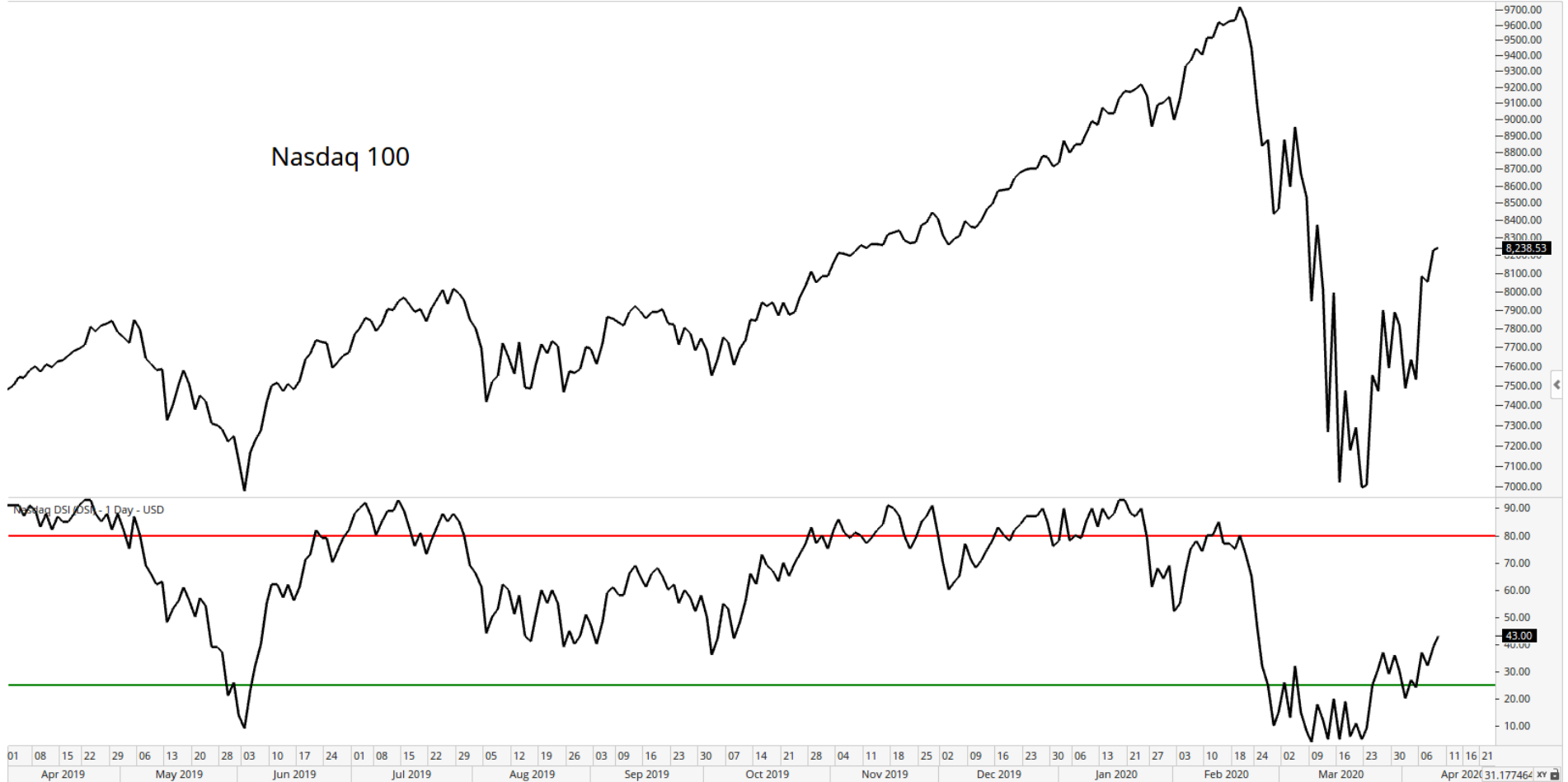
20 0.172813E xy

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





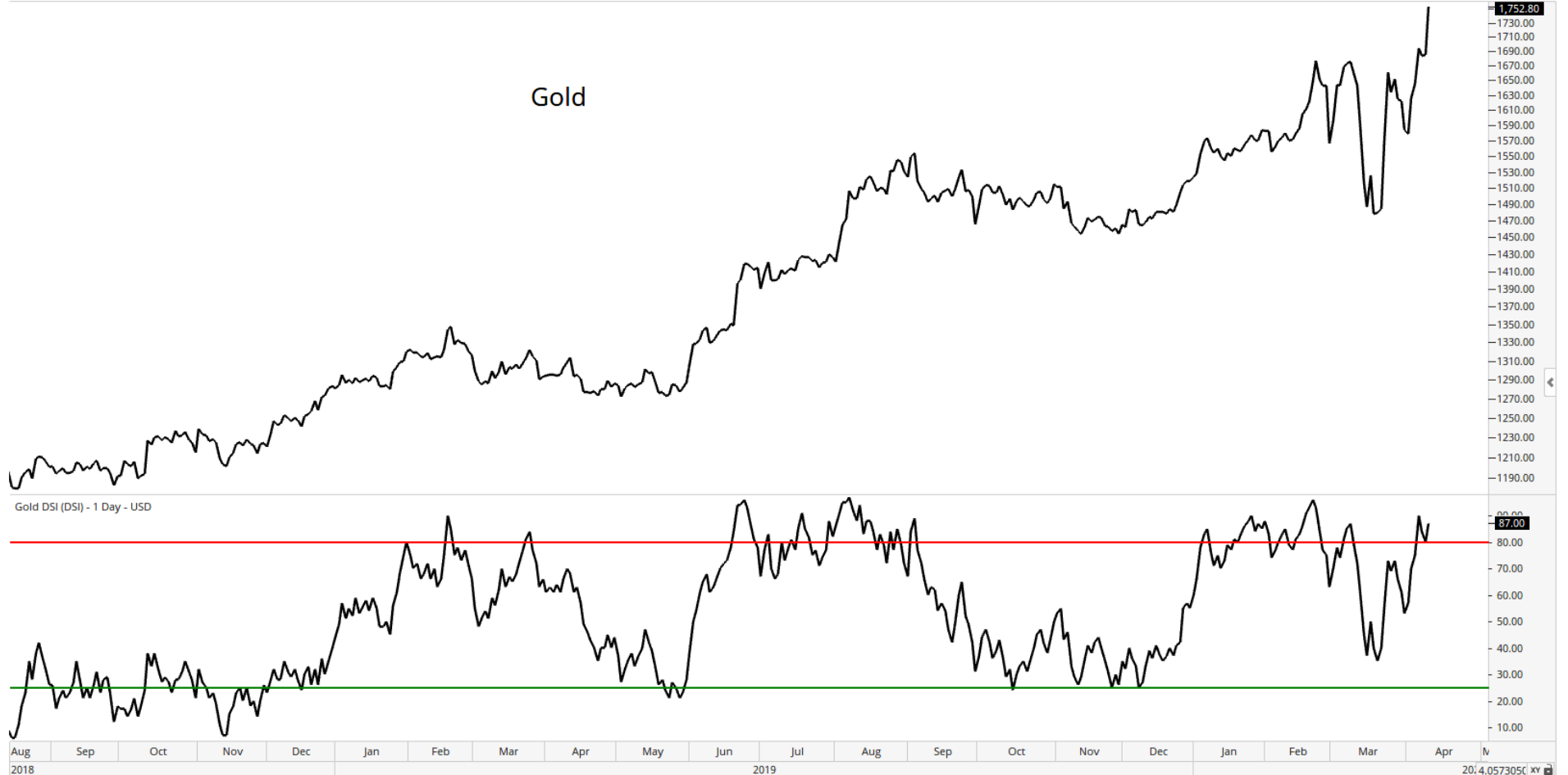
NASDAQ 100 Index - NDY (WI) - 1 Day Line Chart - USD - No Layout



12th Apr 2020



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



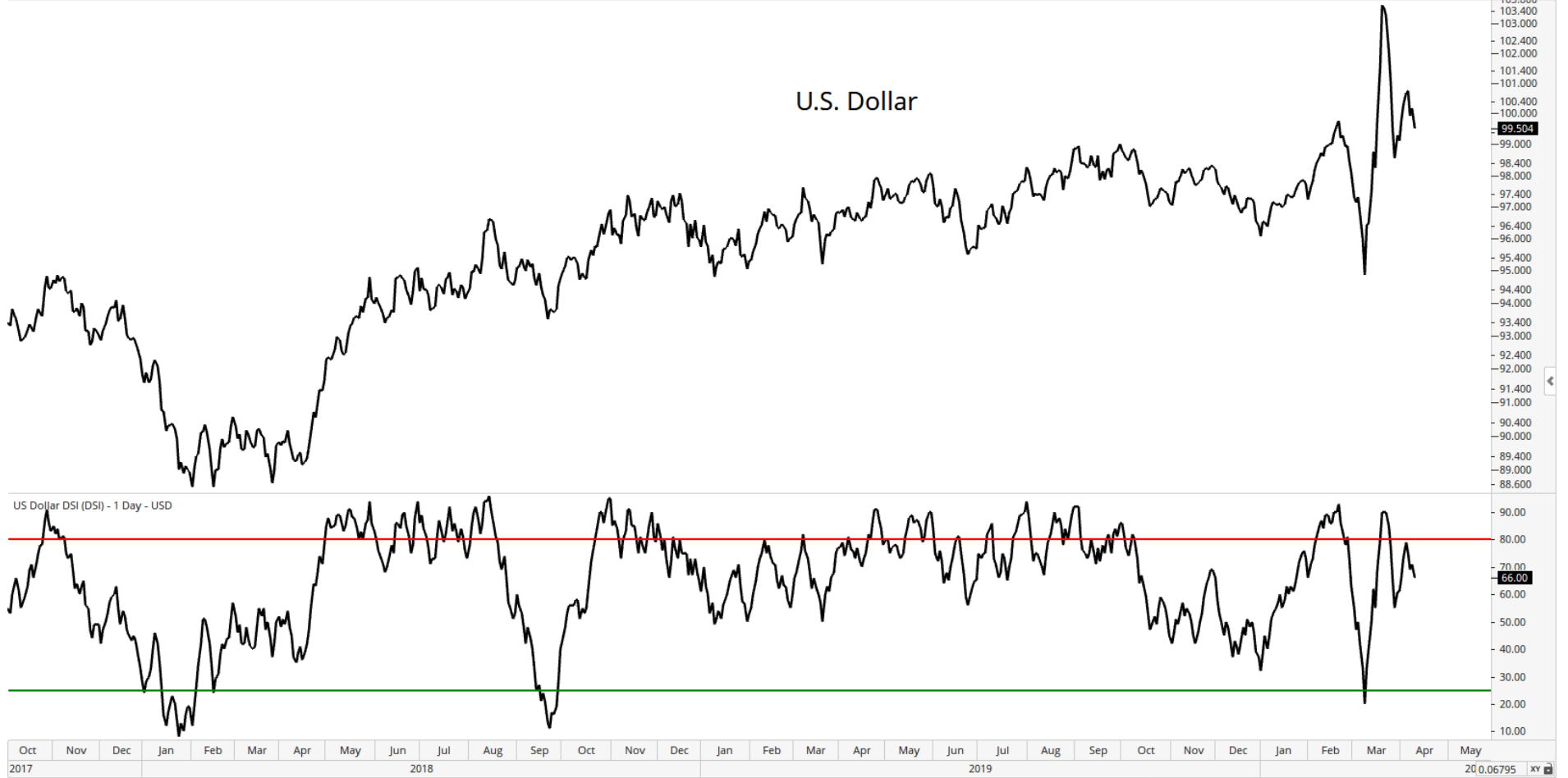
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12th Apr 2020

