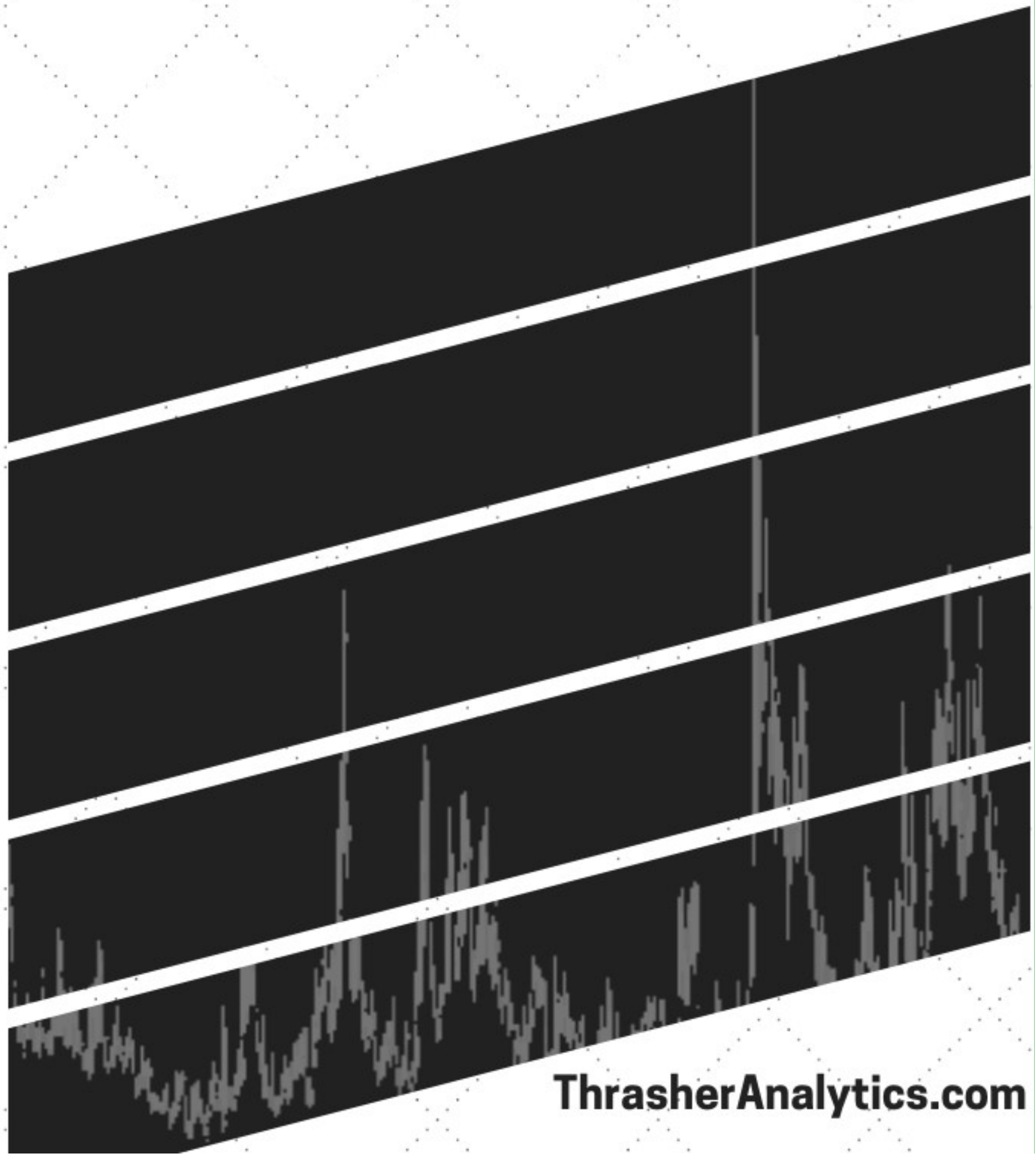
THRASHER ANALYTICS

WEEKLY RESEARCH & ANALYSIS



ThrasherAnalytics.com

Thrasher Analytics Market Dashboard

THRASHER ANALYTICS

Sector Rotation: June	
Technology	XLK
Health Care	XLV
Communications	XLC

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

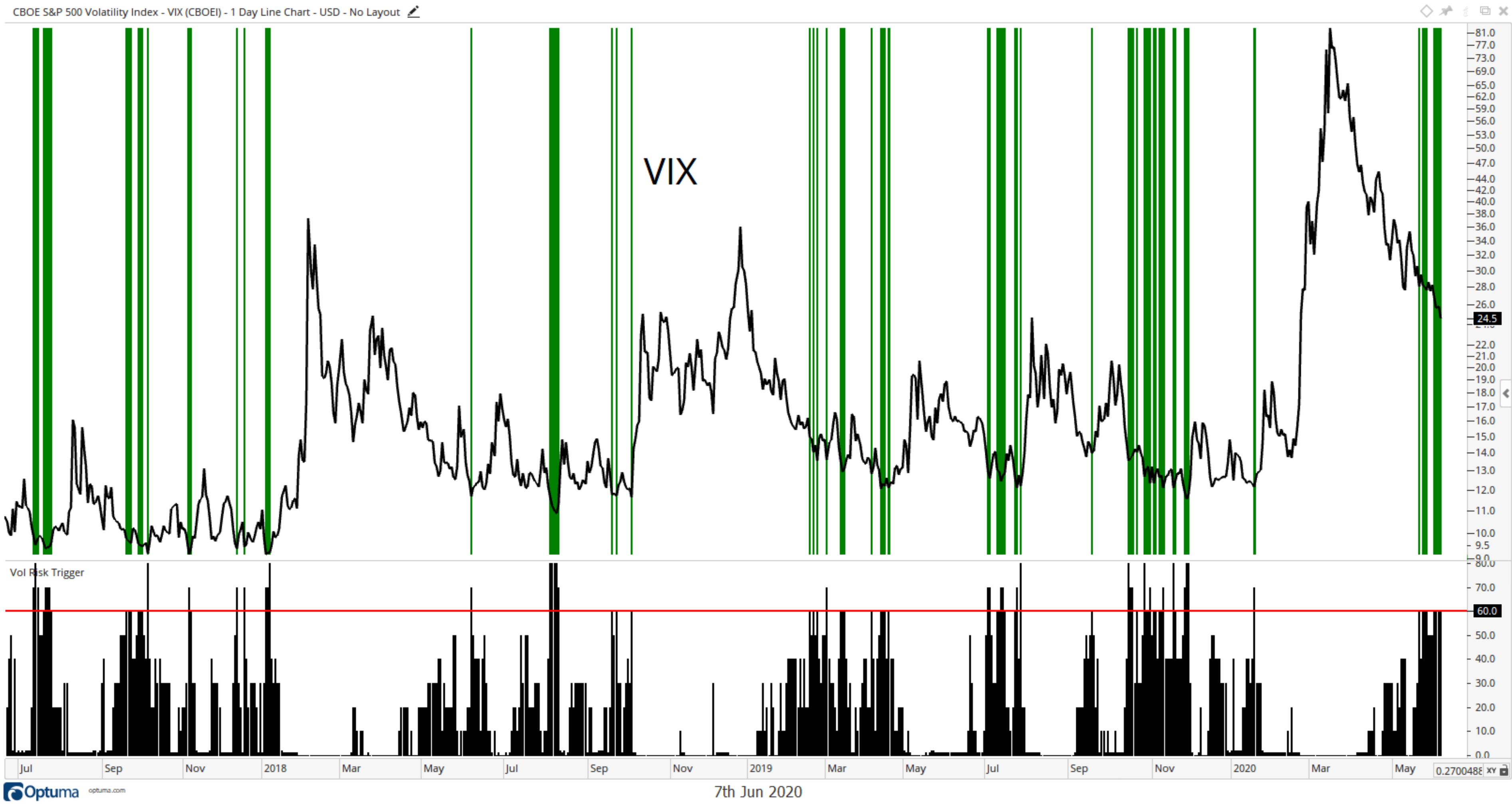
Index & Sector Adaptive Trend	Up Trend	Down Trend
SPX	X	
QQQ	X	
XLF		X
XLY	X	
XLK	X	
XLV	X	
XLU		X
XLP	X	
XLI		X
XLRE		X
XLE		X
XLB	X	

Daily Sentiment Index	% Bullish	5-day MA
S&P 500	87%	80%
Nasdaq 100	90%	85%
Nikkei	91%	92%
VIX	12%	18%
10yr Treasury	27%	40%
5yr Treasury	43%	49%
CRB Index	69%	75%
Gold	57%	66%
U.S. Dollar	31%	35%

**Green<25%   Red>80%*

Notable Breadth Data:	
SPX >50MA	95.45%
SPX >200MA	54.26%
Nasdaq >50MA	88.35%
Nasdaq >200MA	82.52%

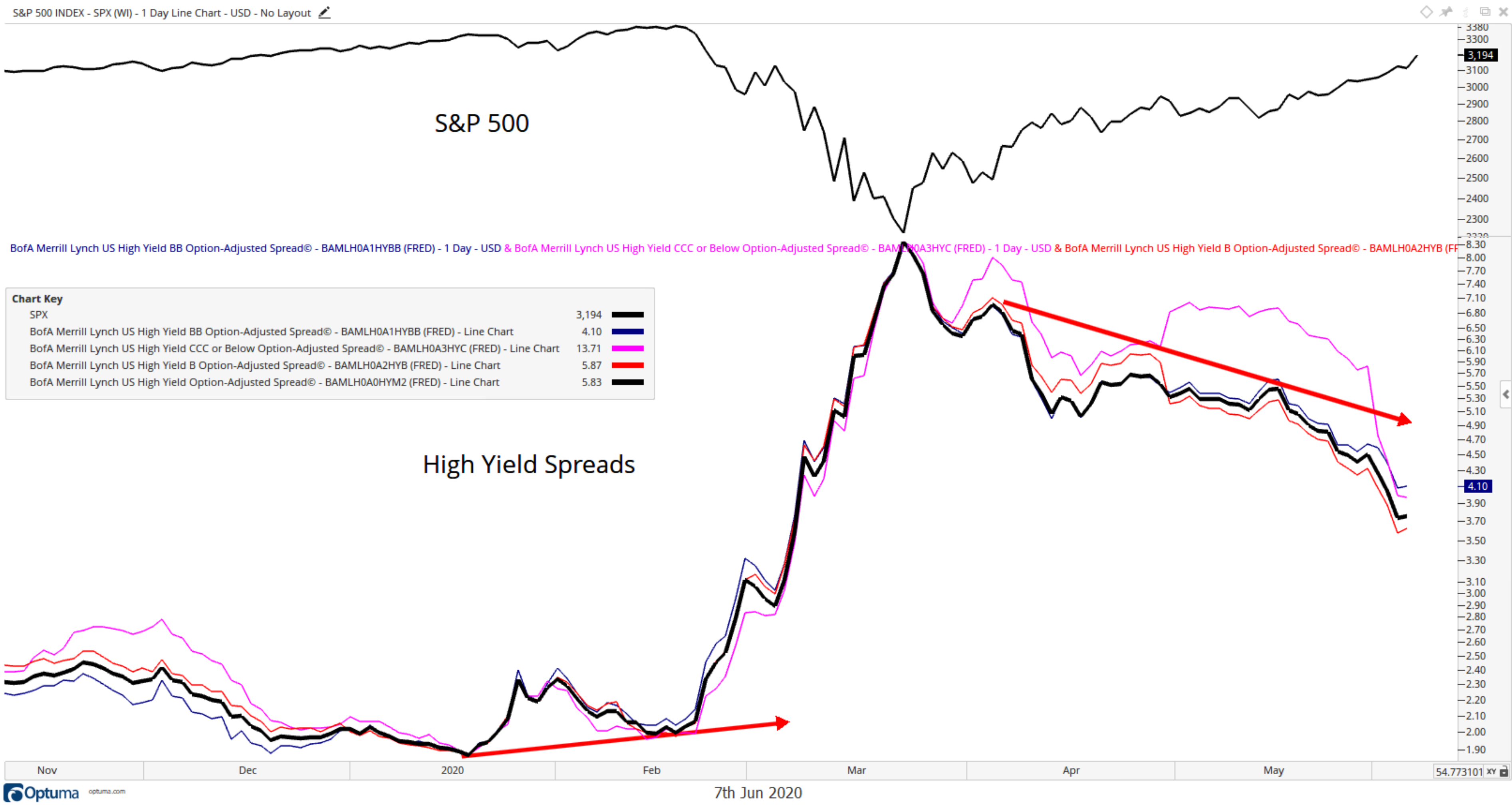
Sector	> 50MA	> 200MA	1wk Perf	1mo Perf	3mo Perf	12mo Perf
SPDR Energy Select Sector Fund ETF	True	False	15.69%	20.80%	-0.42%	-25.12%
SPDR Financial Select Sector Fund ETF	True	False	12.09%	20.42%	-0.79%	-3.03%
SPDR Industrial Select Sector Fund ETF	True	False	10.52%	21.18%	2.33%	-0.27%
SPDR Materials Select Sector Fund ETF	True	True	7.9%	17.08%	8.86%	6.18%
SPDR Real Estate Select Sector Fund ETF	True	False	6.93%	12.04%	-5.41%	-0.51%
SPDR Consumer Discretionary Select Sector Fund ETF	True	True	5.68%	15.88%	12.72%	15.59%
SPDR Technology Select Sector Fund ETF	True	True	3.51%	11.05%	11.65%	37.15%
SPDR Communication Services Select Sector ETF	True	True	2.76%	10.73%	9.49%	19.09%
SPDR Utilities Select Sector Fund ETF	True	False	2.51%	7.80%	-9.56%	1.75%
SPDR Consumer Staples Select Sector Fund ETF	True	False	2.01%	4.82%	-2.6%	5.13%
SPDR Health Care Select Sector Fund ETF	True	True	0.19%	3.31%	5.67%	15.18%



The VRT has continued to issue trigger warnings of heightened volatility. Since the first trigger, the volatility curve has begun to flatten out a bit, a potential sign of an uptick in uncertainty as 30 day and 3 month volatility narrow their premium. I'll have this chart further into the letter. As I mentioned two weeks ago, VRT signals when VIX is this high have been rare and less effective as signals when VIX is below 20-15, so it's not a big surprise that volatility has continued to come down.