20:4,057305C xy



U.S. Dollar Index - DXSpot (AFUT) - 1 Day Line Chart - USD - No Layout

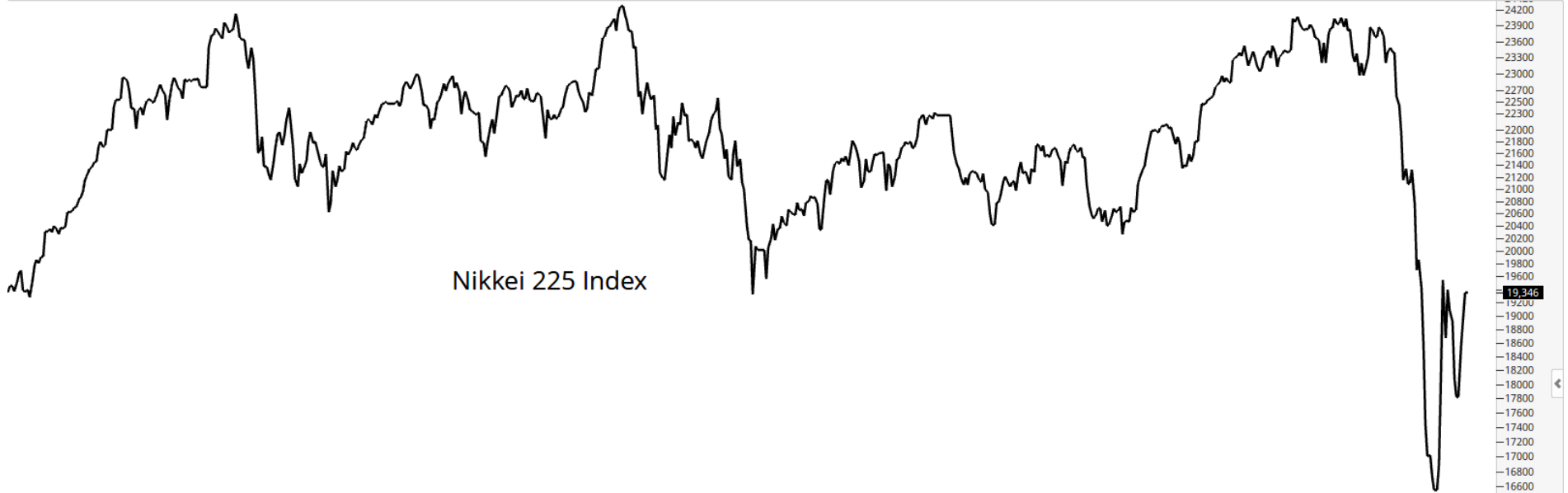


CBOE S&P 500 Volatility Index - VIX (CBOE) - 1 Day Line Chart - USD - No Layout

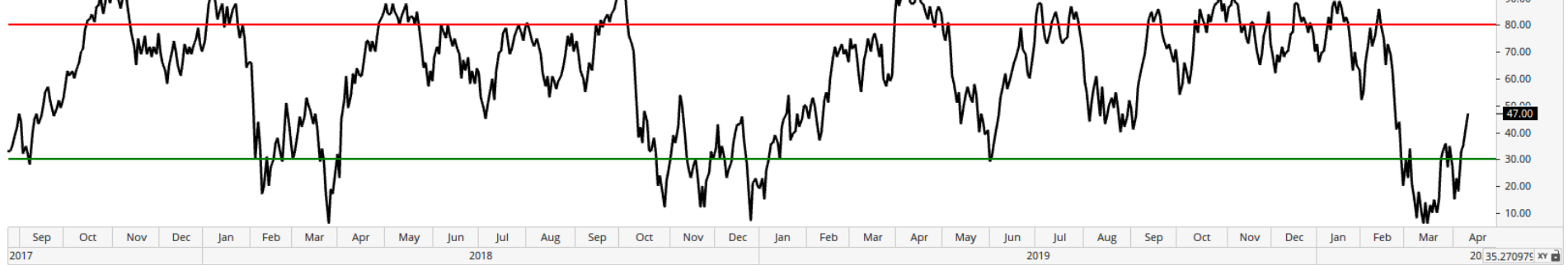




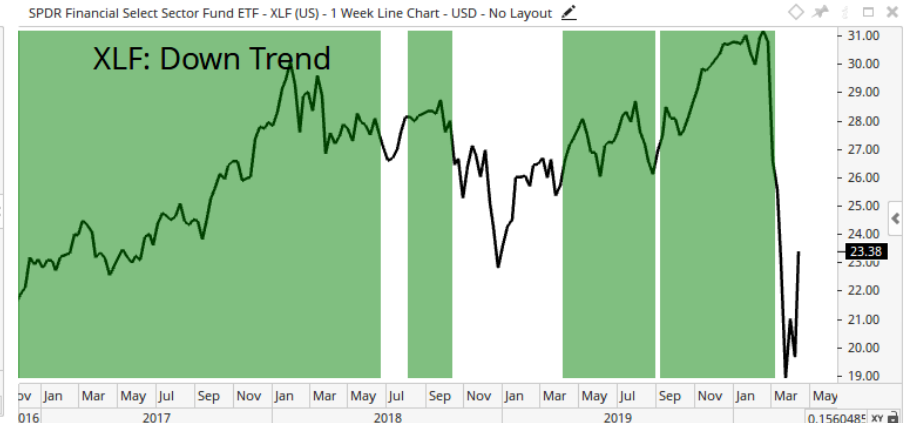
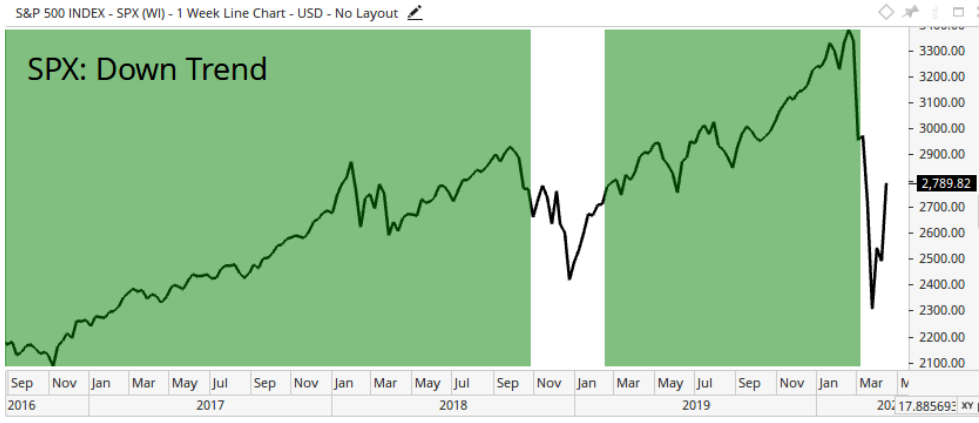
NIKKEI 225 INDEX - NYCash (CME) - 1 Day Line Chart - USD - No Layout



Nikkei DSI (DSI) - 1 Day - USD



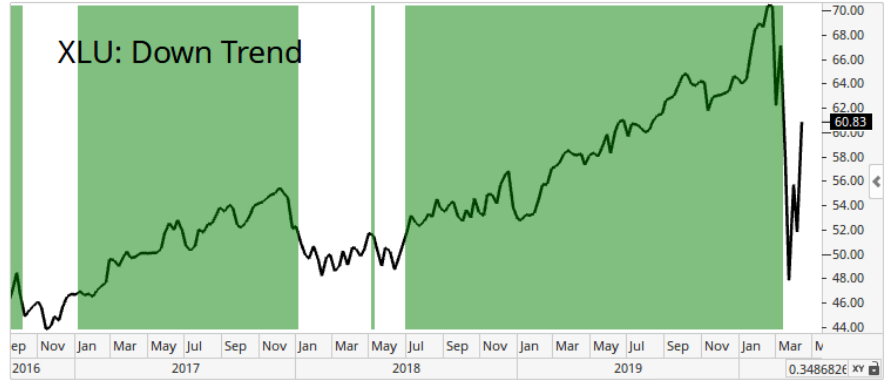




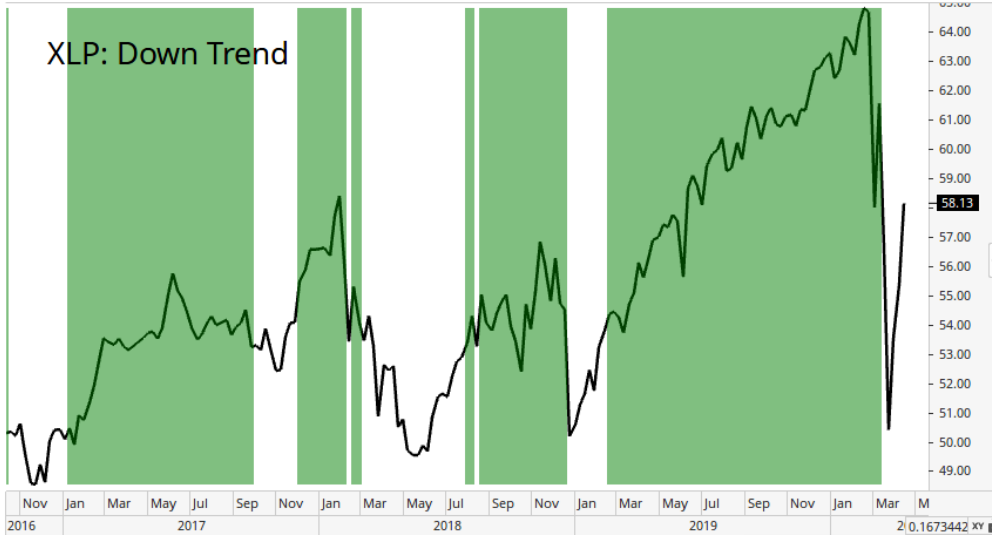
SPDR Health Care Select Sector Fund ETF - XLV (US) - 1 Week Line Chart - USD - No Layout



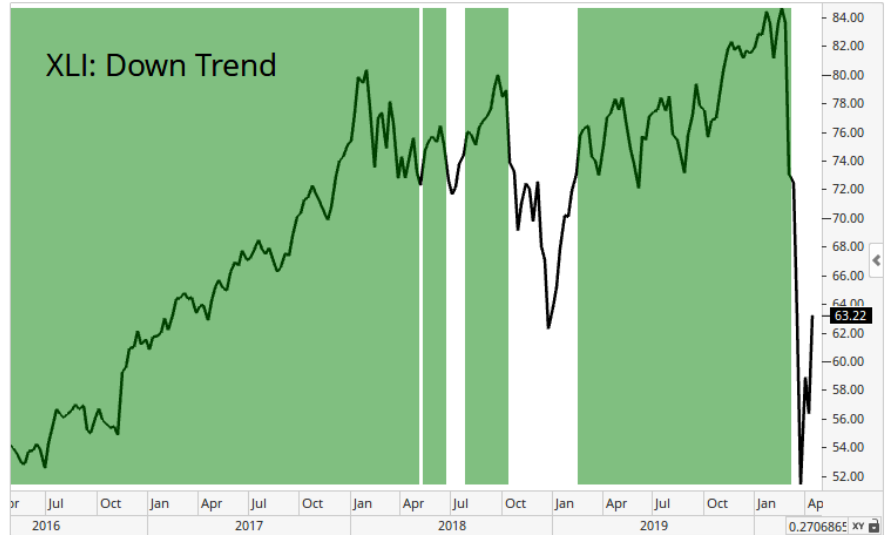
SPDR Utilities Select Sector Fund ETF - XLU (US) - 1 Week Line Chart - USD - No Layout



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



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



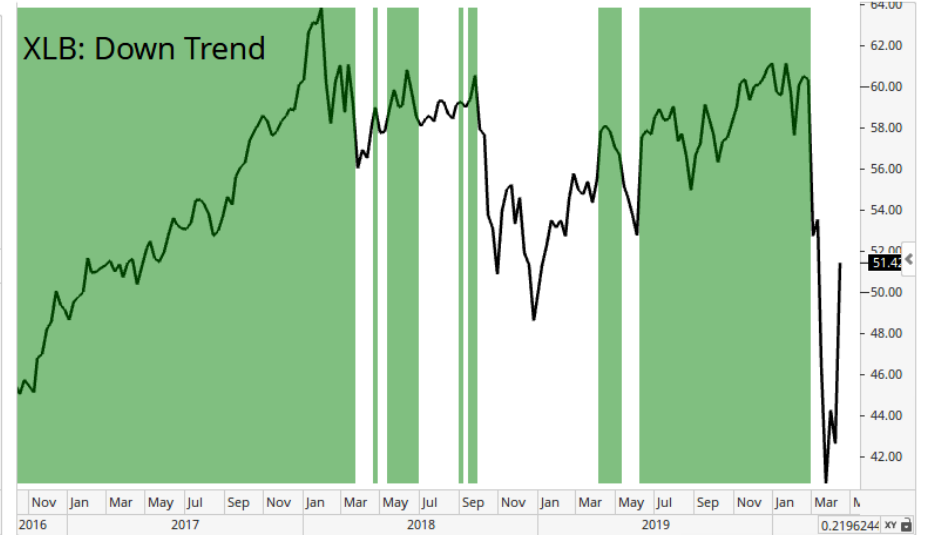
SPDR Real Estate Select Sector Fund ETF - XLRE (US) - 1 Week Line Chart - USD - No Layout