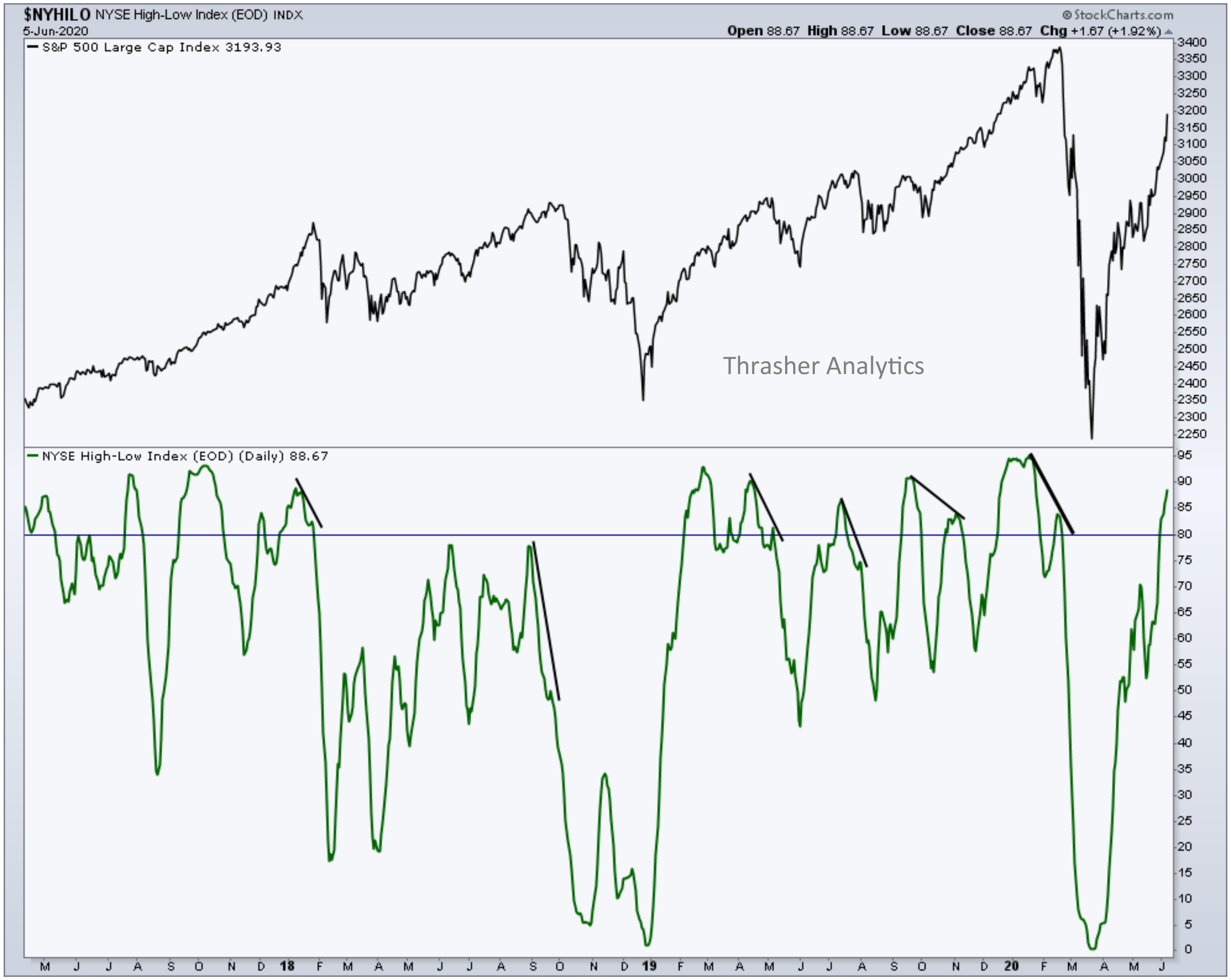
The S&P 500 has moved above its 200-day MA, the area I've spent a great deal of time writing about, after consolidating for a brief period of time. Since the break higher stocks have increased in their velocity higher, with Friday's gap up expanding on this built up of bullishness once the index has gotten back above its important long-term moving average. Momentum has now moved into 'overbought' status with the RSI above 70. This is a long-term positive, (strong momentum is a good thing!) and a slight short-term headwind. Volume has begun to match levels seen during the crash in March, some call this a blow-off top type move, I think we are starting to resemble a little bit of January 2018 which lead to a quick pullback but not a major turn lower. I think a similar move could be in the cards, giving traders a type to 'reset'.

Leadership has continued to be found in offensive sectors, a bullish sign in sector rotation.

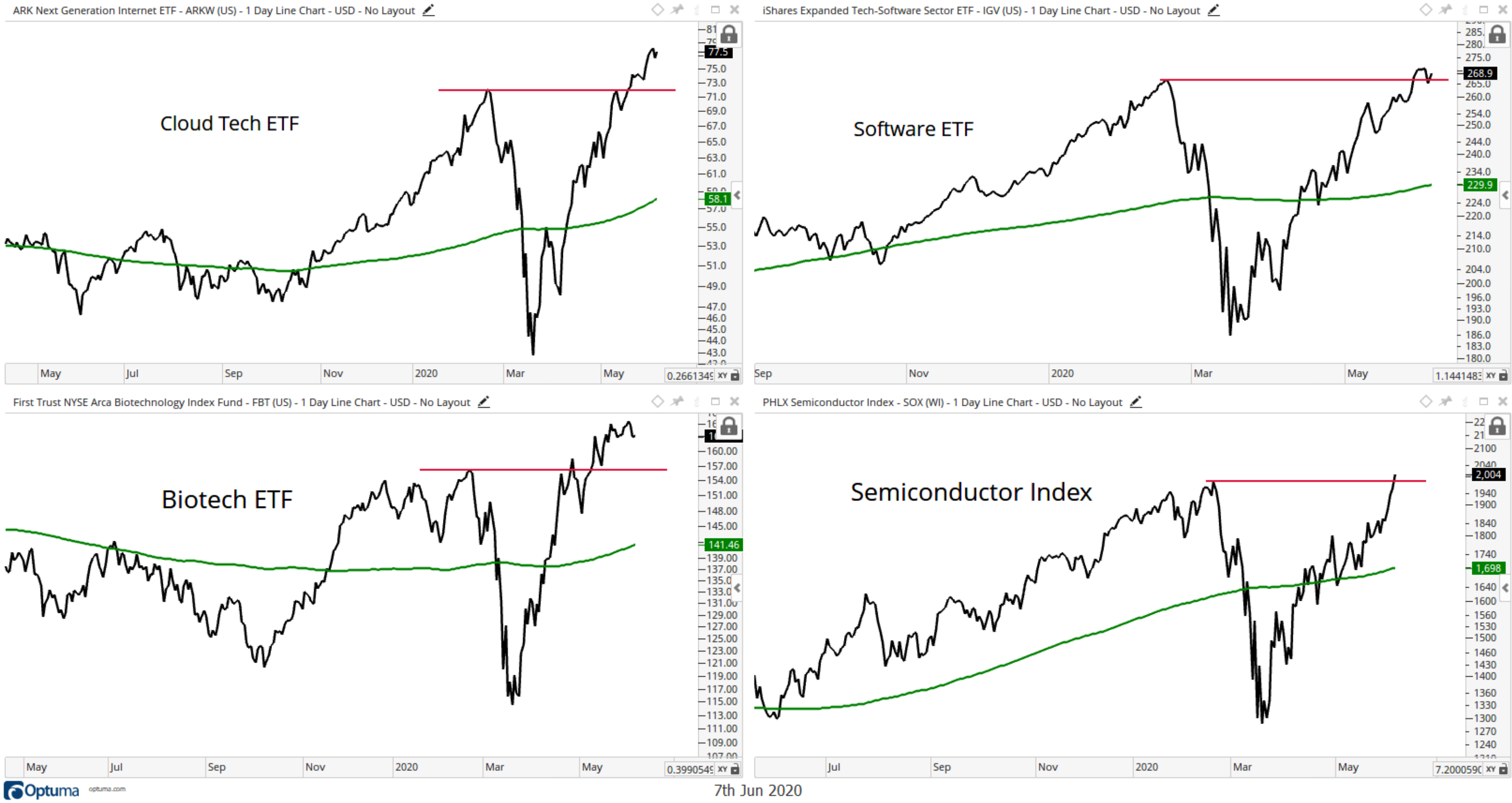


High yield bond spreads have continued to tighten, a bullish sign from the fixed income market. Even the CCC or Below spread has dropped, which likely due to energy markets improving. Across the high yield spectrum, spreads are coming back down as the concern of bankruptcy in the U.S. declines.

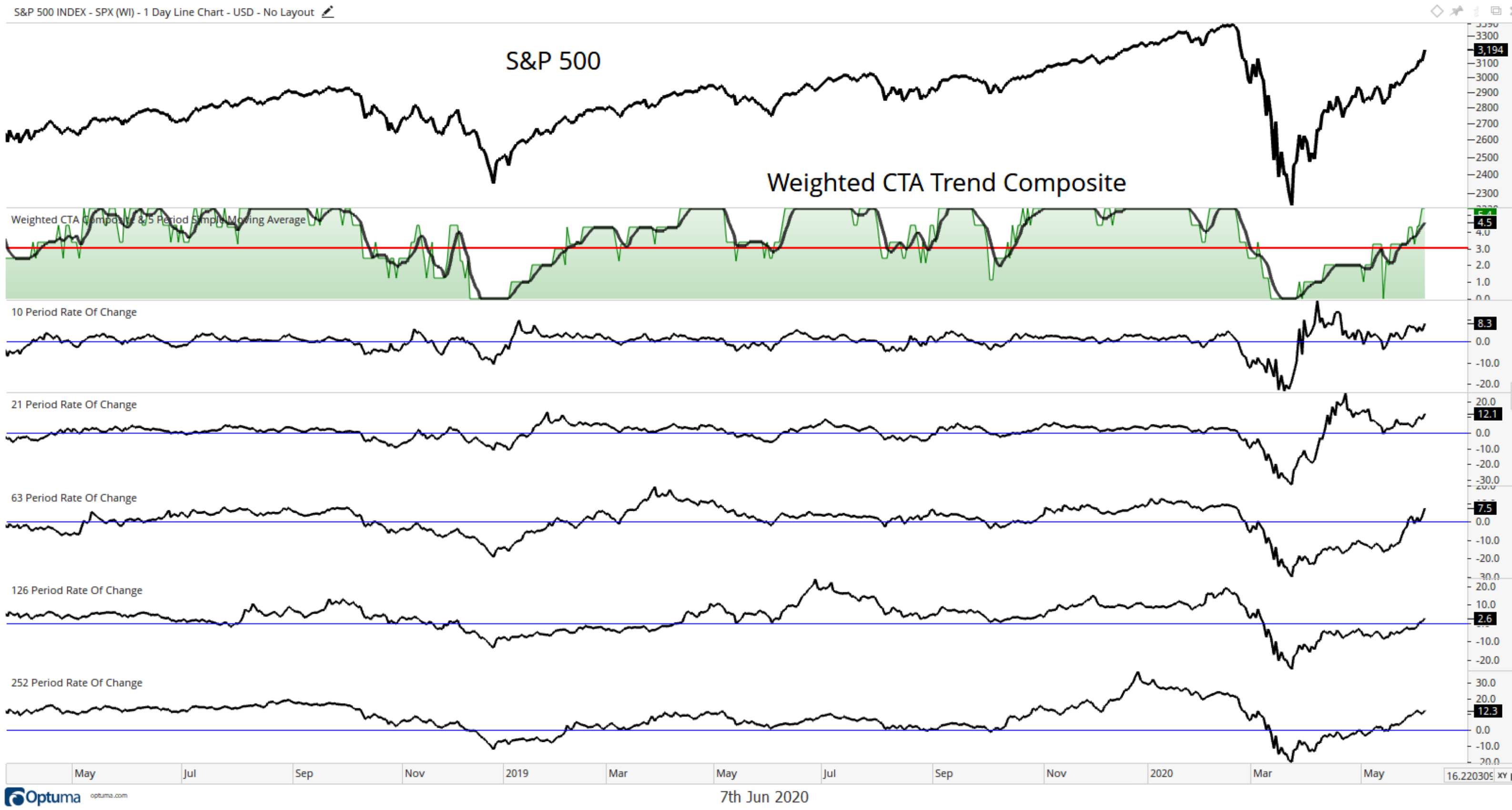
The equity put/call ratio has been steadily declining and gaining a lot of attention as extremely low levels get breached due to the near elimination in interest of traders to own equity options. For my long-time readers know, the trend in the put/call ratio is MUCH more important to me than the absolute level. The low level is of interest but I focus on the divergences, which are much more timely in their trend change identification for the equity index. Last week I noticed a slight divergence, but that has been resolved lower as more calls continue to trade over puts. The sentiment from the option market is very much showing signs of extreme froth. From here I want to see if we start seeing a move higher in the 5-day average of the equity p/c ratio, like we have before many major and minor dips in equity prices as shown on the chart above.



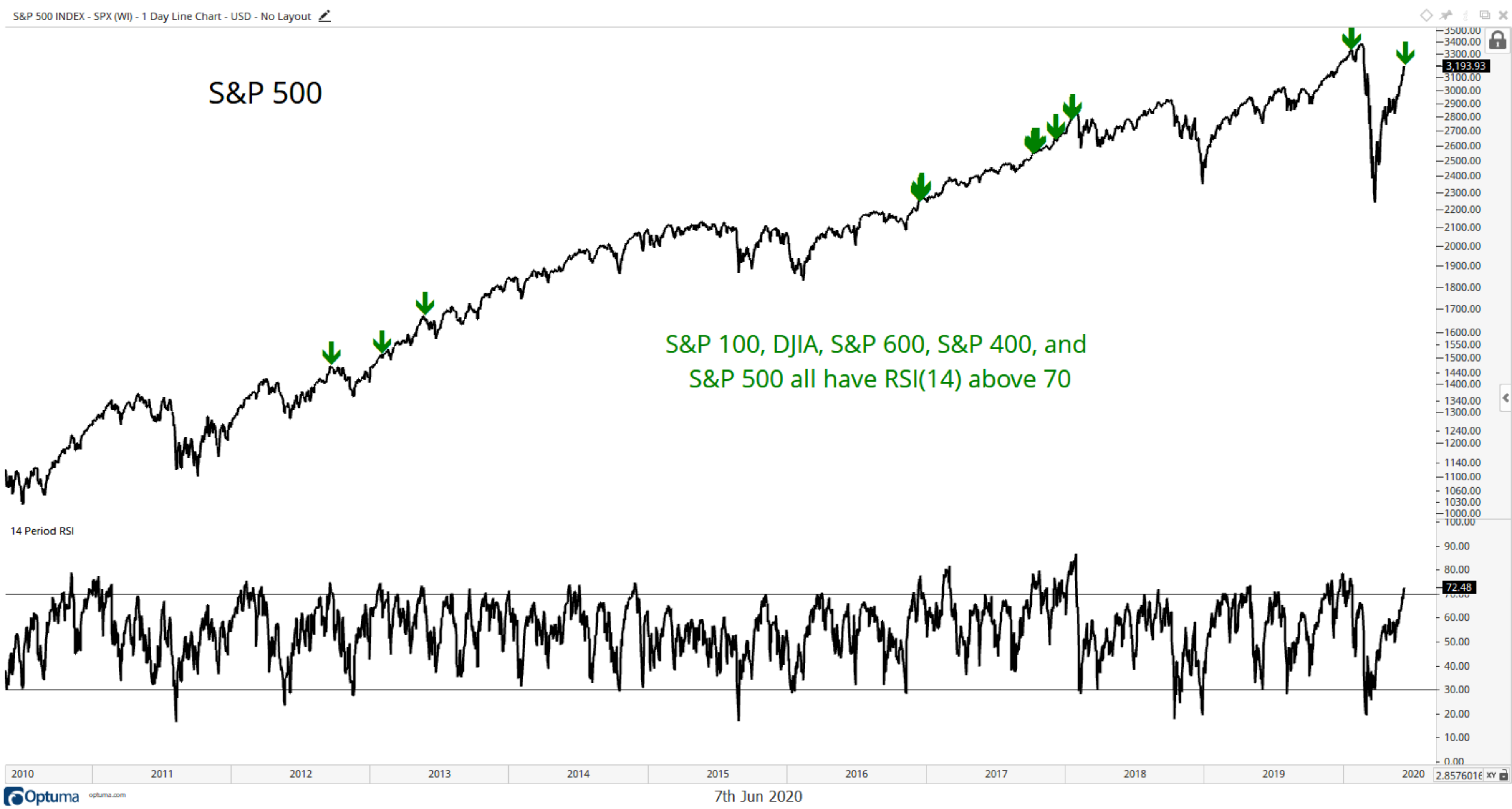
The NYSE High-Low Index has continued to rise, breaching the 80%. The index records the number of stocks making 52-week highs and lows and then takes a 10-day average. The smoothed average at 88% shows a great deal of the NYSE is at a 1 year high. Typically I look for divergences int his figure once we get above 80. In Q4 ‘18, we didn’t even get that high but did get pretty close. Even in Jan ‘18 we saw a brief divergences ahead of the drop, other times the divergence is longer lasting. So far, no divergence is present with the breadth indicator making higher-highs along with price.



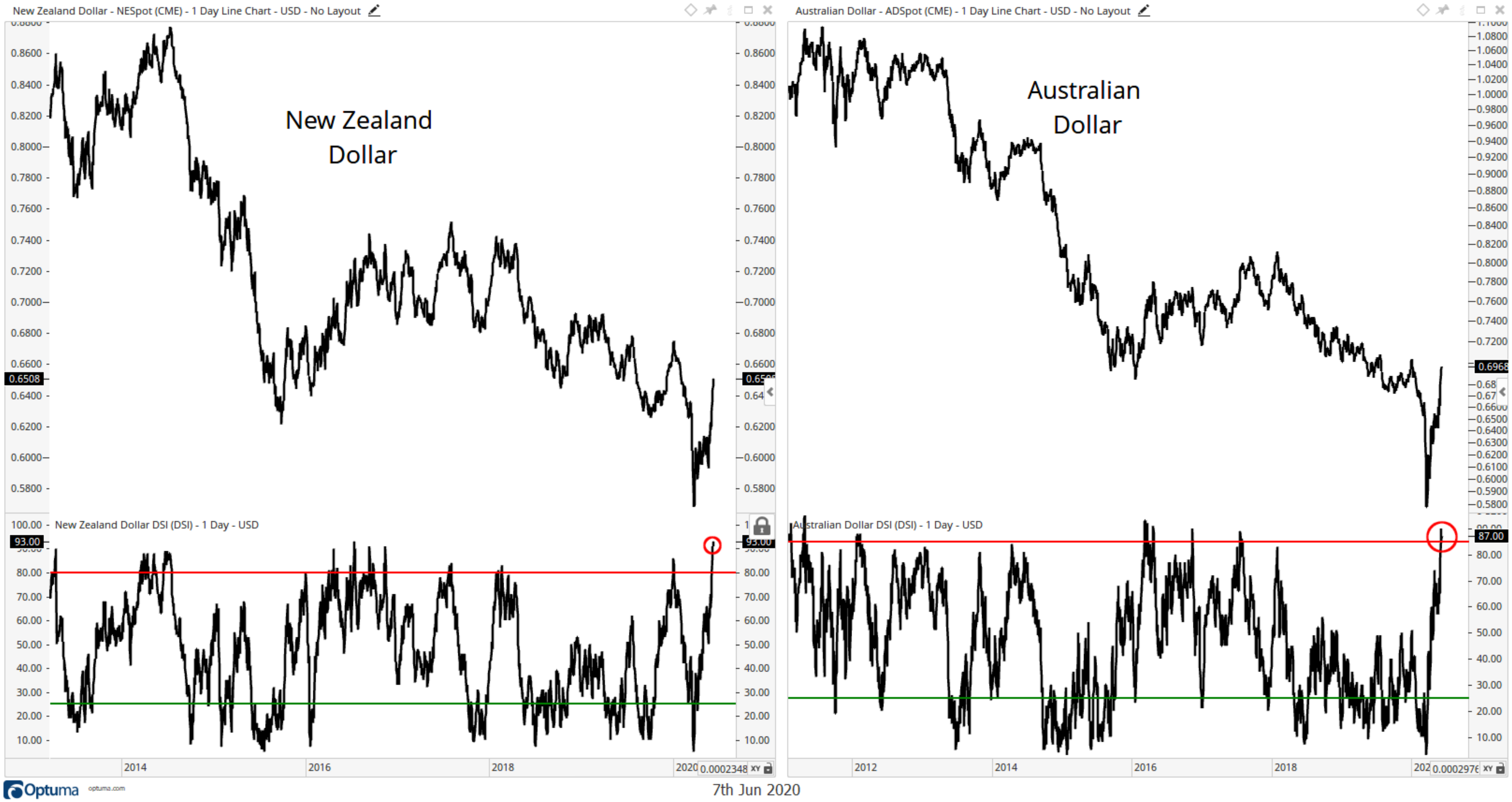
Cloud tech, software, biotech, and semiconductors are four of the major equity leaders, each having breached their prior 2020 highs. This is an encouraging sign. I'm very focused on the semi's, which are just a few points above their prior high, I don't want to see a false break down here—it'd be bullish to see these continue to lead and move further away from their prior highs, leaving them in their proverbial rearview mirror.



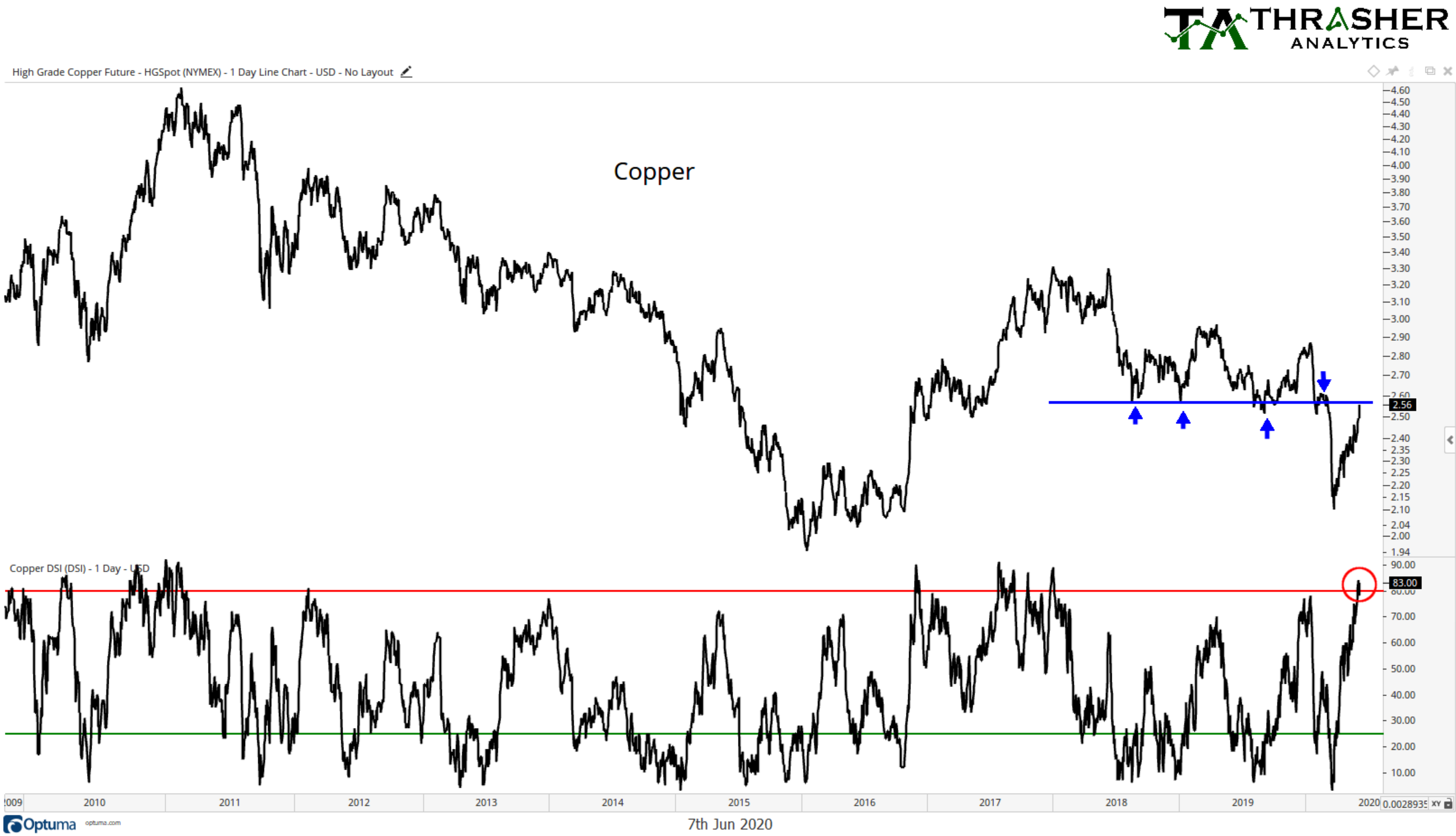
Each of the lookback periods of the Weighted CTA Trend Composite are now positive, giving trend followers a tailwind for equities to move higher.



While ‘overbought’ momentum is a positive sign long-term, it can cause brief headwinds in the short-term. This is amplified when the major asset indices begin to show lofty momentum levels at the same time. The above chart shows when the S&P 100, Dow Jones Industrial Average, S&P 600, S&P 400, and S&P 500 all have a 14-day RSI reading above 70, marked by the green arrows. The RSI for the S&P 500 is shown in the bottom panel. As you can see, it’s not very often we get all the major asset sizes get ‘overbought’ momentum. In fact, we saw it before a divergence formed in February and again in January ‘18 and a few times during the parabolic move up in November and December ‘17. After that it happened just a handful of times going back to 2010. This diminishes the risk/reward attractiveness for stocks in the short-term. While dips still are buyable, things are little over-heated at this point.