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



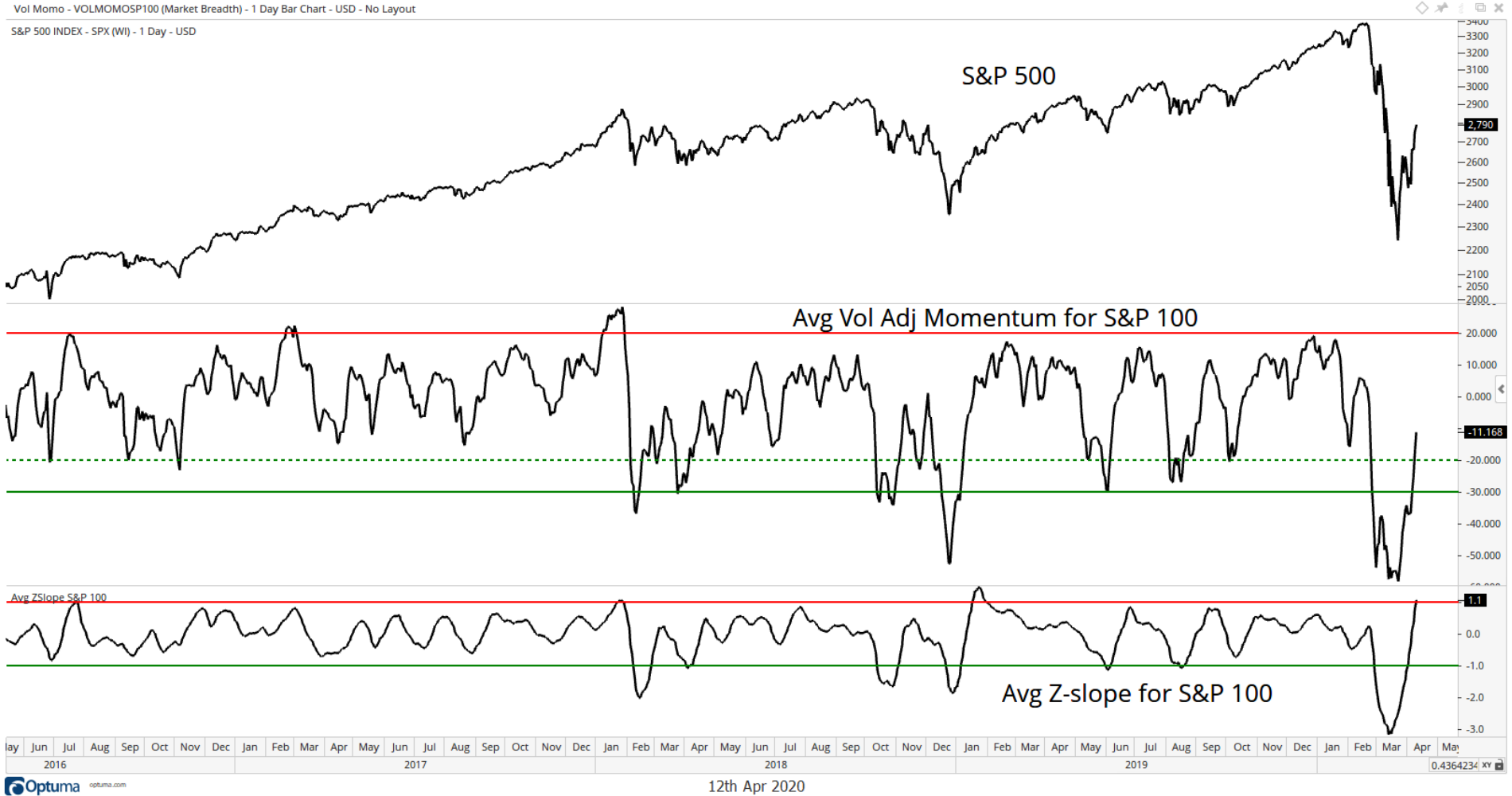
SPDR Materials Select Sector Fund ETF - XLB (US) - 1 Week Line Chart - USD - No Layout



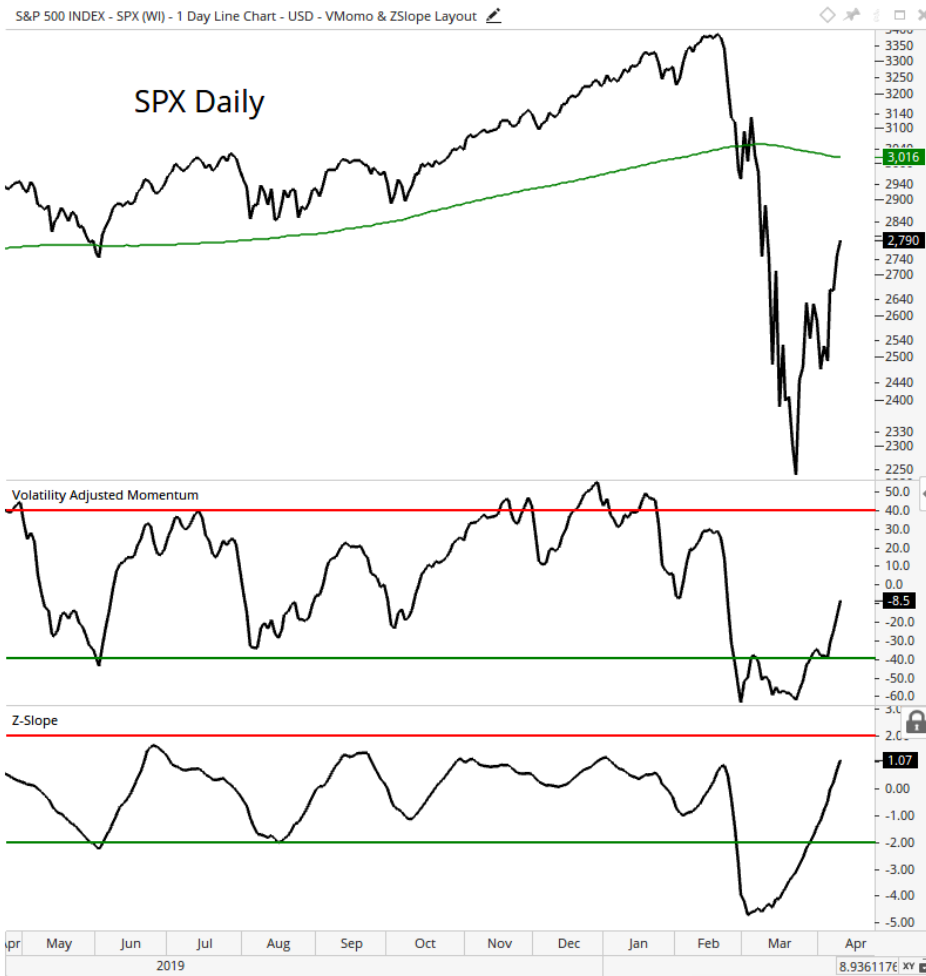
The following charts will become a regular installment for this, and future letters. Each page will include a daily and weekly chart with two indicators that are unique to Thrasher Analytics. With a focus on risk mitigation, the focus of these charts is on potential mean-reversion of each asset through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

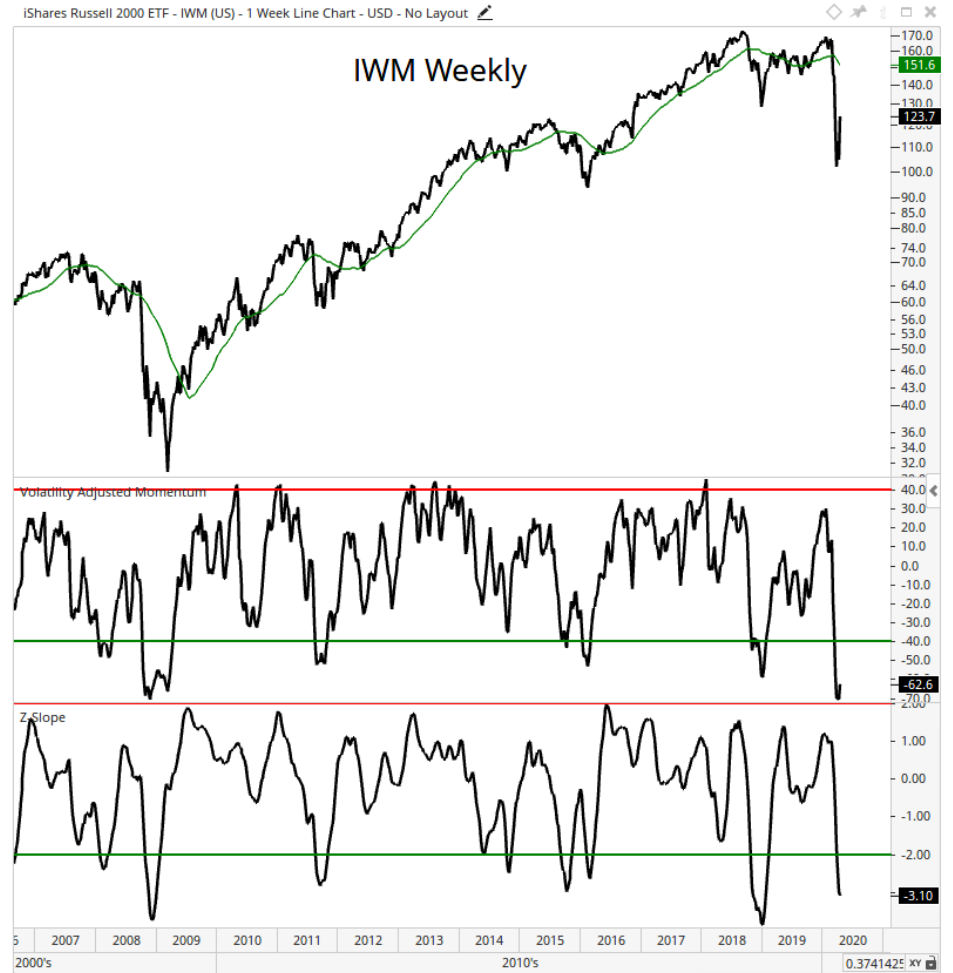
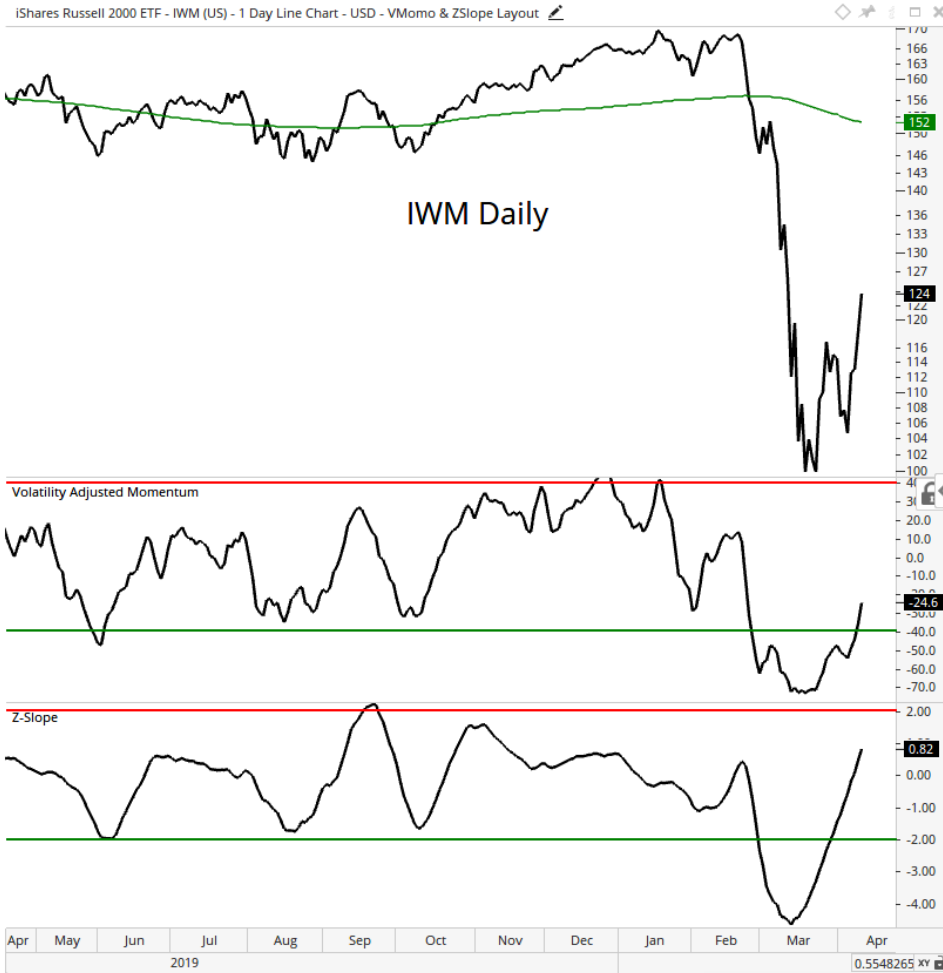
**Z-Slope:** This indicator takes two lookback periods, one long and one short, for calculating the slope and evaluates the z-score of the difference. This provides insight into whether the current slope of the trend fits within the long-term price history of the security. If a z-score breaks above 2, 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.



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



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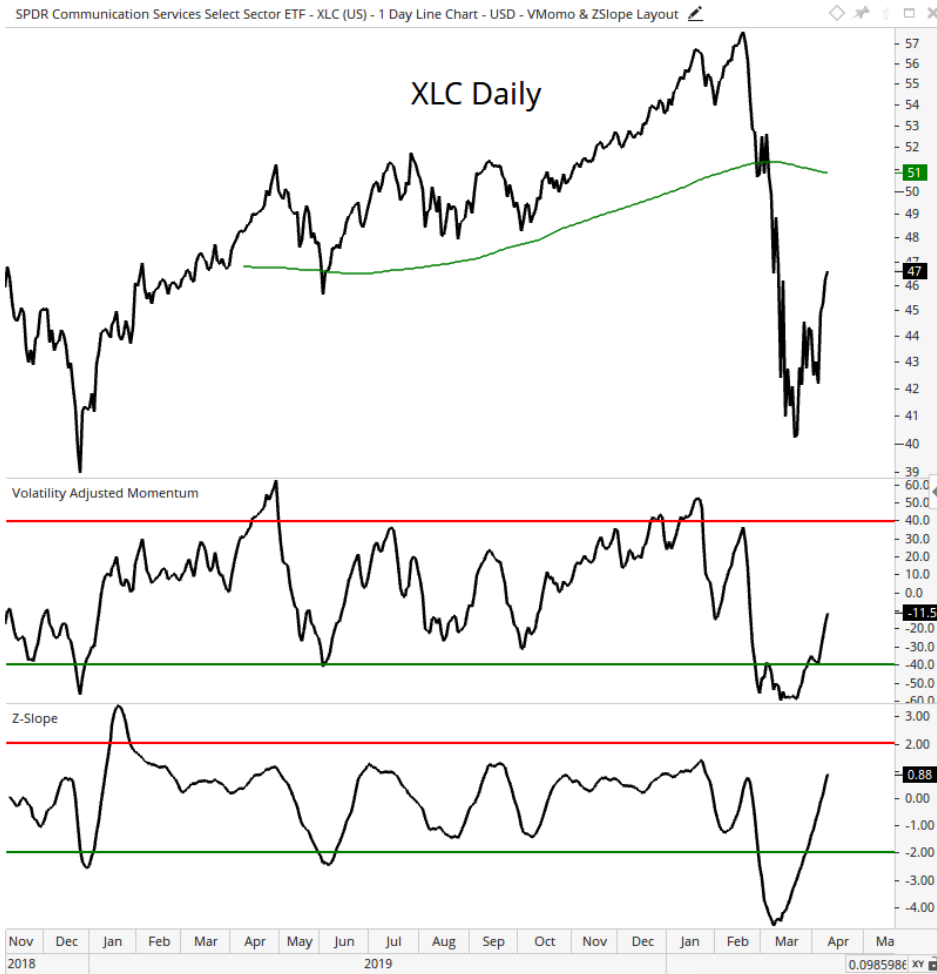




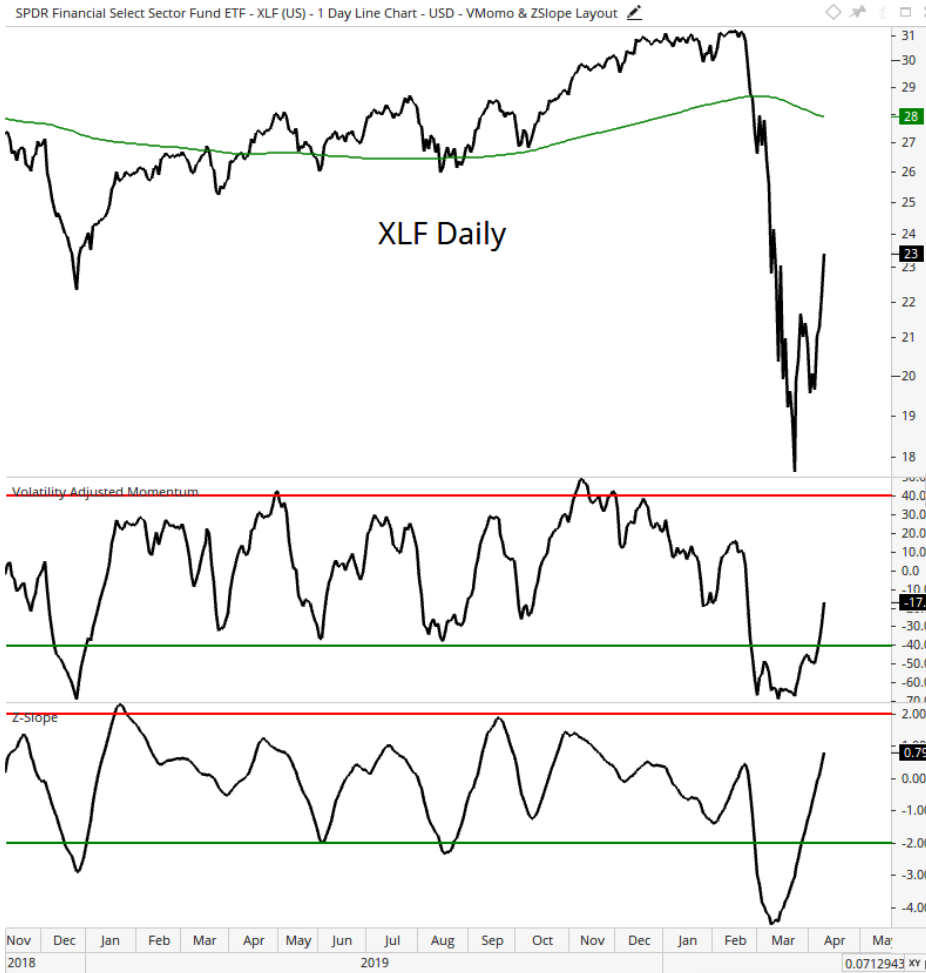
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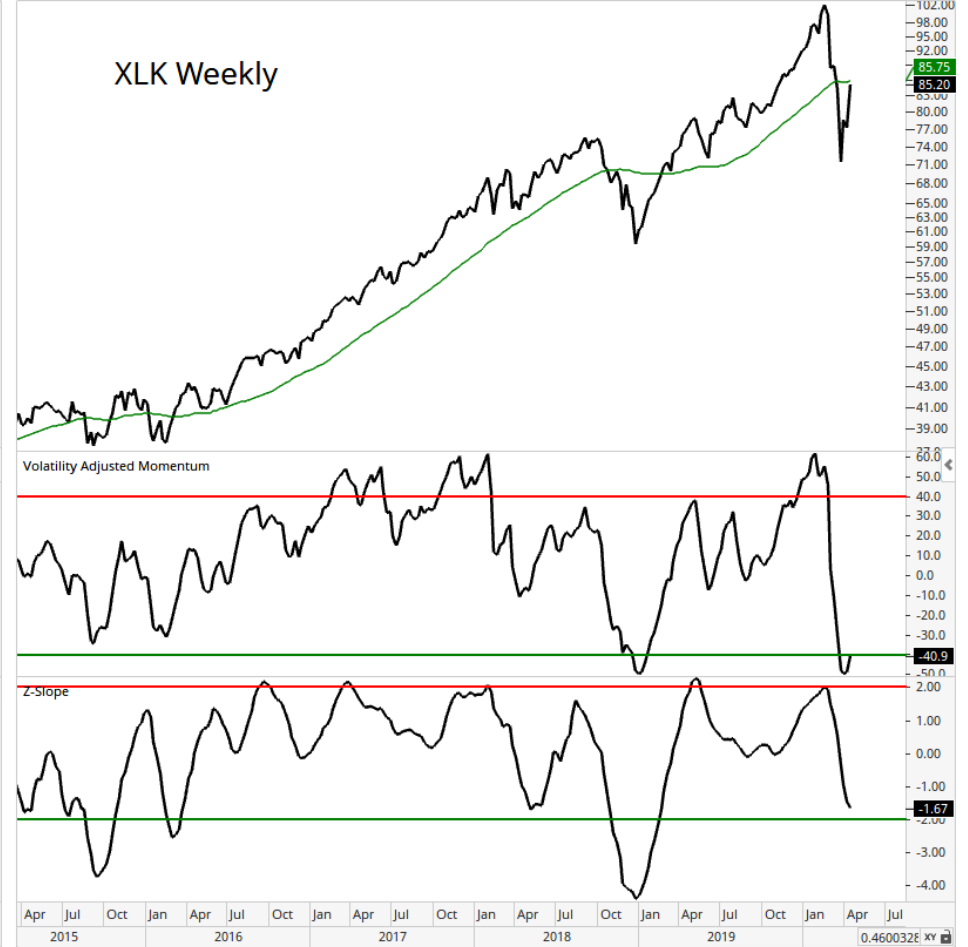
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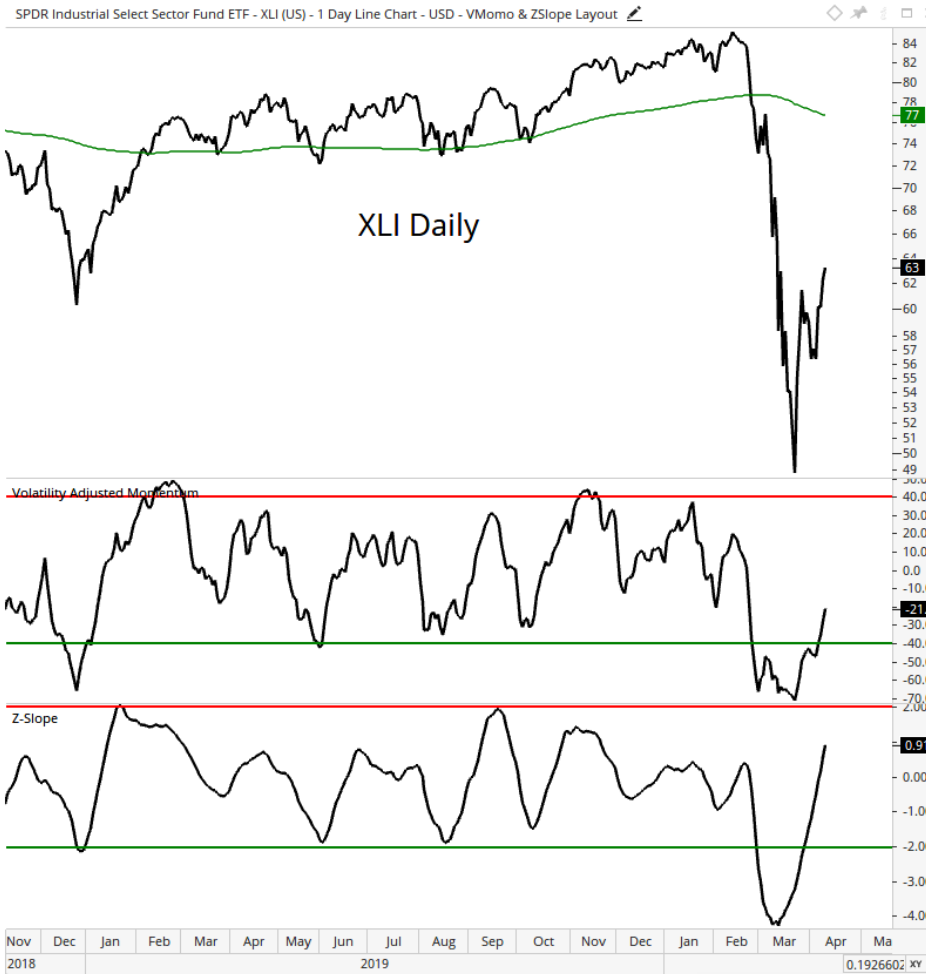
12th Apr 2020

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

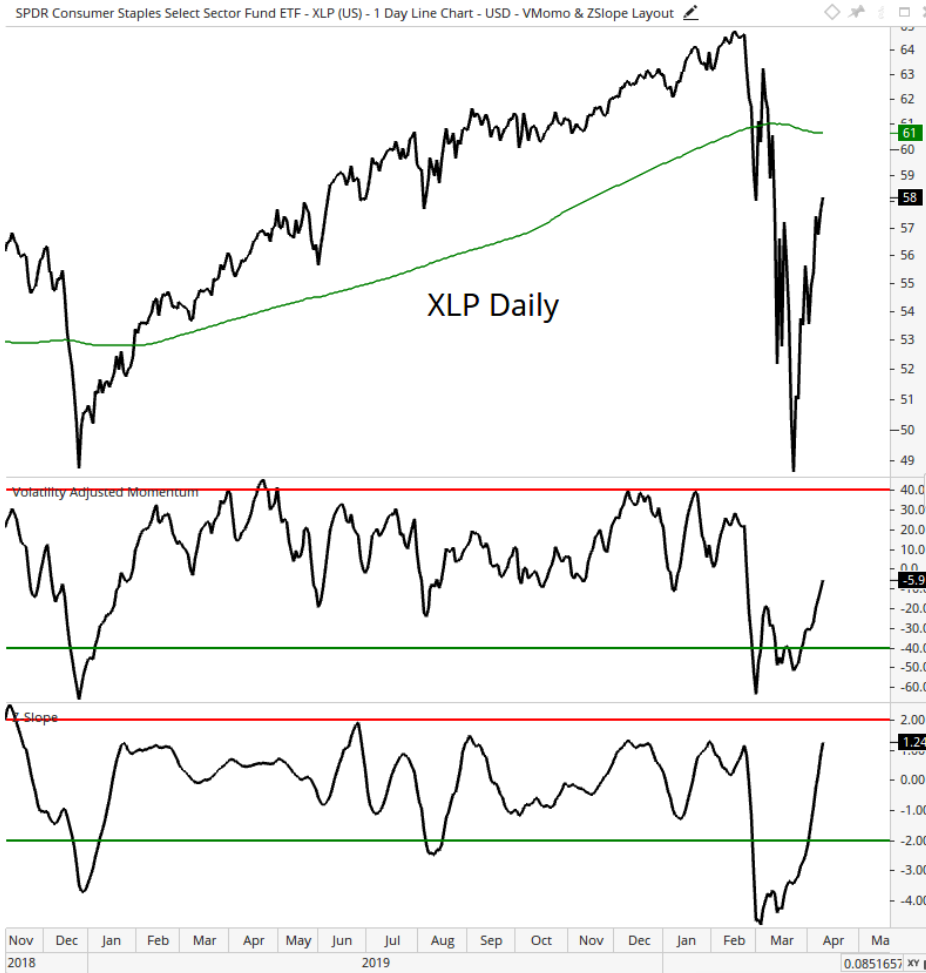
SPDR Technology Select Sector Fund ETF - XLK (US) - 1 Week Line Chart - USD - No Layout