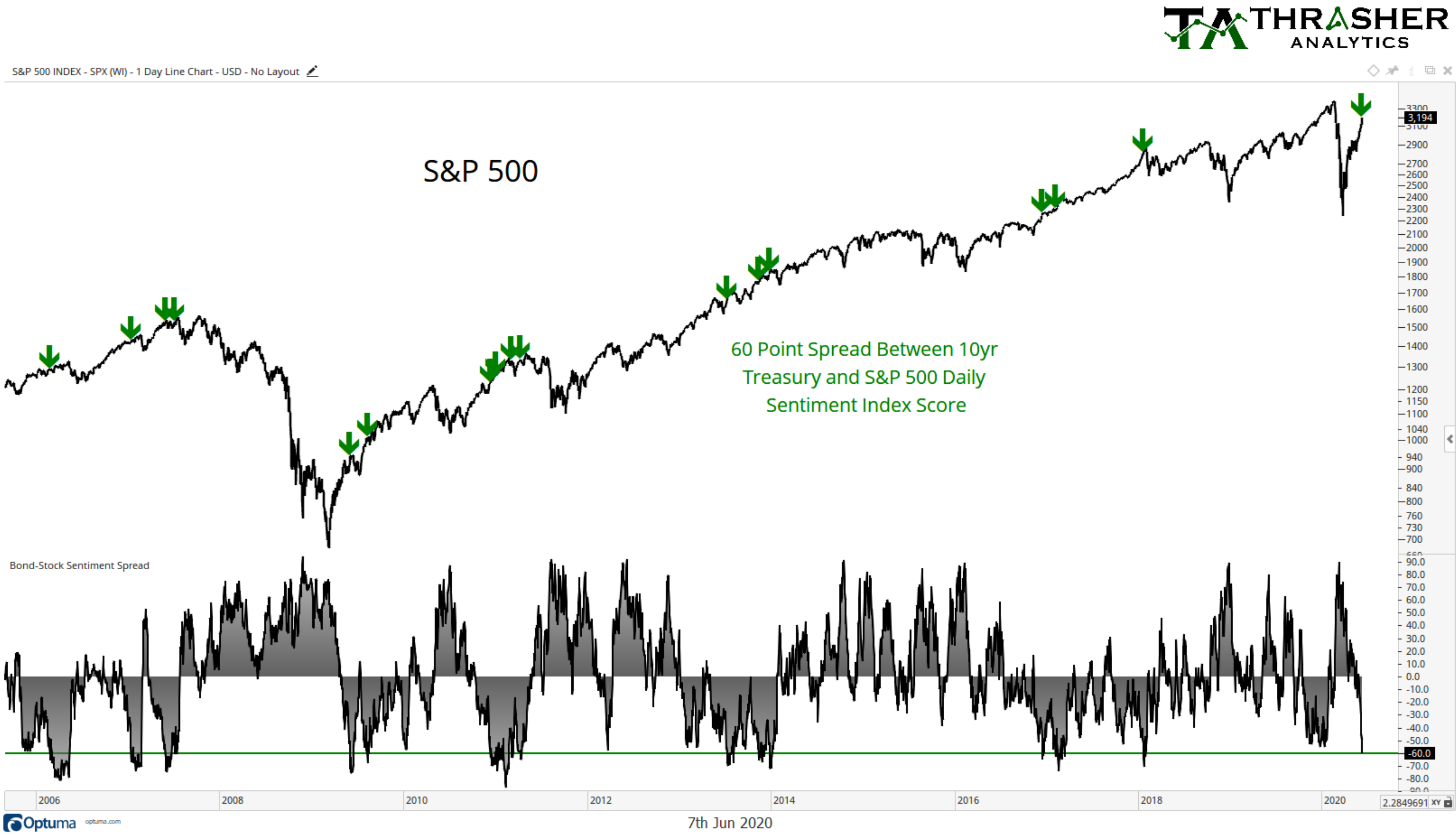


New Zealand and Australian Dollars both are showing extremely high sentiment readings which as you can see on the chart above is not something that happens all too often. These two currencies are unique as they are commonly used in carry trades (selling a currency with low interest rates to buy one with high rates) which acts as a barometer for risk-taking. When traders are bullish on risky assets, they express this in forex markets through carry trades, confident the rate spread will provide a pay-off. So the high sentiment readings here show that the carry trade may be getting ahead of itself, and these two currencies are due for some consolidate or decline to allow sentiment to settle down from their high levels.

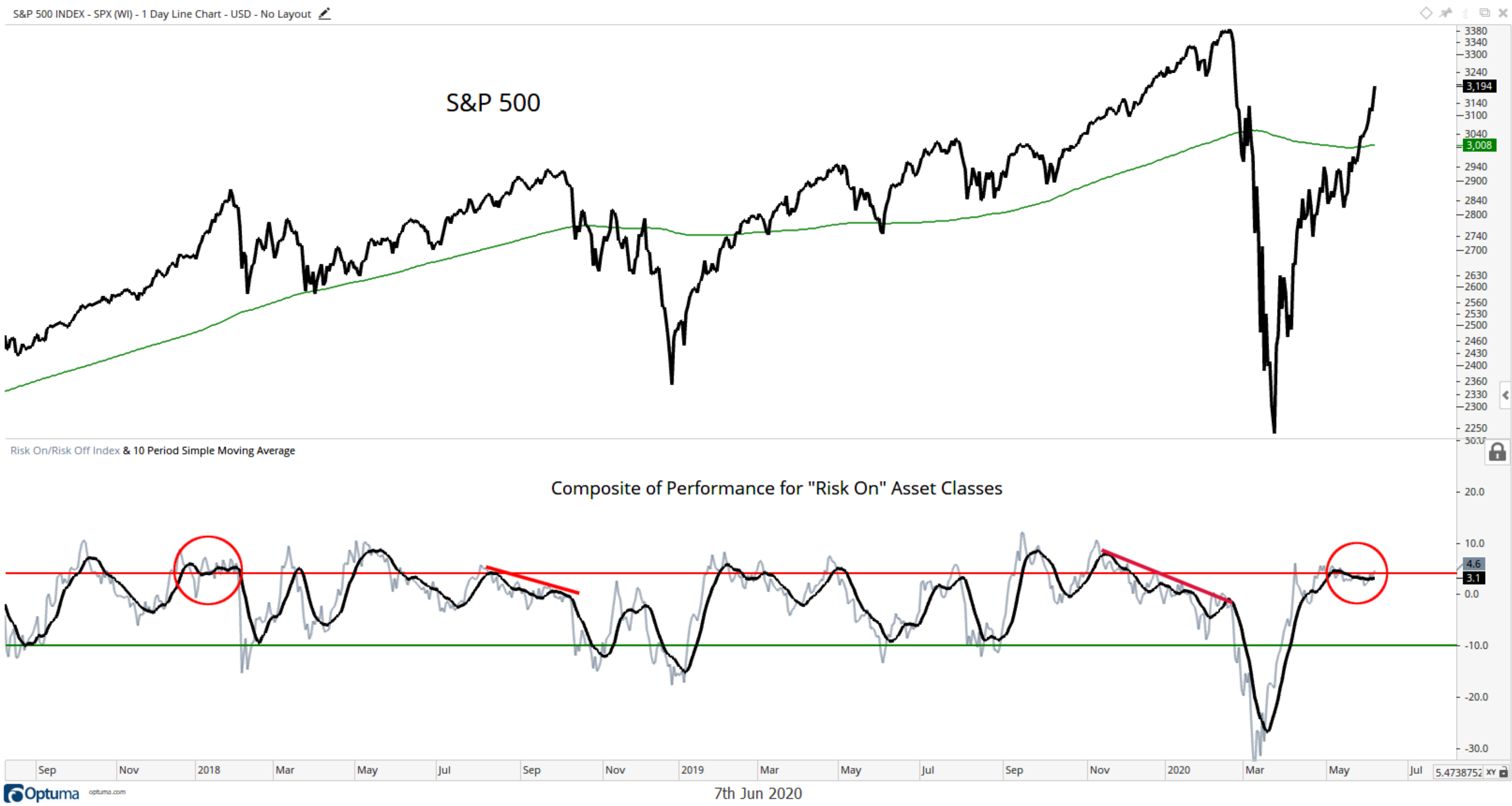


Sentiment for copper is also getting elevated, now at 83% bullish. I find it interesting that sentiment is this high just as the price of copper is approaching a previously important price level at $2.60. Will the high sentiment and prior resistance prevent copper from breaking out? It’s a chart I’ll be keeping an eye on this week.

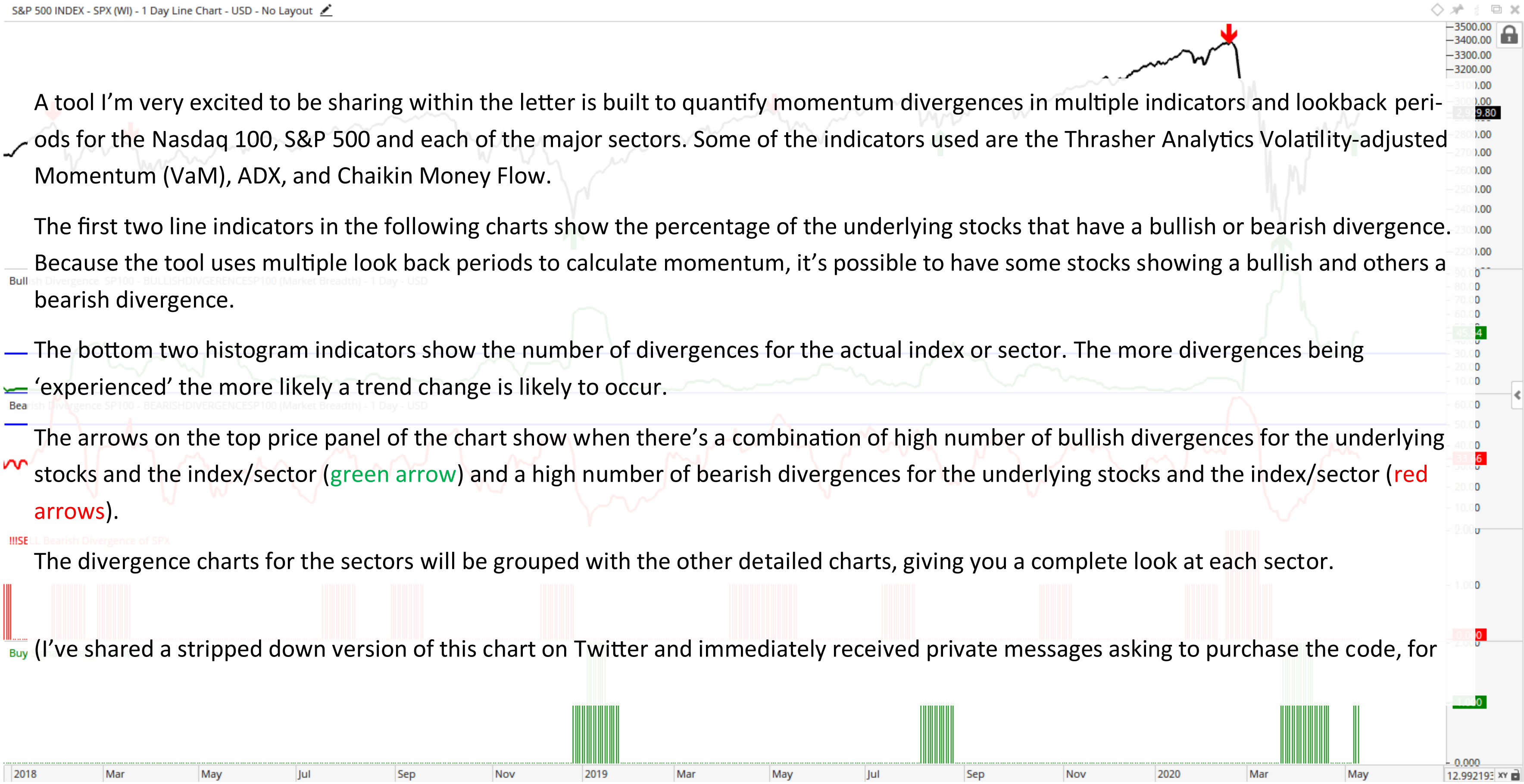
The spread between 30-day and 3-month volatility has now been declining as you'd expect considering the continue rise in equity prices and also the decline in 30-day vol (VIX). We often see the spread between these two parts of the VIX curve rise when option markets get a little nervous. We saw in Jan. '18 (there's that date again), Q4 '18, May '19, and just before the crash earlier this year. Notice the longer the divergence the more severe the decline in equities. Jan. '18 and May '19 were fairly short and quick moves while the Q4 '18 and '20 divergences were longer and were followed by larger declines. So far the current divergence is fairly small, so I'd rather see price respond sooner rather than later, not allowing the divergence to build any history and lead to a large decline. The fact that vol traders are flattening the VIX curve while the put/call ratio drops like a rock shows a tug-of-war within the option community, my guess is vol traders win out in the end.



The spread between the Daily Sentiment Index for the S&P 500 and the 10-year Treasury has widened to a major level. There's now a 60 point spread between the two, something we don't see very often as the chart above shows (green arrows). We last saw this large of a spread in sentiment in… January 2018. It didn't first occur in Jan. '18 at the top, but several days in advance, which was the case for many of the prior instances, which lines up with how sentiment flows to price activity… sentiment leads, price follows. We often see extreme readings in sentiment data FIRST and then price responds afterward. This fits with what the VIX curve is showing, and the put/call ratio, all three of these are showing frothy sentiment readings which could cause a 'reset' moment for stocks, but I believe it'd be a buyable dip based on current strong breadth data.



The composite of ‘risk on’ assets (think high beta, small cap, etc.) has steadily climbed with the equity index, showing a broadly bullish trend in risky asset performance. However, we’ve now started to see the indicator stall out at an elevated level. The flattening itself isn’t a large concern but it does fit the theme of a Jan. ‘18 repeat, when we also saw the risk on composite flatten out, noted with a circle on the chart.



A tool I'm very excited to be sharing within the letter is built to quantify momentum divergences in multiple indicators and lookback periods for the Nasdaq 100, S&P 500 and each of the major sectors. Some of the indicators used are the Thrasher Analytics Volatility-adjusted Momentum (VaM), ADX, and Chaikin Money Flow.