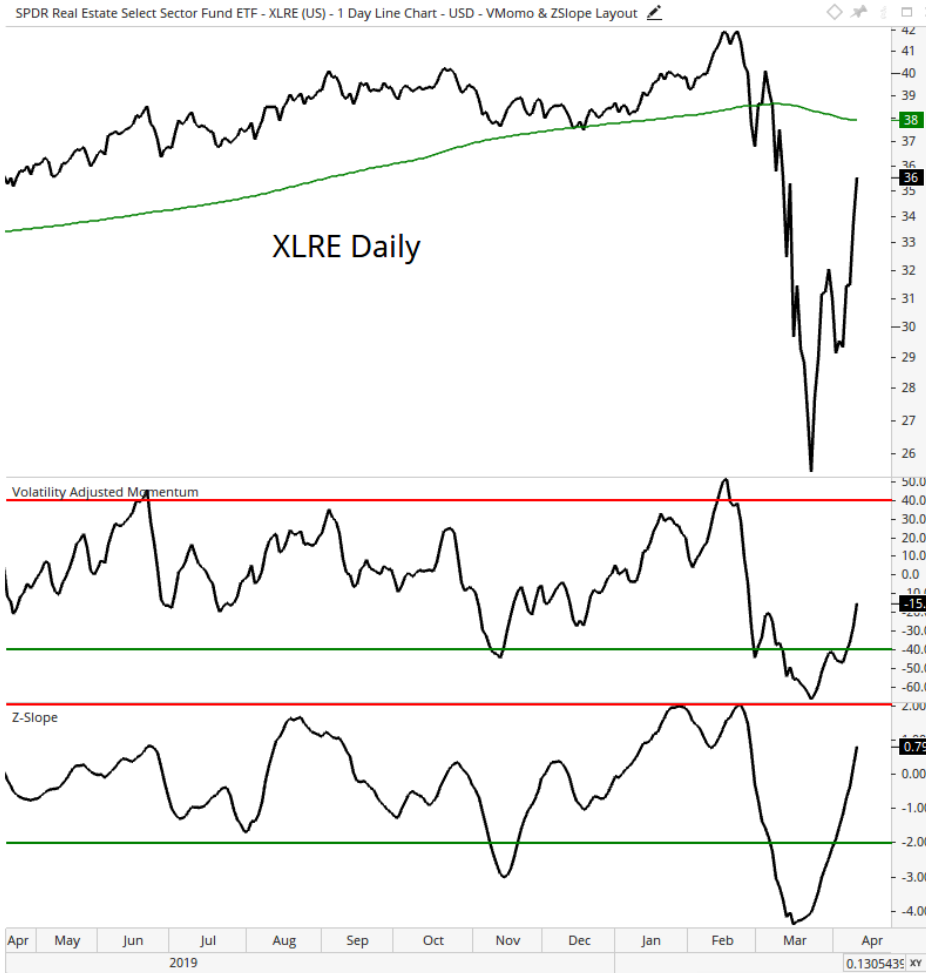
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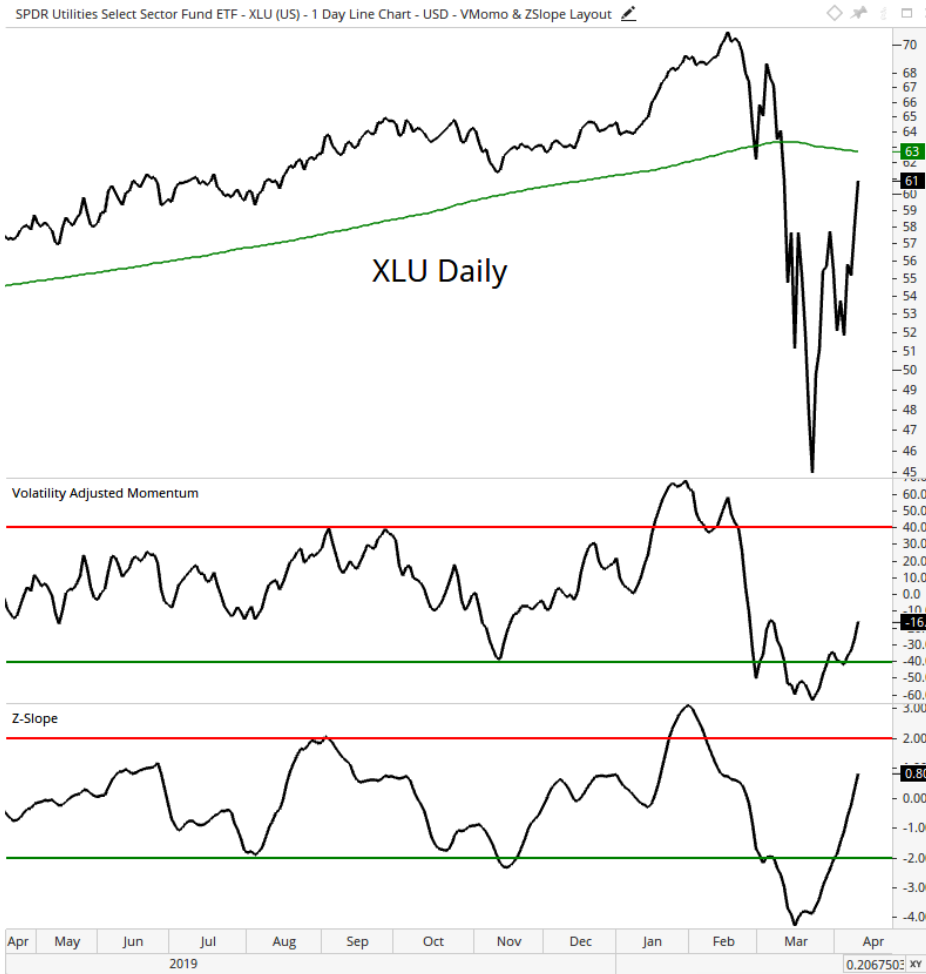


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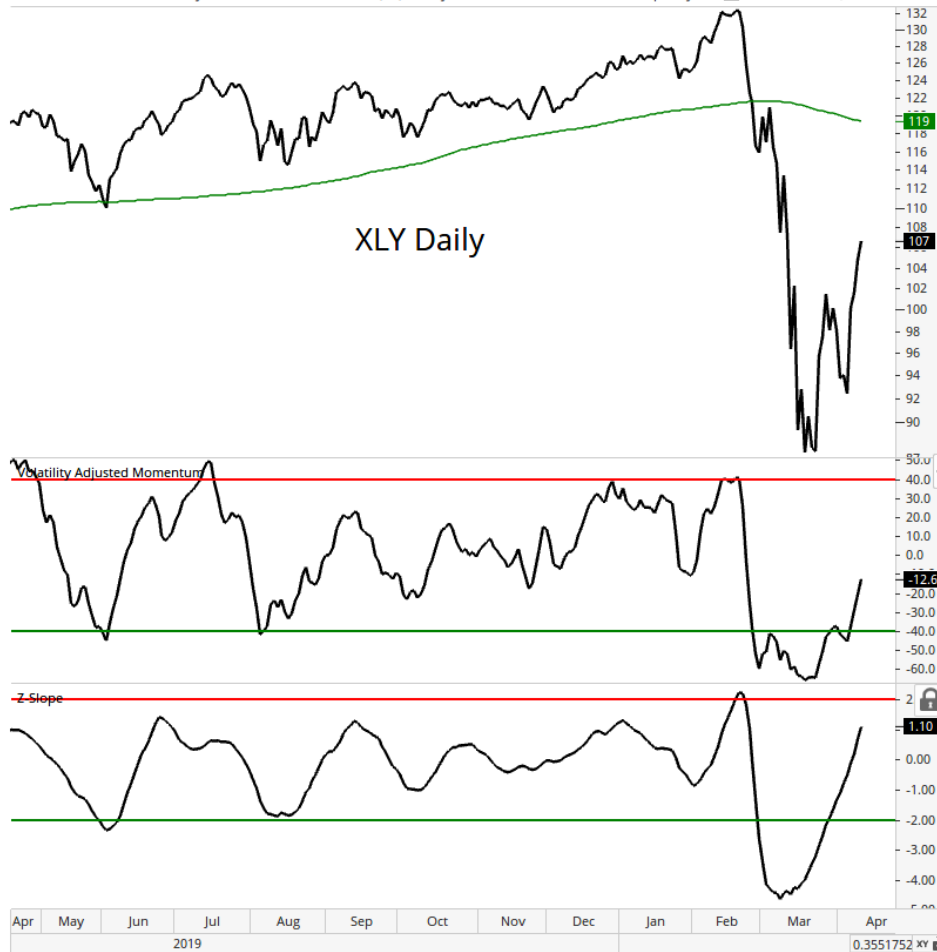


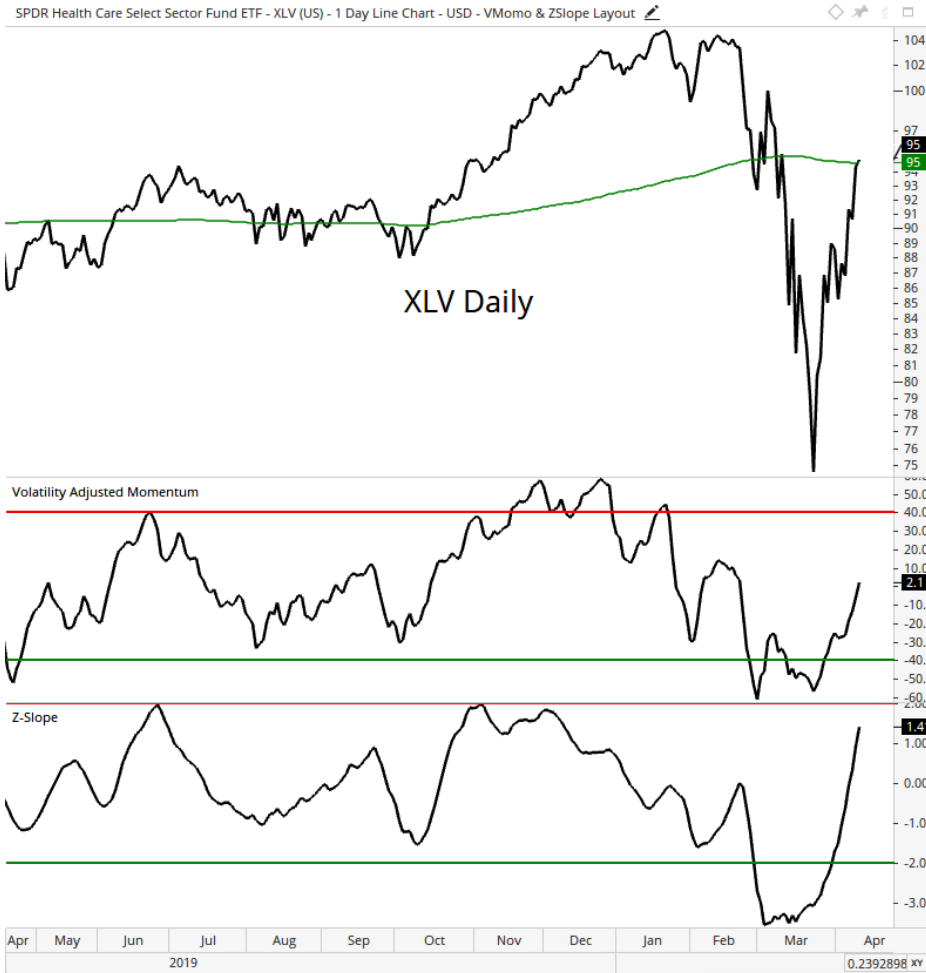




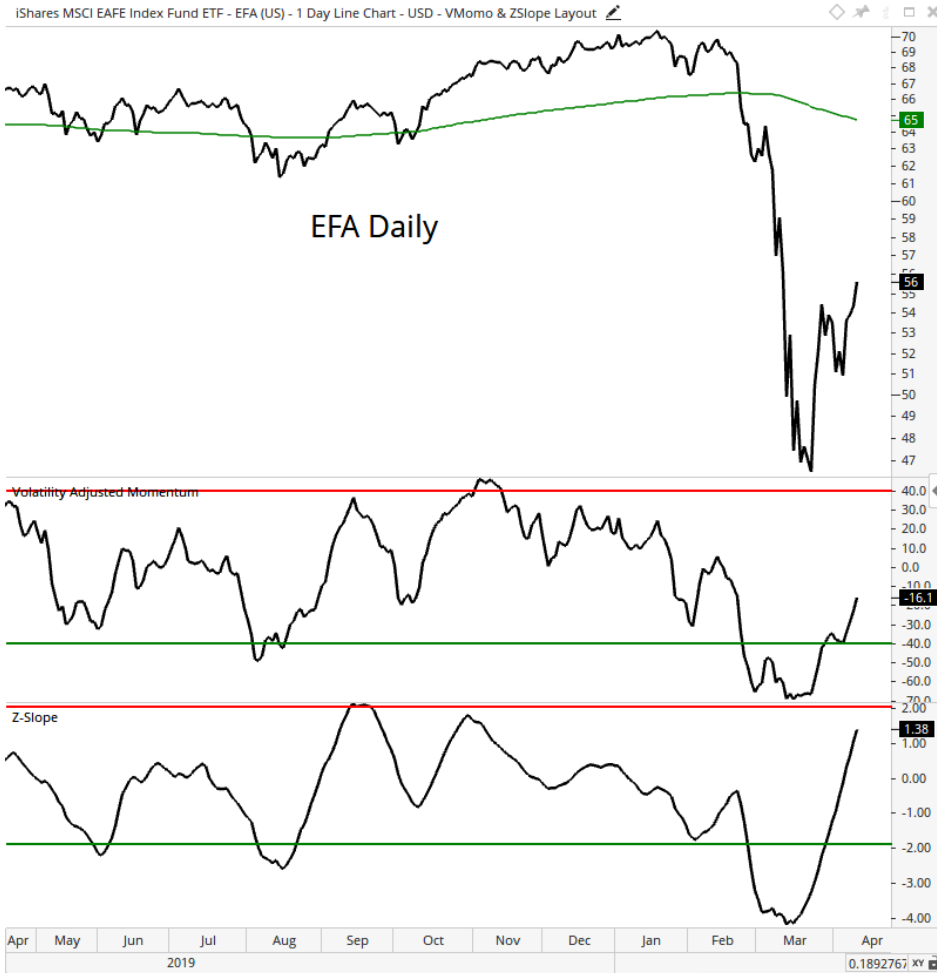
SPDR Consumer Discretionary Select Sector Fund ETF - XLY (US) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

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

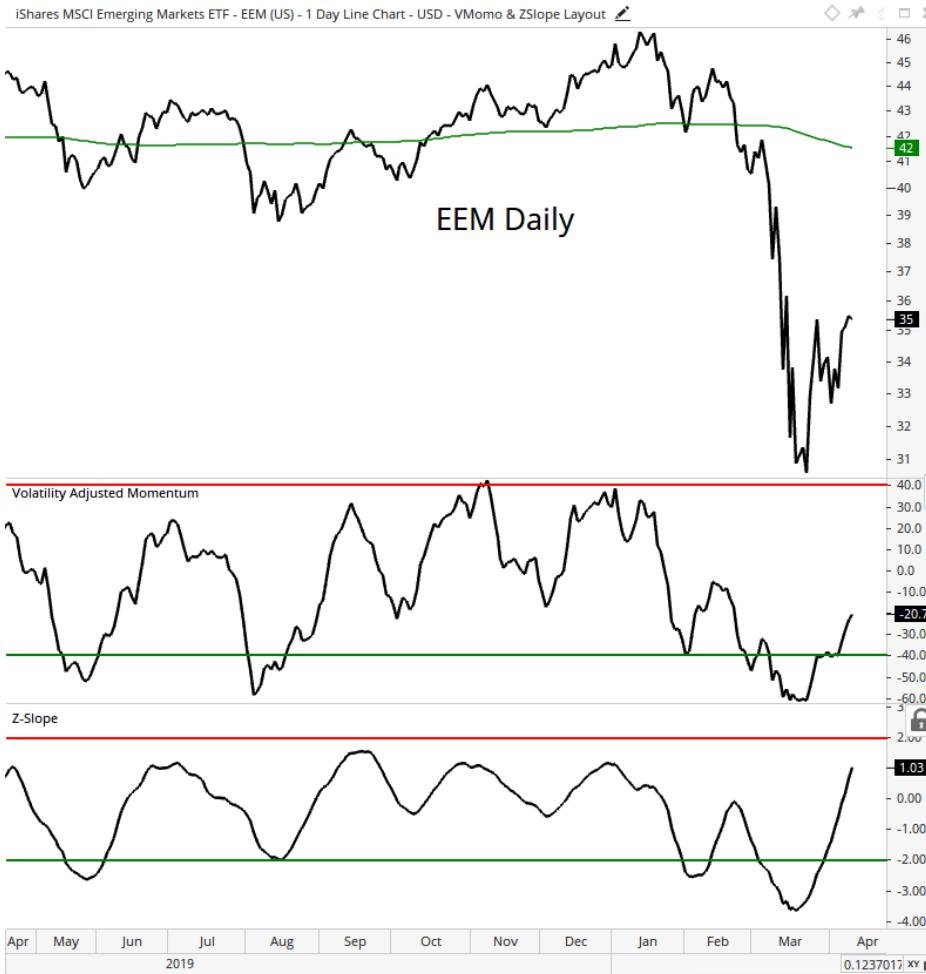




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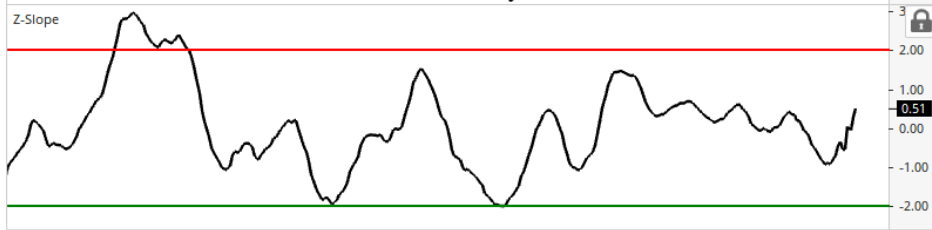
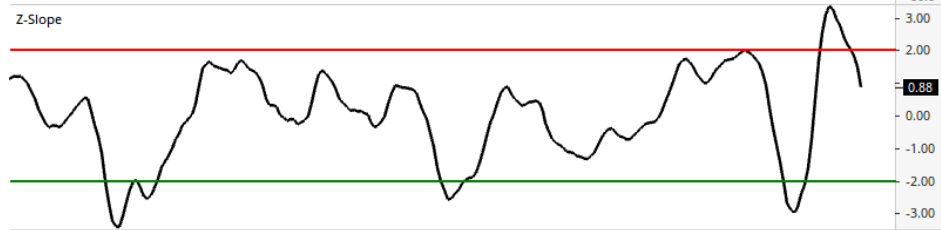
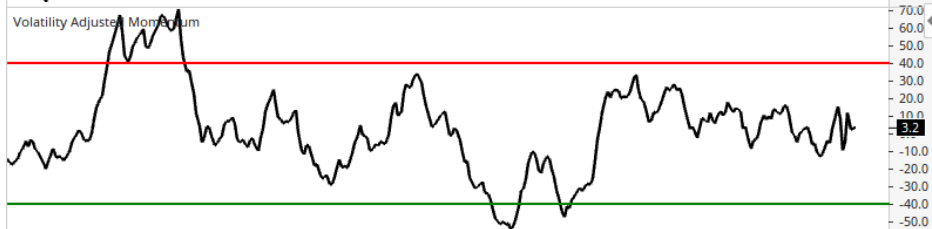
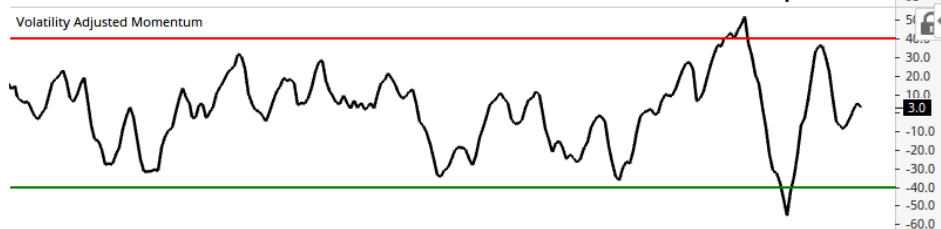
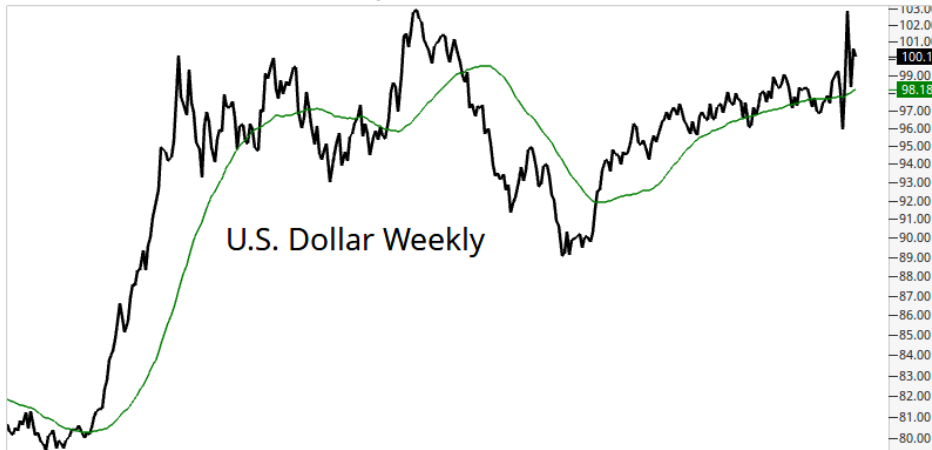


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US Dollar Index - DXY (W1) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

US Dollar Index - DXY (W1) - 1 Week Line Chart - USD - No Layout



May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr 2019 0.0637263 XY

3 2014 2010's 2015 2016 2017 2018 2019 2020 0.1361665 XY



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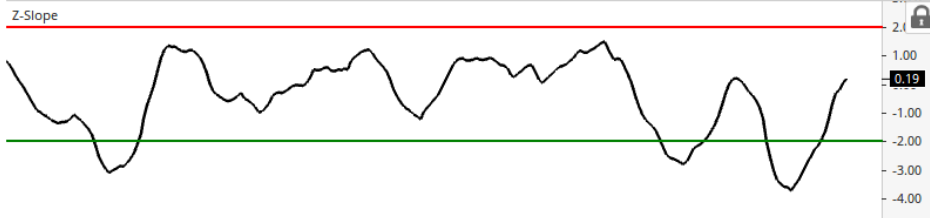
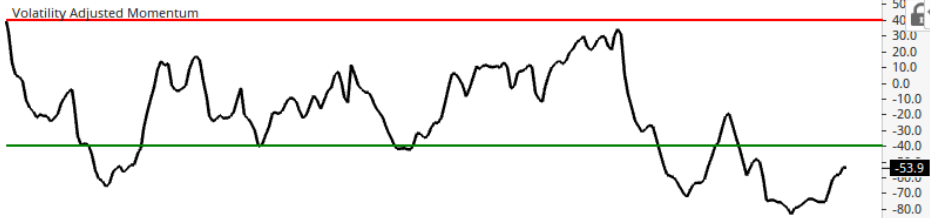
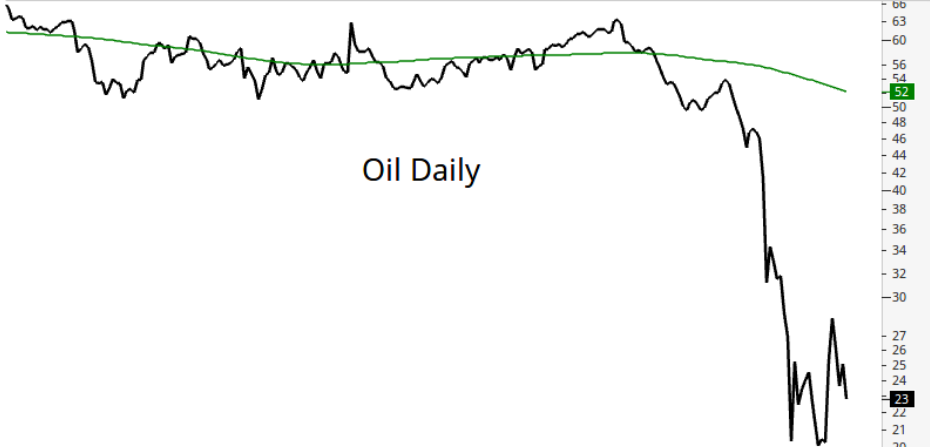
Gold Futures - GCSpot (NYMEX) - 1 Day Line Chart - USD - VMomo & ZSlope Layout