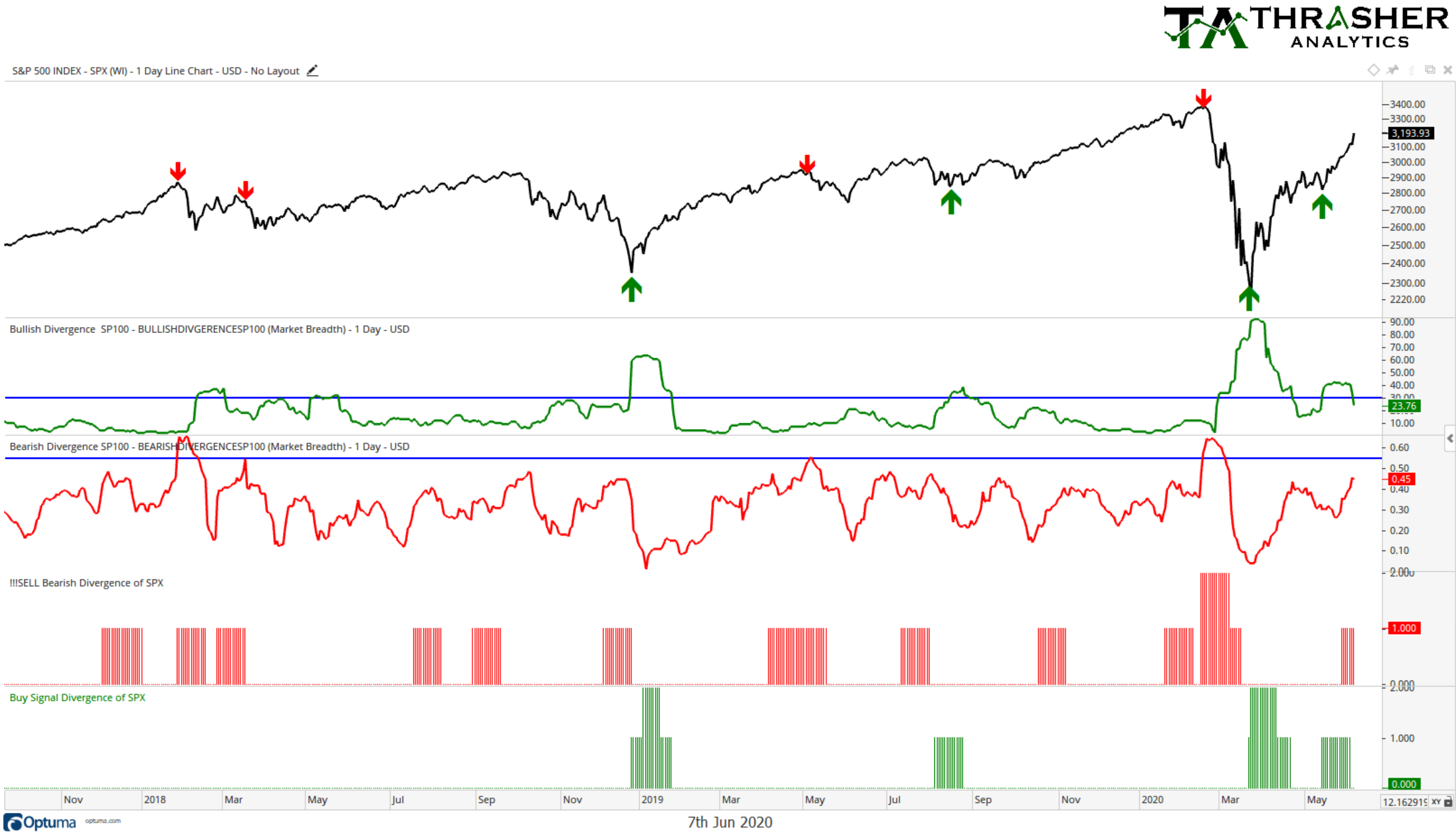
The first two line indicators in the following charts show the percentage of the underlying stocks that have a bullish or bearish divergence. Because the tool uses multiple look back periods to calculate momentum, it's possible to have some stocks showing a bullish and others a bearish divergence.

The bottom two histogram indicators show the number of divergences for the actual index or sector. The more divergences being 'experienced' the more likely a trend change is likely to occur.

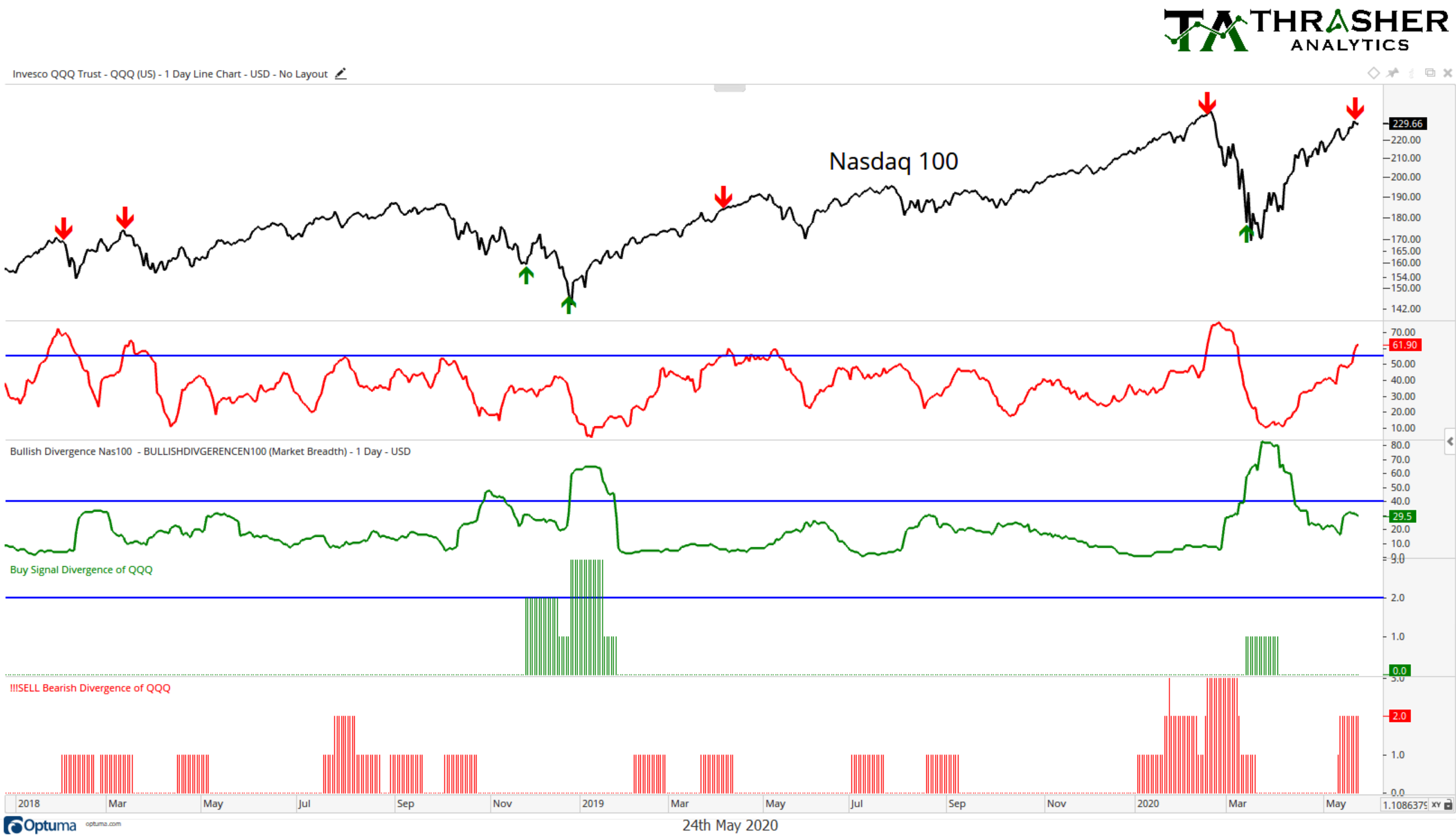
The arrows on the top price panel of the chart show when there's a combination of high number of bullish divergences for the underlying stocks and the index/sector (green arrow) and a high number of bearish divergences for the underlying stocks and the index/sector (red arrows).

The divergence charts for the sectors will be grouped with the other detailed charts, giving you a complete look at each sector.

(I've shared a stripped down version of this chart on Twitter and immediately received private messages asking to purchase the code, for



There's a growing number of SPX stocks with bearish divergences which continues from two weeks ago. However, one change is the drop in bullish divergences which has fallen to 23%. Typically we see bearish divergences rise above 50% with divergence on the index itself (shown by the histograms in the bottom panels). We aren't to 50% yet, but at 45%, it could just take another day or two to get 5bps more.



While SPX still has less than 50% of its stock with a bearish divergence, the Nasdaq has over 60%, with 2 divergences formed on the index itself (Shown by the bottom histogram). The attractively of QQQ has diminished severely, and I don't believe offers an attractive entry at this point.

One of the new sections of the report will include a more detailed look at the primary S&P sectors. This section will develop over time but initially will include two pages (three when the divergence data launches in the next report).

The first page will show a daily and weekly chart of the sector with two proprietary indicators. The first is a **Momentum Composite**, which allows momentum indicators to be viewed from a overbought and oversold lens as the indicator evaluates the z-score of multiple momentum indicators with varying lookback periods. When the underlying indicators are at historic extremes, they often are prone to mean-reversion price action, especially when grouped together as I've done with the Momentum Composite

The second tool is a **Volatility-Adjusted Momentum**, which uses a custom gauge of volatility applied to a traditional momentum indicator.

When used together, a great detail can be gleaned from what momentum is showing for the daily and weekly charts of each sector and I'll of course provide brief commentary to accompany them.

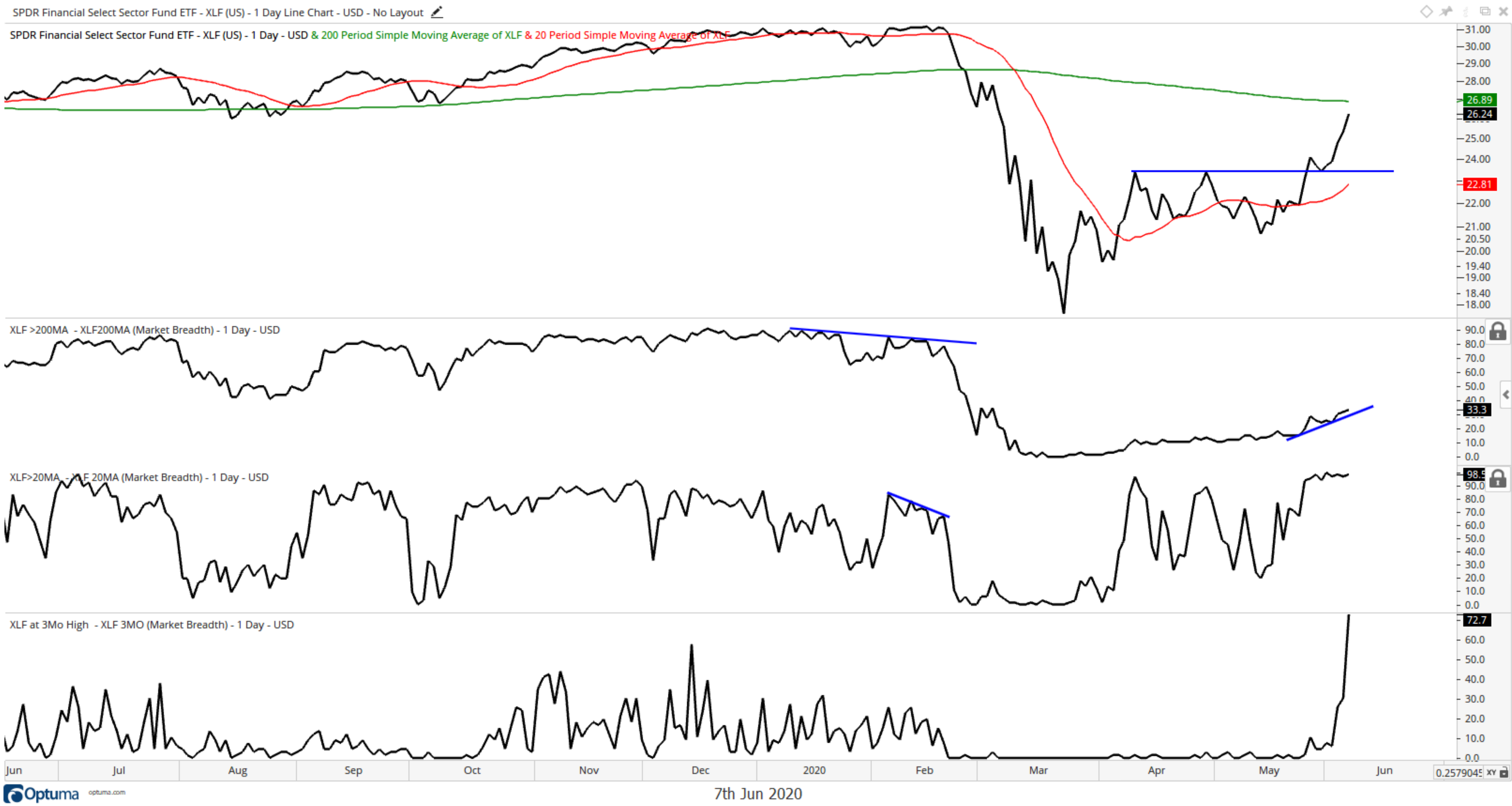
On the far right are **two watchlists,** showing stocks that make up each sector broken down by momentum and mean-reversion. The momentum list is the same tool used for the sector rotation model, a custom built indicator (different than the Momentum Composite) that evaluates the trend of a security and provides a score based on the attractiveness and sustainability of that trend. The higher the score the better.

The second watchlist is the individual stocks of the sector sorted by respective Momentum Composite reading, shown as a z-score. Scores less than 2 are significant.