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



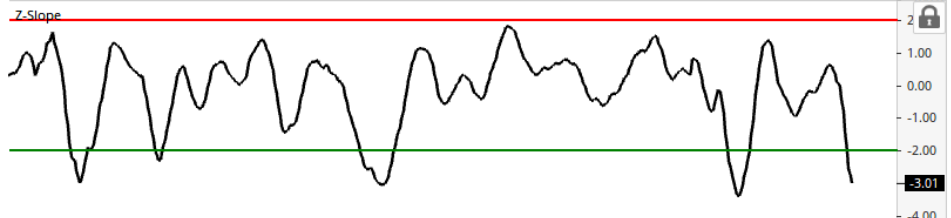
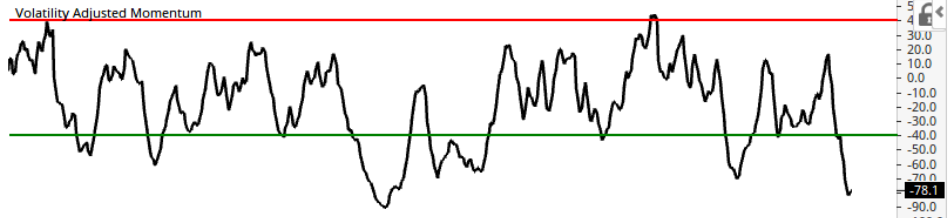
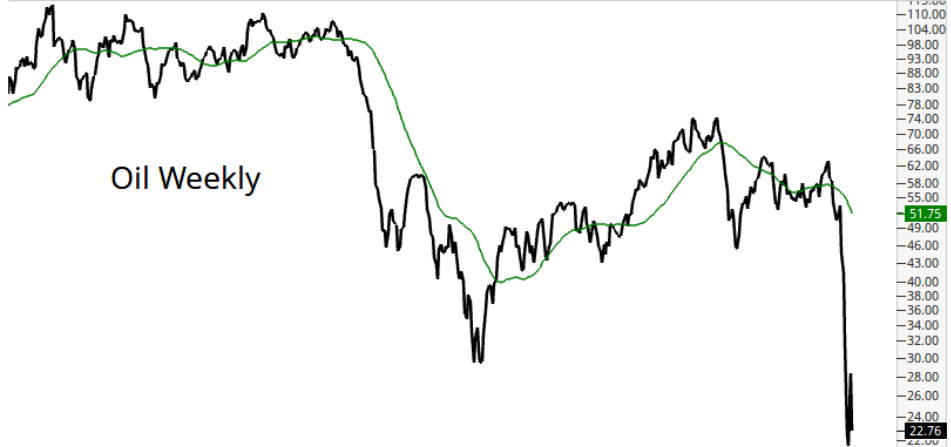


Light, Sweet Crude Oil Futures - CL2Spot (Cmdty) - 1 Day Line Chart - USD - VMomo & ZSlope Layout



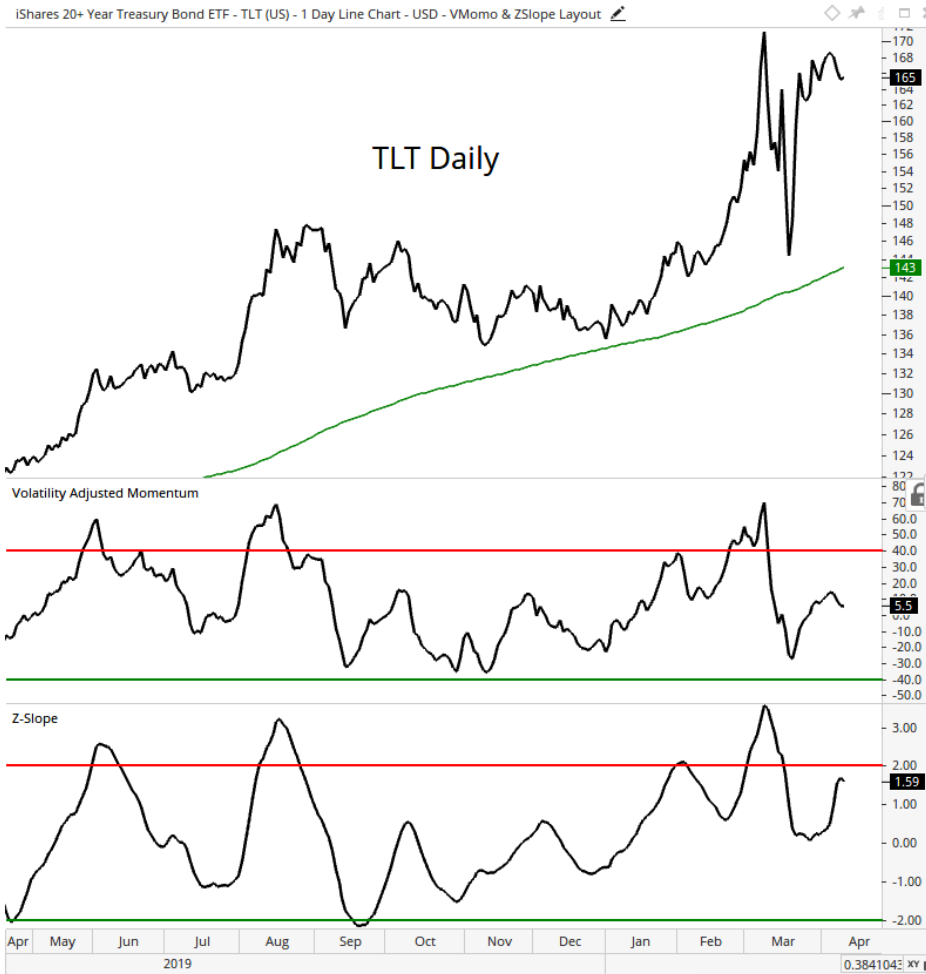
pr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr 2019 0.3591666 xy

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

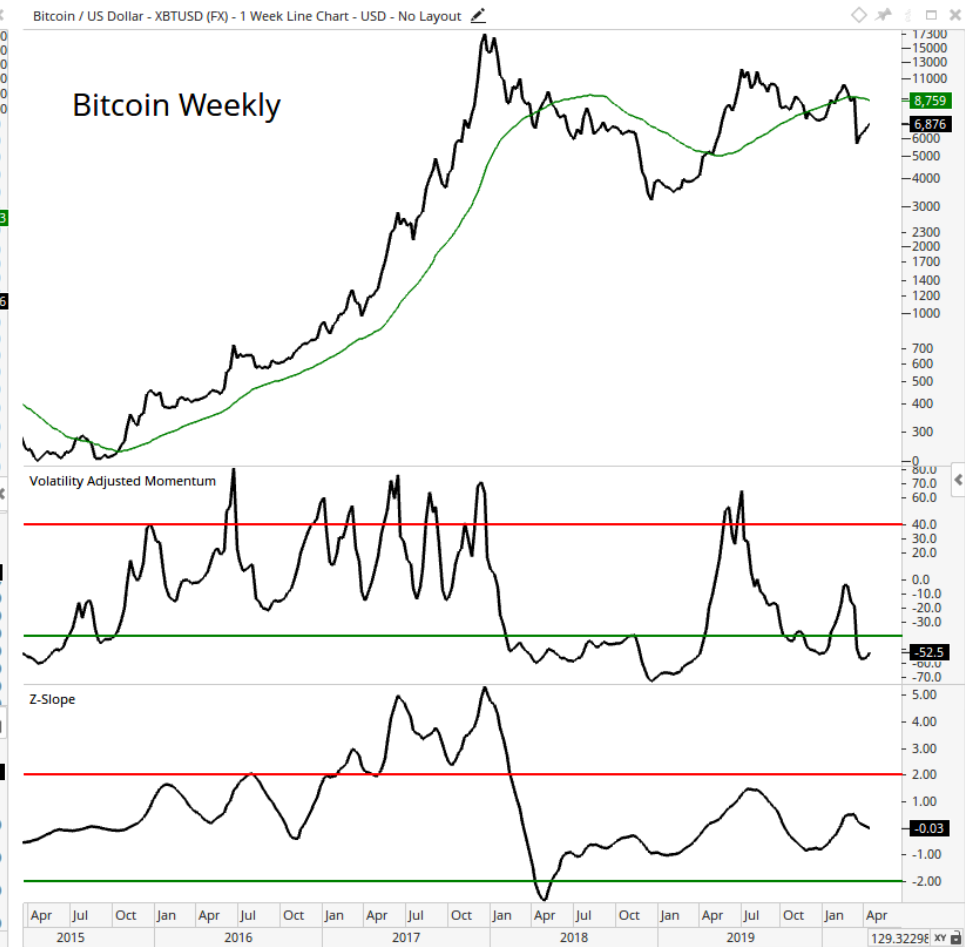
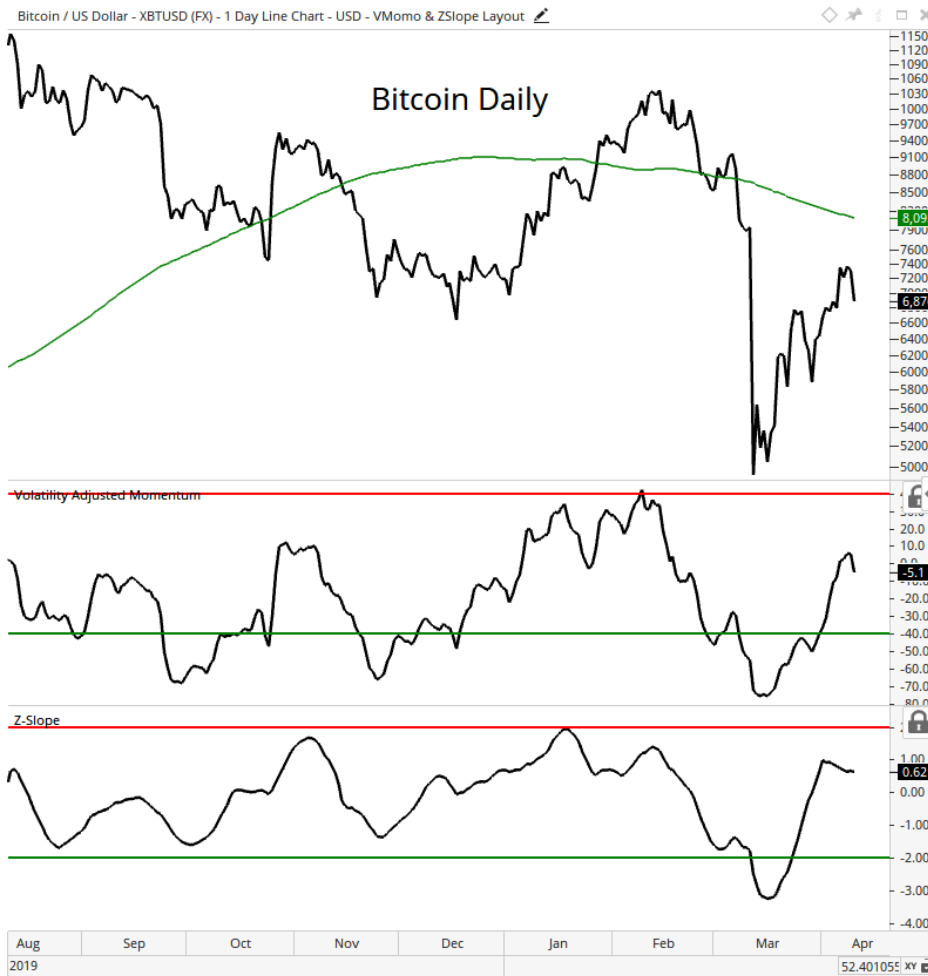