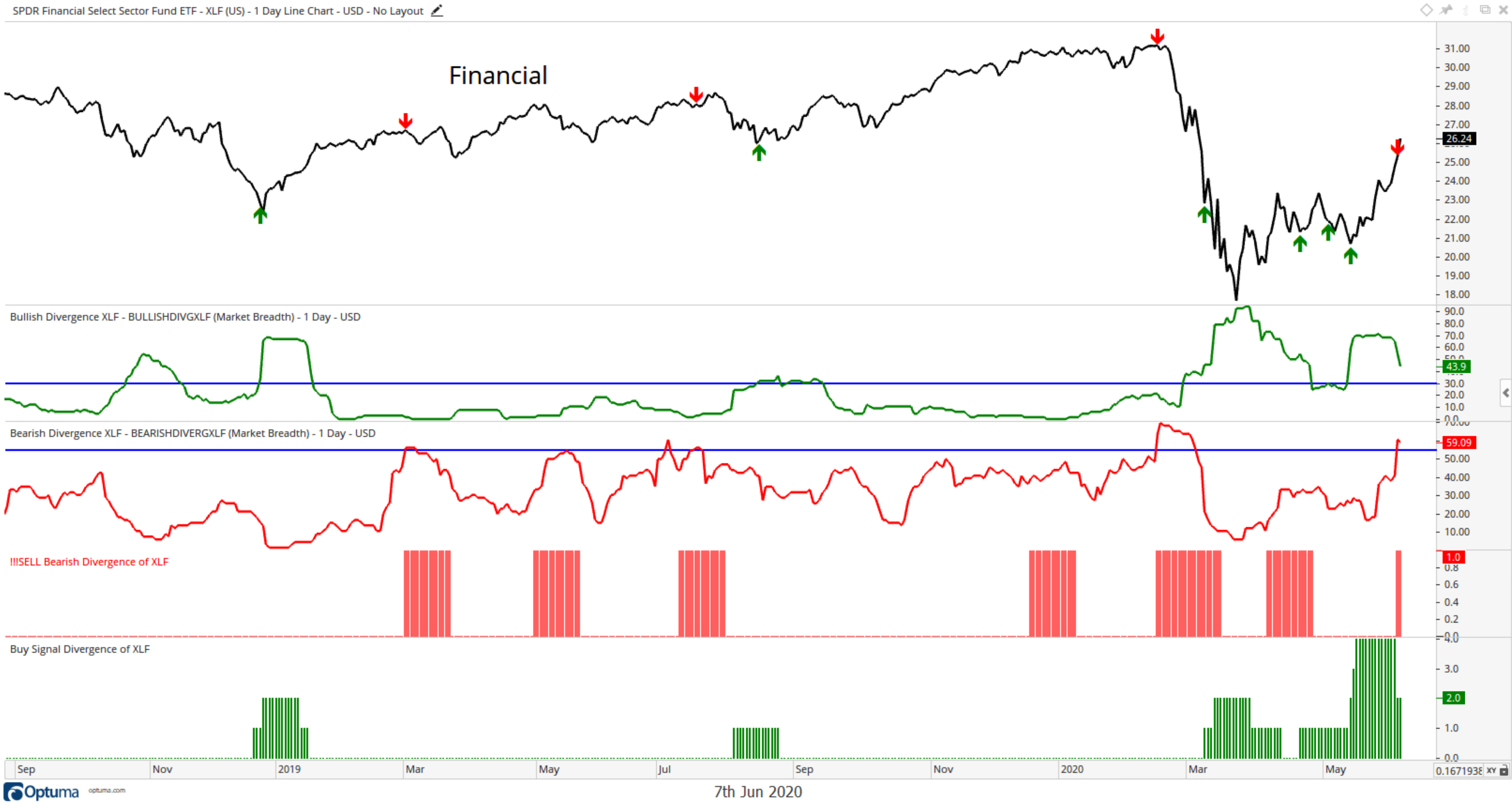
These watchlists can provide an excellent starting point for further research and analysis. Feel free to use these as idea generation. I'll have more details and example back tests in the future. These lists aren't intended to be buy/sell signals on their own.

The second page will show several standard breadth gauges for each sector, providing additional insight into the individual stock participation in the sector's price action.

Watching the test of the July ‘19 low for XLF with overbought VaM and momentum composite indicators on the daily.



Breadth remains supportive.



Large number of stocks have a bearish divergence with 2 divergences for XLF itself.

Watch List

Ticker	Momentum
Tech Sector Momentum Score	
PYPL	34.3851
NVDA	27.6557
CDNS	26.6567
SNPS	25.3210
ADBE	24.7071
MSFT	20.1199
FTNT	19.9286
NOW	18.7092
AAPL	17.5500
IPGP	17.5303
ADSK	16.9633
ZBRA	12.5625
SWKS	7.9132

Watch List

Ticker	Mean Reversion
Tech Sector Mean Reversion Score	
XRX	-1.4835
DXC	-0.6658
ADS	-0.5497
HPQ	-0.4865
NLOK	-0.4700
NTAP	-0.4176
MSI	-0.3398
WDC	-0.3191
IT	-0.2457
FLIR	-0.2245
CTSH	-0.1915
ADP	-0.0413
IBM	-0.0285
PAYX	-0.0239
ORCL	0.0310
XLNX	0.0588
GLW	0.1210

XLK is approaching its prior high, watching for a breakout or a failure.

A continued trend of more stocks rising above their respective 200-day MA

THRASHER ANALYTICS

Watch List

Ticker	Momentum
Health Care Momentum Score	
REGN	26.4708
ABMD	25.5400
IDXX	19.9418
ILMN	18.8633
TMO	17.0679
PKI	14.6864
DHR	12.4967
DGX	12.0032
A	8.6915
VRTX	7.9370
HUM	7.5172
UNH	6.8743
ABC	6.0675

Watch List

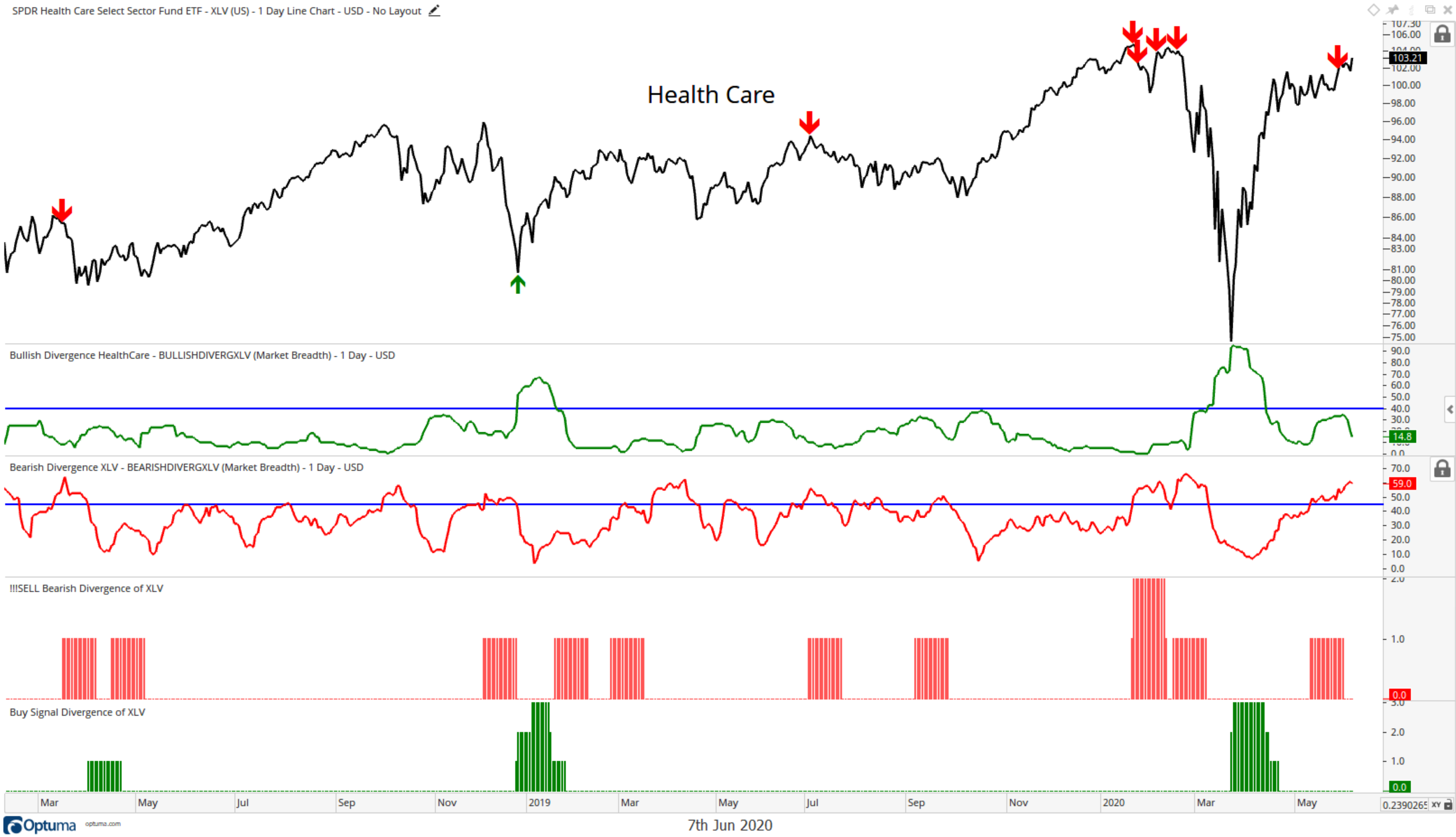
Ticker	Mean Reversion
Health Care Mean Reversion Score	
UHS	-0.9048
BDX	-0.6251
HCA	-0.5018
PFE	-0.4783
BSX	-0.2265
XRAY	-0.1811
MDT	-0.1334
MYL	-0.1171
MRK	-0.1075
WAT	-0.0678
COO	0.2199
EW	0.2626
IQV	0.3029
SYK	0.3357
ZBH	0.3471
VAR	0.4595

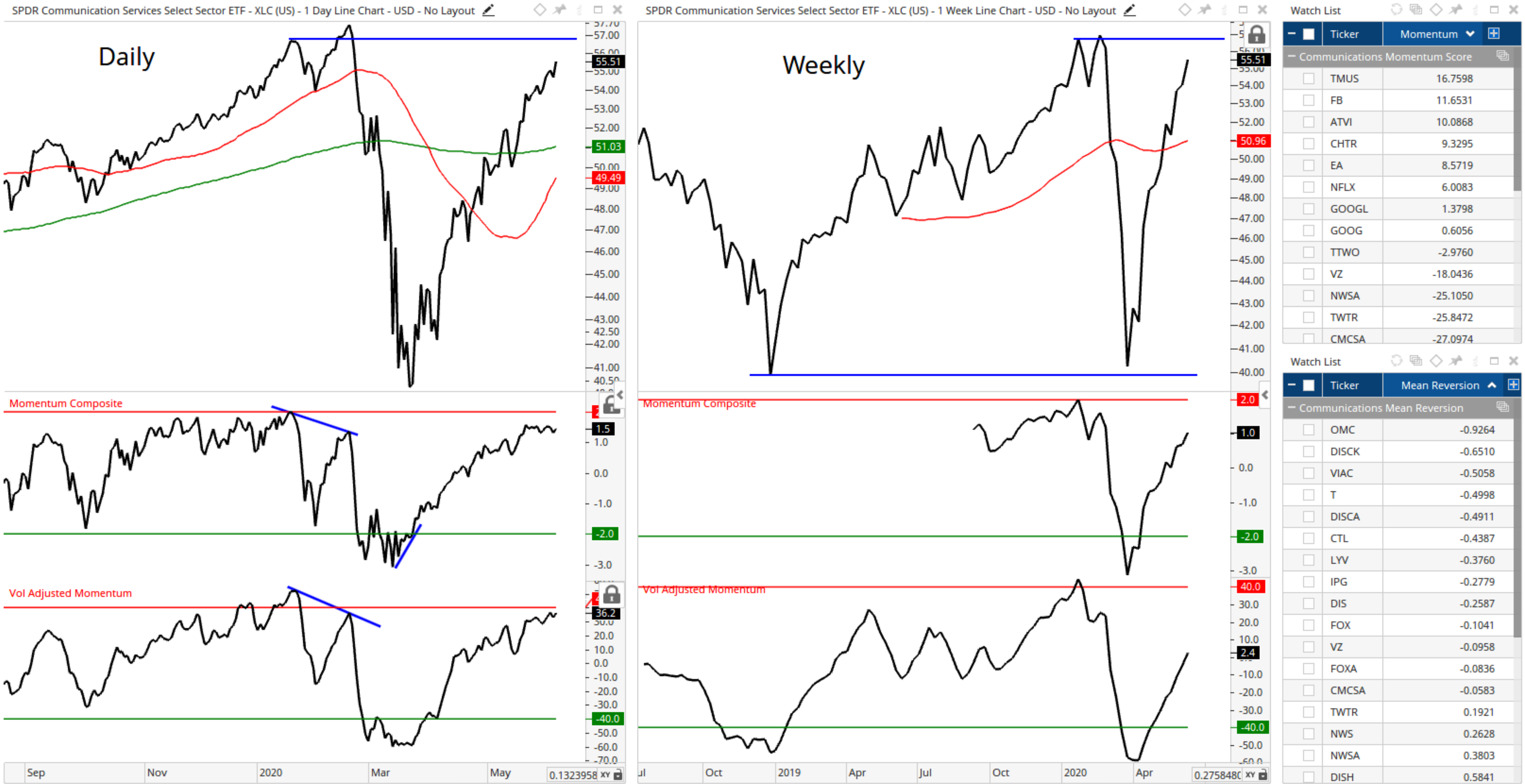
7th Jun 2020

XLV consolidated and recently broke out, now sitting just below its prior high.

Continued improvement in L/T breadth but a slight divergence has developed with % above 20-day MA.

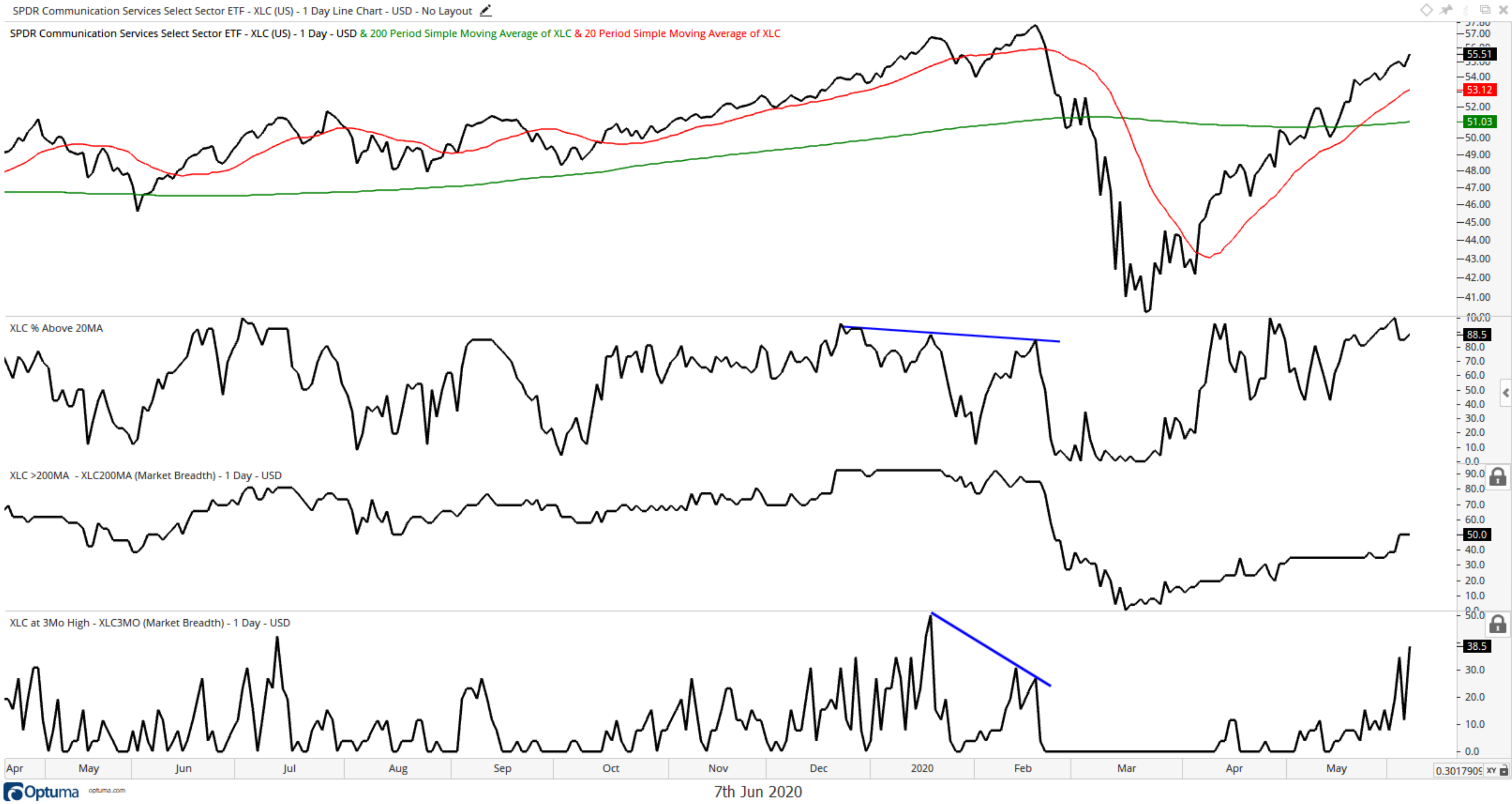
THRASHER ANALYTICS





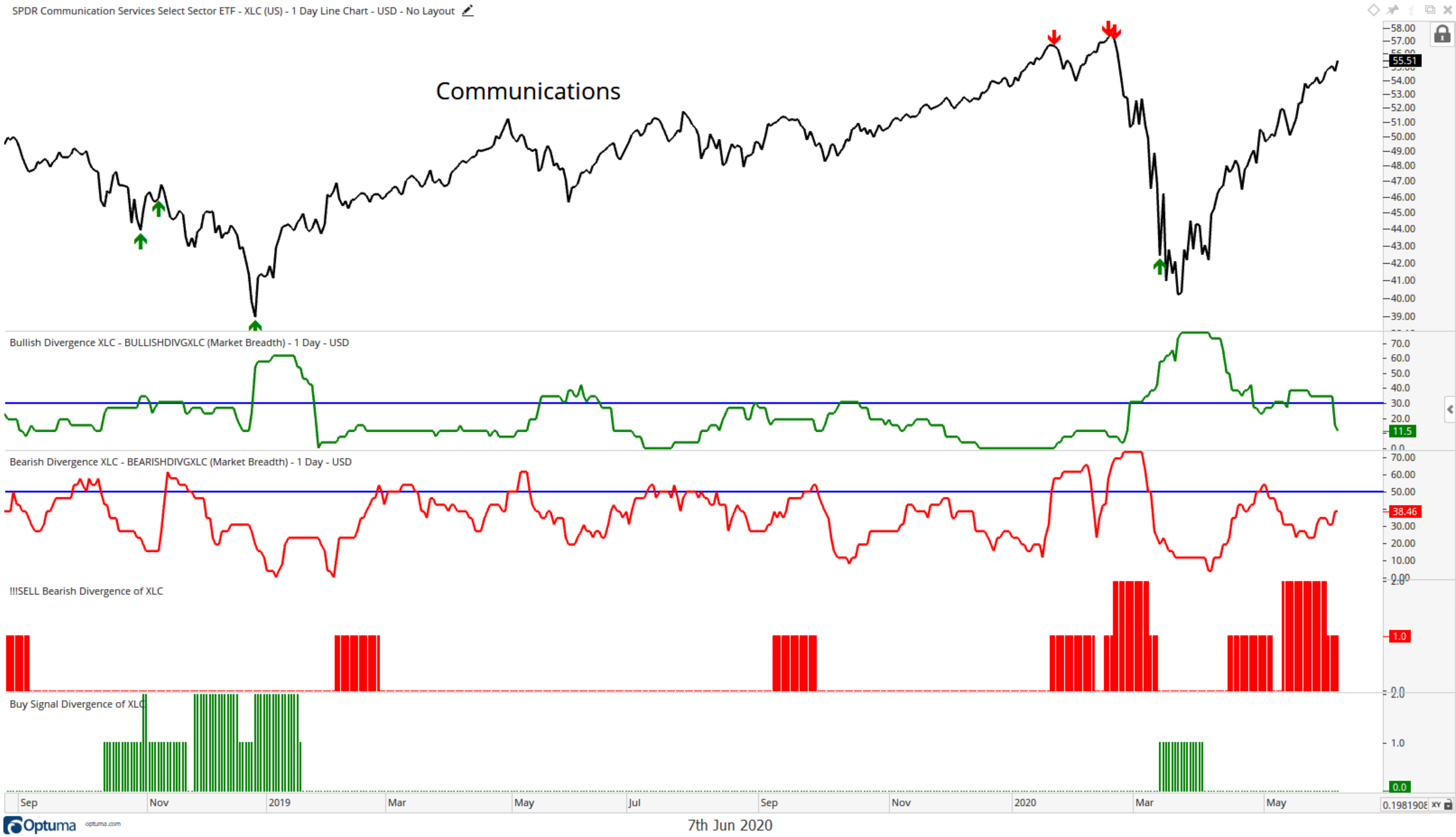
7th Jun 2020

XLC sits just under the prior high with both momentum and VaM at high levels.



Breadth looks positive for XLC

Communications Sector



7th Jun 2020

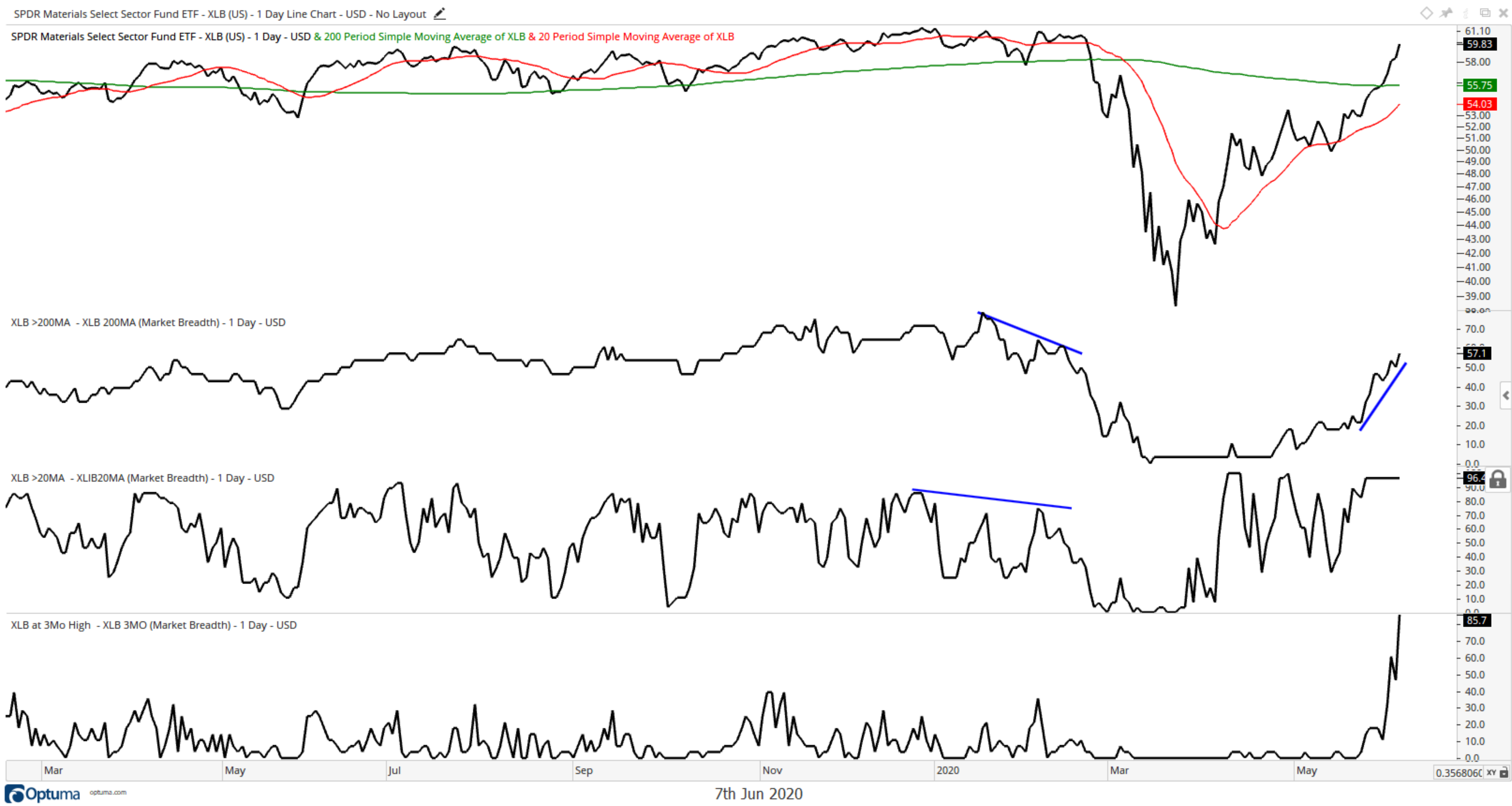
Watch List

Ticker	Momentum
Materials Momentum Score	
ECL	14.8639
SHW	3.2694
APD	-1.4164
IFF	-4.2836
AMCR	-6.4483
FMC	-8.7195
LIN	-9.2389
PKG	-11.1106
NEM	-13.5184
BLL	-14.6739
EMN	-14.9599
CTVA	-21.2615
ALB	-23.3141