10 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2010's 0.358732c xy





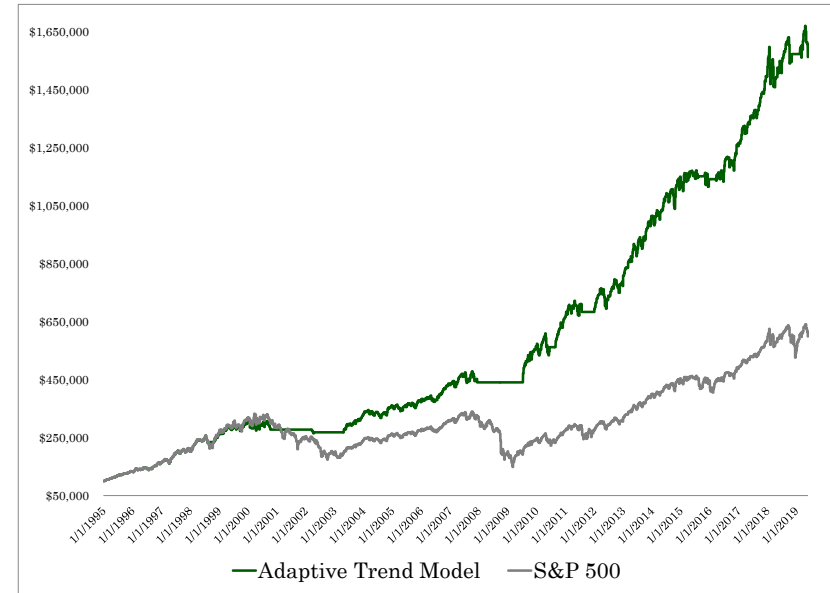
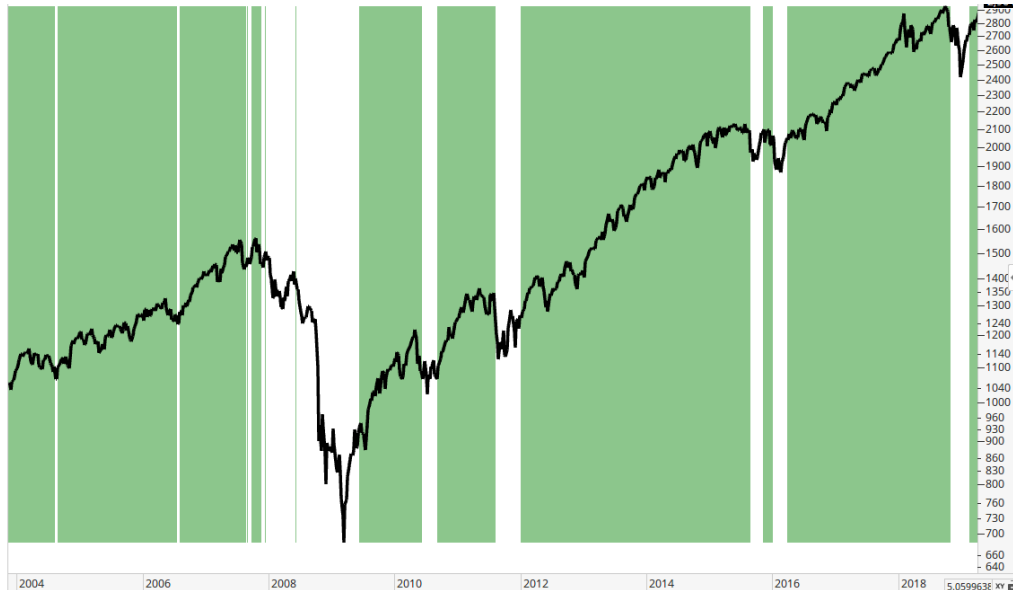
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**T**rend-based analysis is a process built on the idea of enduring minor pullbacks in the anticipating of avoiding protracted drawdowns in financial markets. With a focus on stepping out of the market during large down trends, the Thrasher Analytics 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.

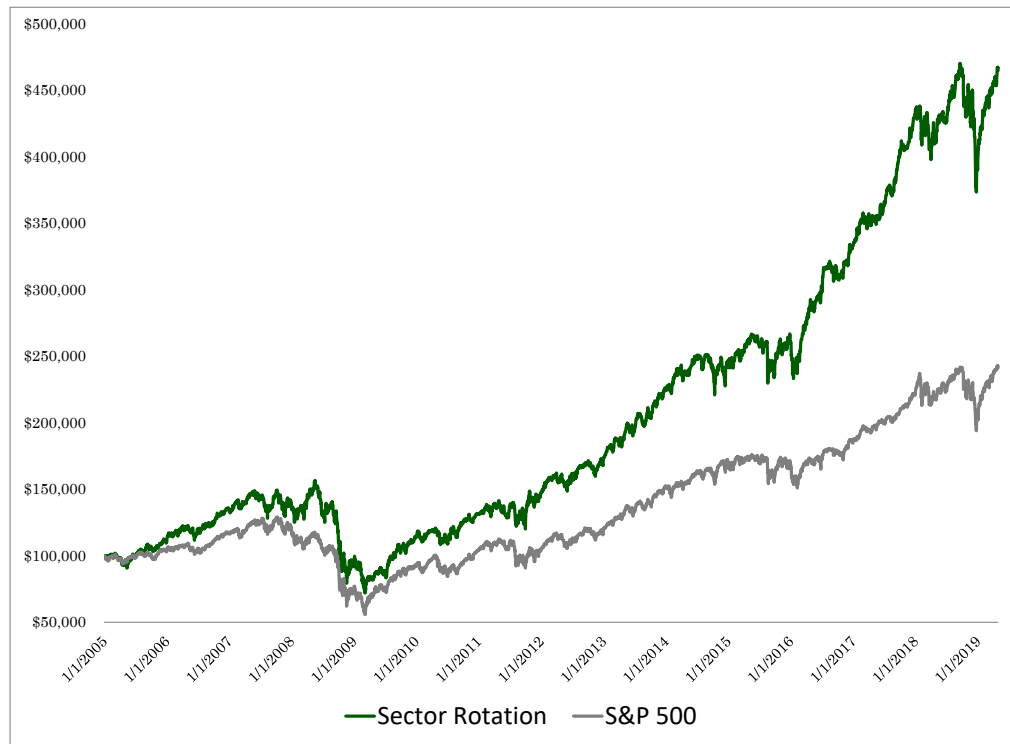


	<b>Annualized Return</b>	<b>Annualized Volatility</b>	<b>Beta</b>	<b>Sharpe</b>	<b>Maximum Drawdown</b>
<b>Adaptive</b>	12.5%	10.3%	0.47	0.97	14.1%
<b>S&amp;P 500</b>	8.9%	15.3%	1	0.42	56.6%

*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.

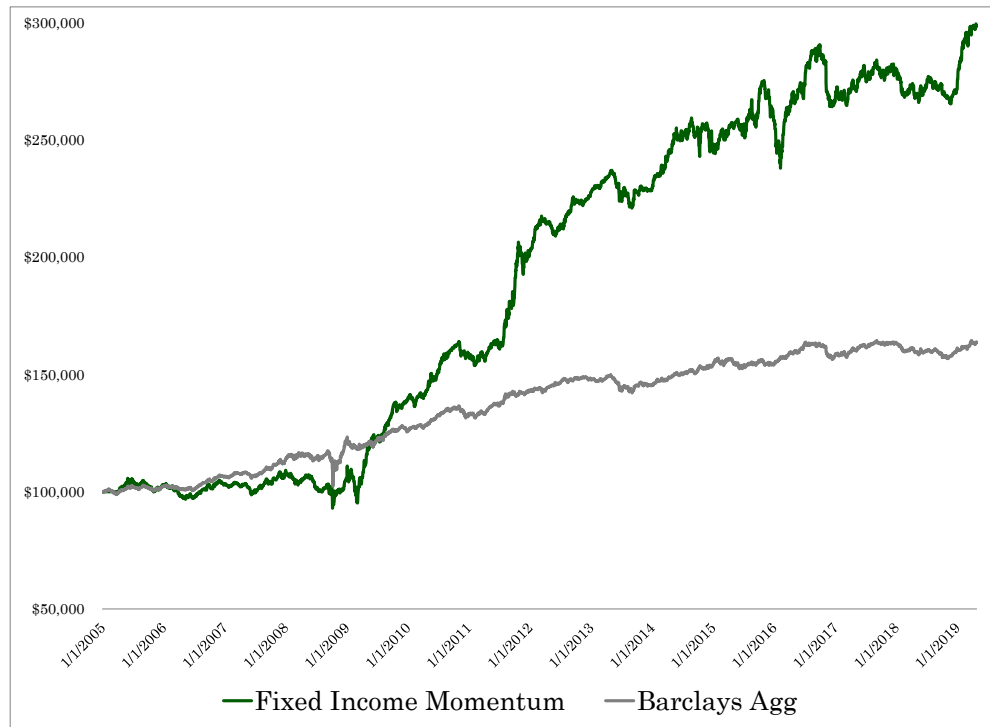


	<b>Annualized Return</b>	<b>Annualized Volatility</b>	<b>Beta</b>	<b>Sharpe</b>	<b>Maximum Drawdown</b>
<b>Sector</b>	12.7%	15.9%	0.96	0.64	53.9%
<b>S&amp;P 500</b>	7.5%	14.8%	1	0.34	56.6%

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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.



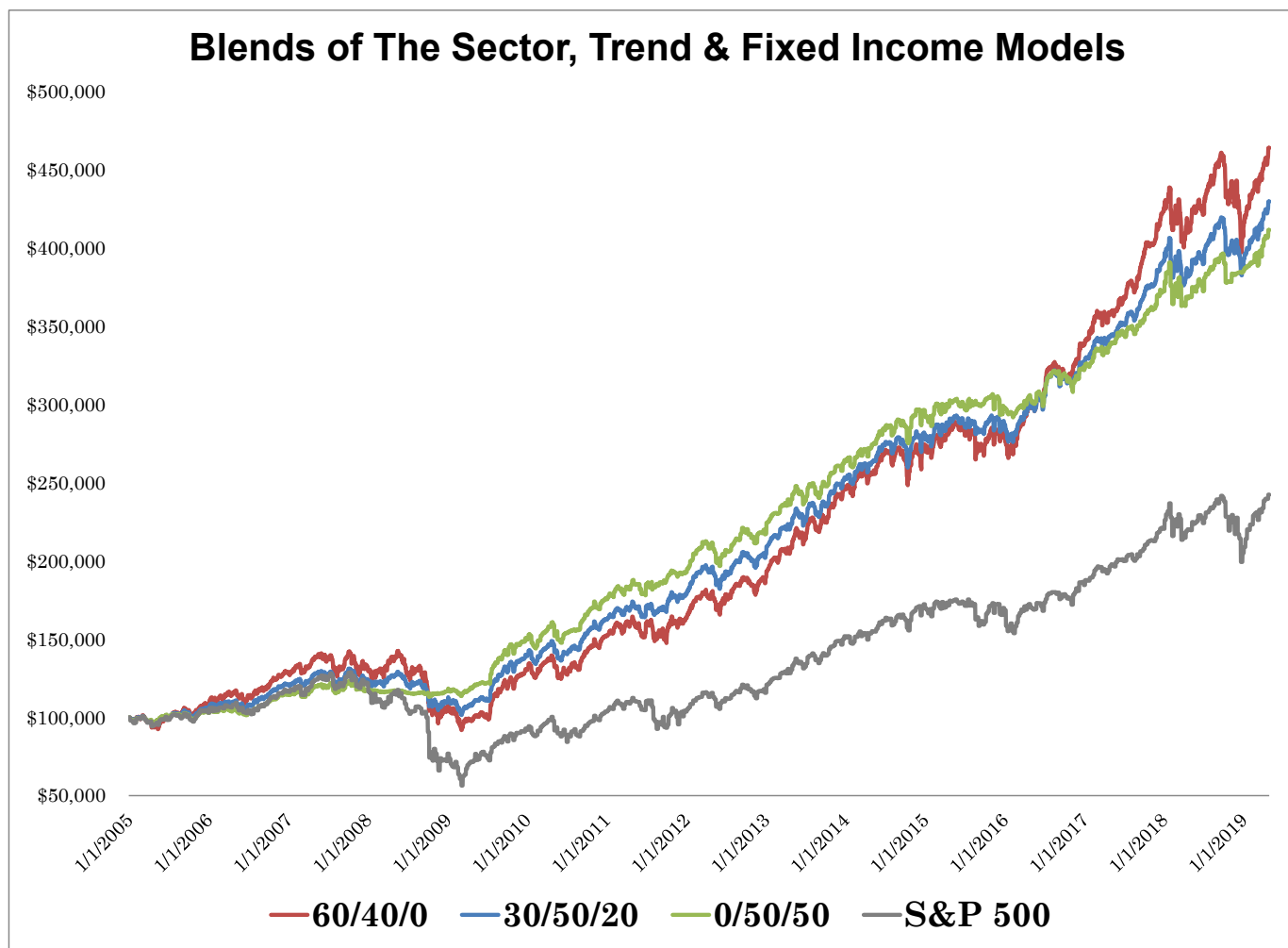
	<b>Annualized Return</b>	<b>Annualized Volatility</b>	<b>Beta</b>	<b>Sharpe</b>	<b>Maximum Drawdown</b>
<b>Fixed Income</b>	8.3%	8.2%	1.04	0.7	14.9%
<b>Barclays Agg</b>	3.6%	3.7%	1	0.29	11.0%

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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>
Negative	XLV XLK XLP	PCY CWB

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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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