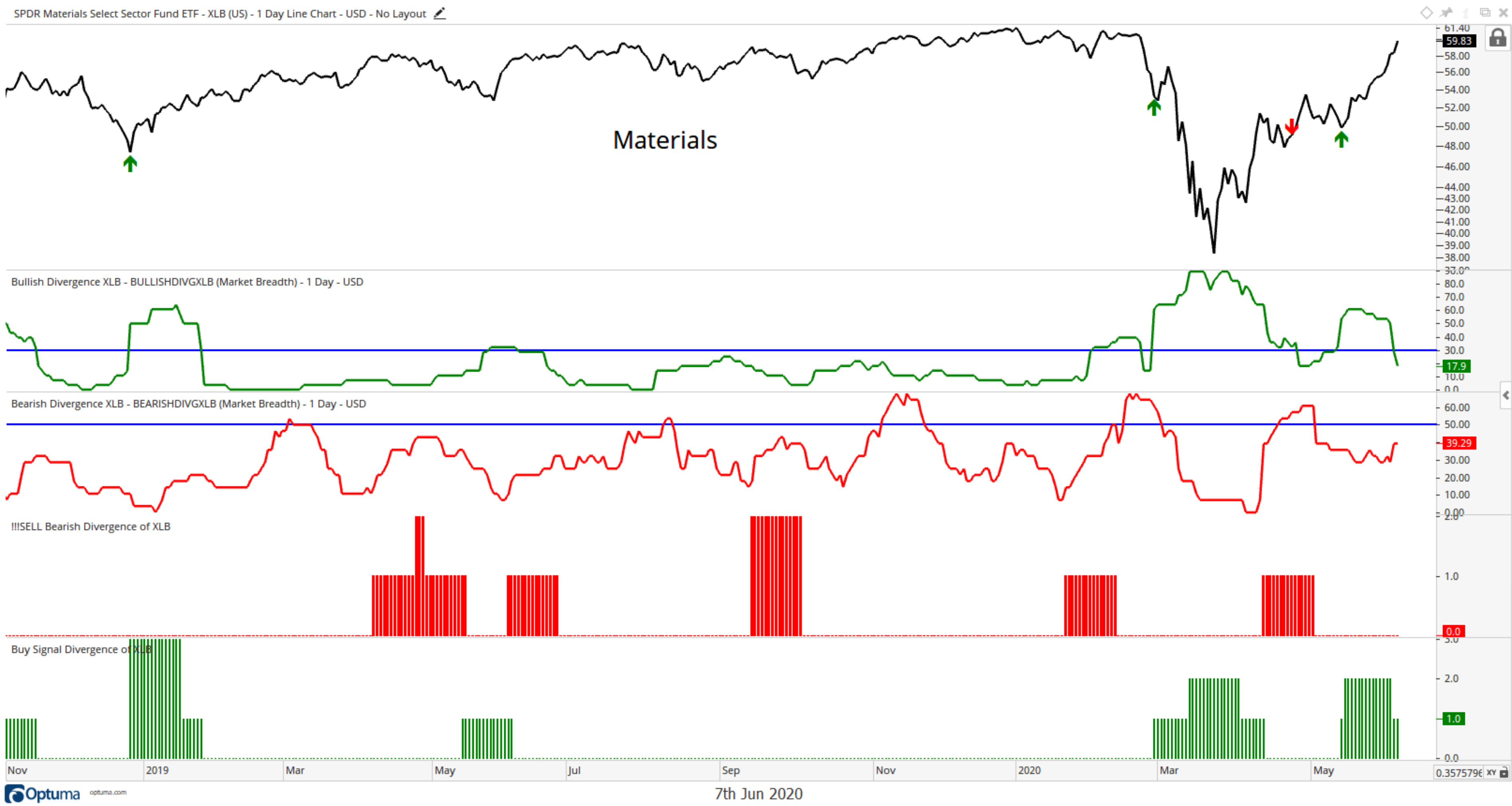
Watch List

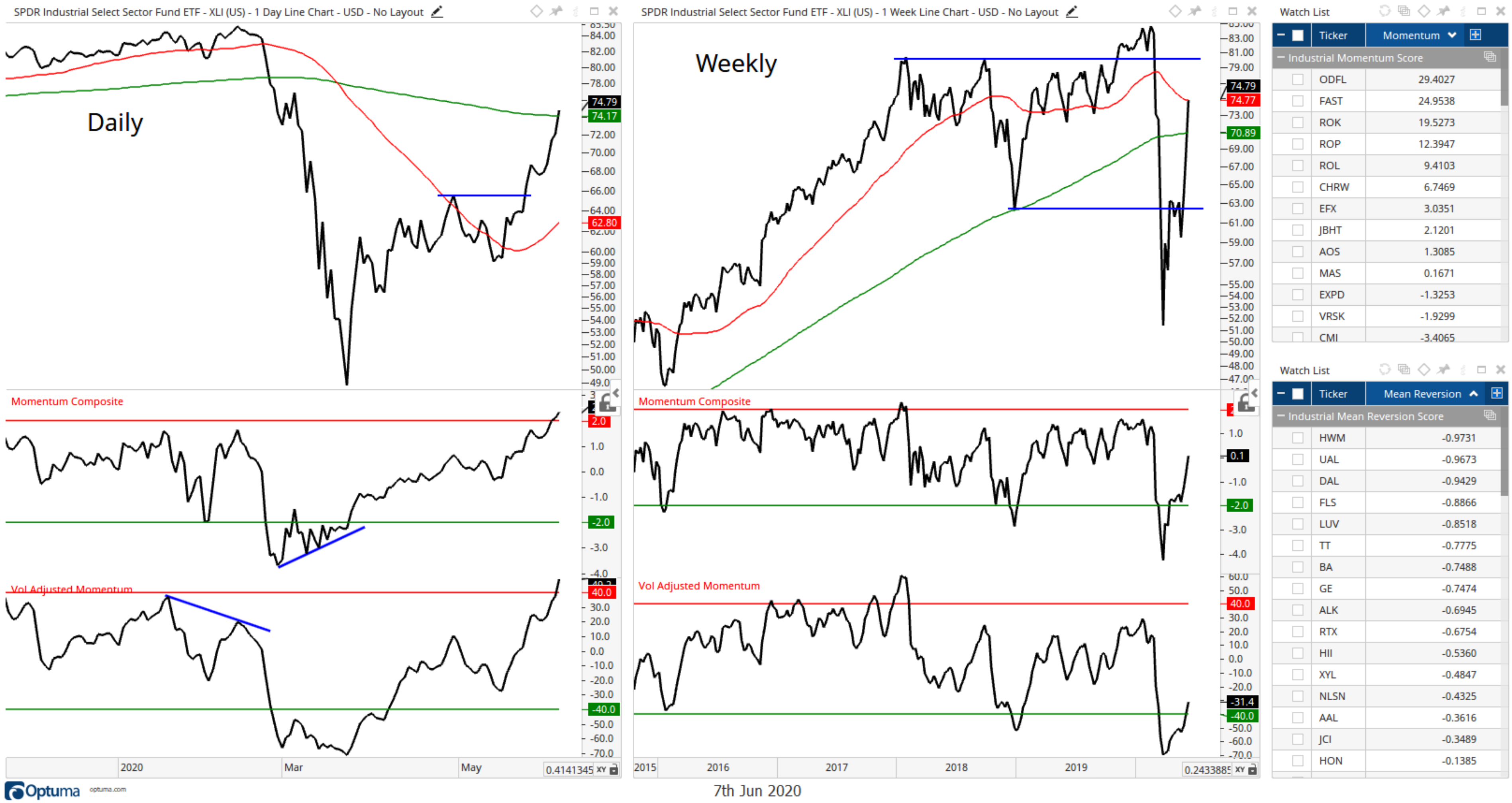
Ticker	Mean Reversion
Materials Mean Reversion Score	
CF	-0.8038
MOS	-0.4779
WRK	-0.4484
VMC	-0.3884
CE	-0.3104
MLM	-0.2999
NUE	-0.1967
SEE	-0.1516
IP	-0.0450
CTVA	0
AMCR	0
DOW	0.0010
LYB	0.0273
PPG	0.1274
DD	0.1681
FCX	0.4200

XLB is just under the prior high, watching for a breakout but both indicators are/near overbought.

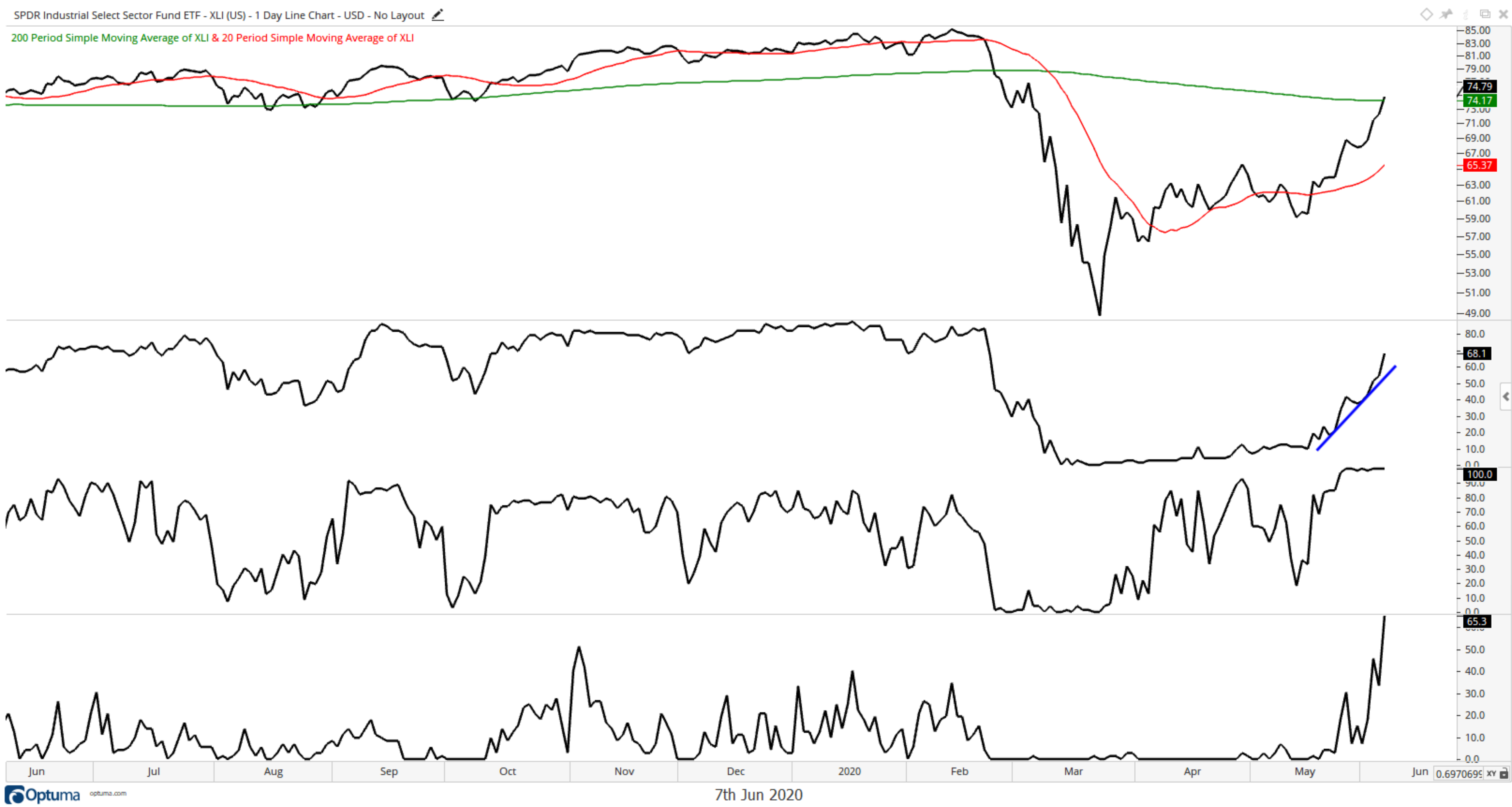


Breadth is positive for XLB..


SPDR Materials Select Sector Fund ETF - XLB (US) - 1 Day Line Chart - USD - No Layout
Materials
Bullish Divergence XLB - BULLISHDIVGXLB (Market Breadth) - 1 Day - USD
Bearish Divergence XLB - BEARISHDIVGXLB (Market Breadth) - 1 Day - USD
!!!SELL Bearish Divergence of XLB
Buy Signal Divergence of XLB
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
7th Jun 2020

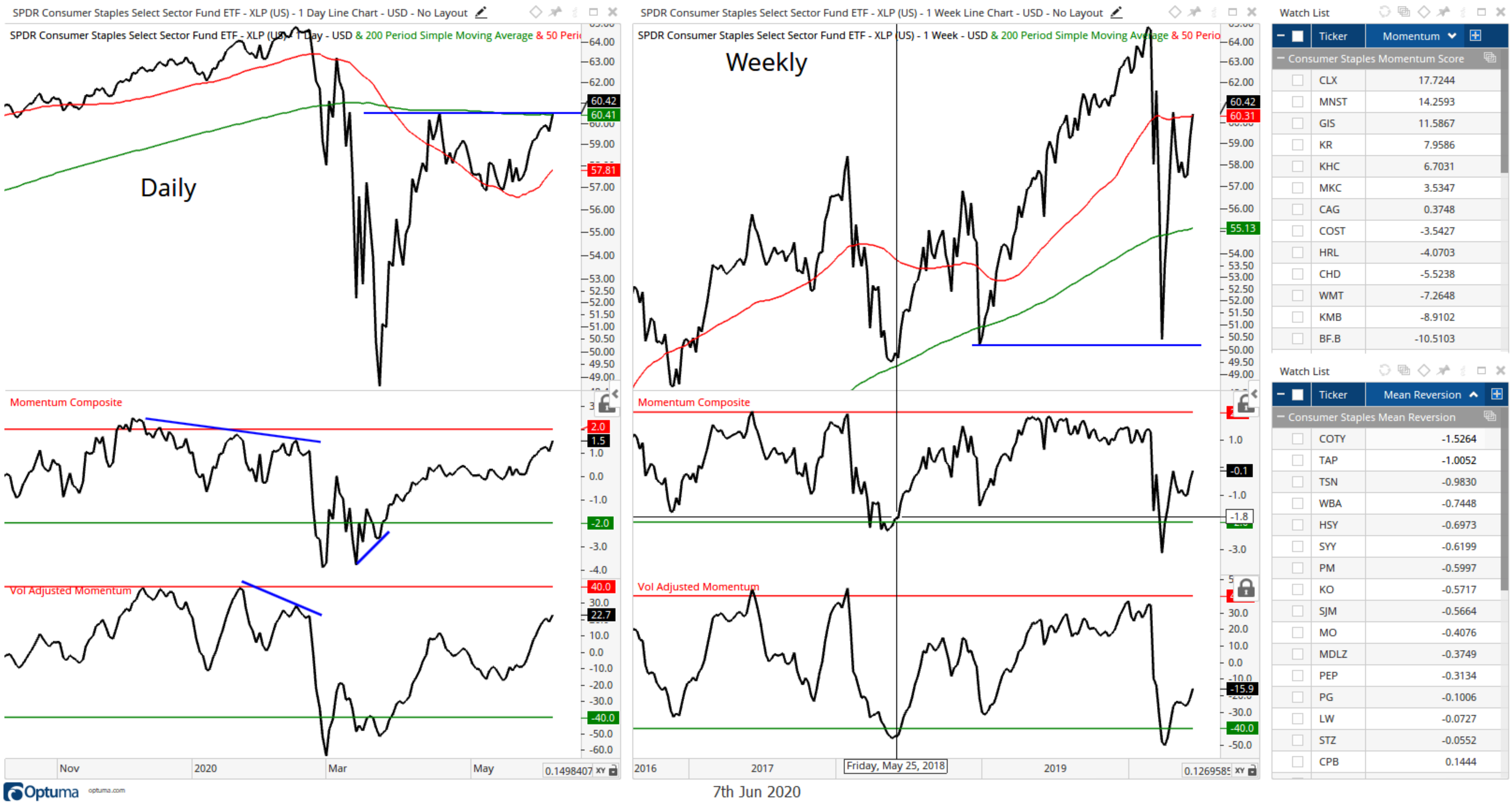


XLI recently broke above its 200-day MA with both indicators now overbought, watching if 200MA fails to hold.



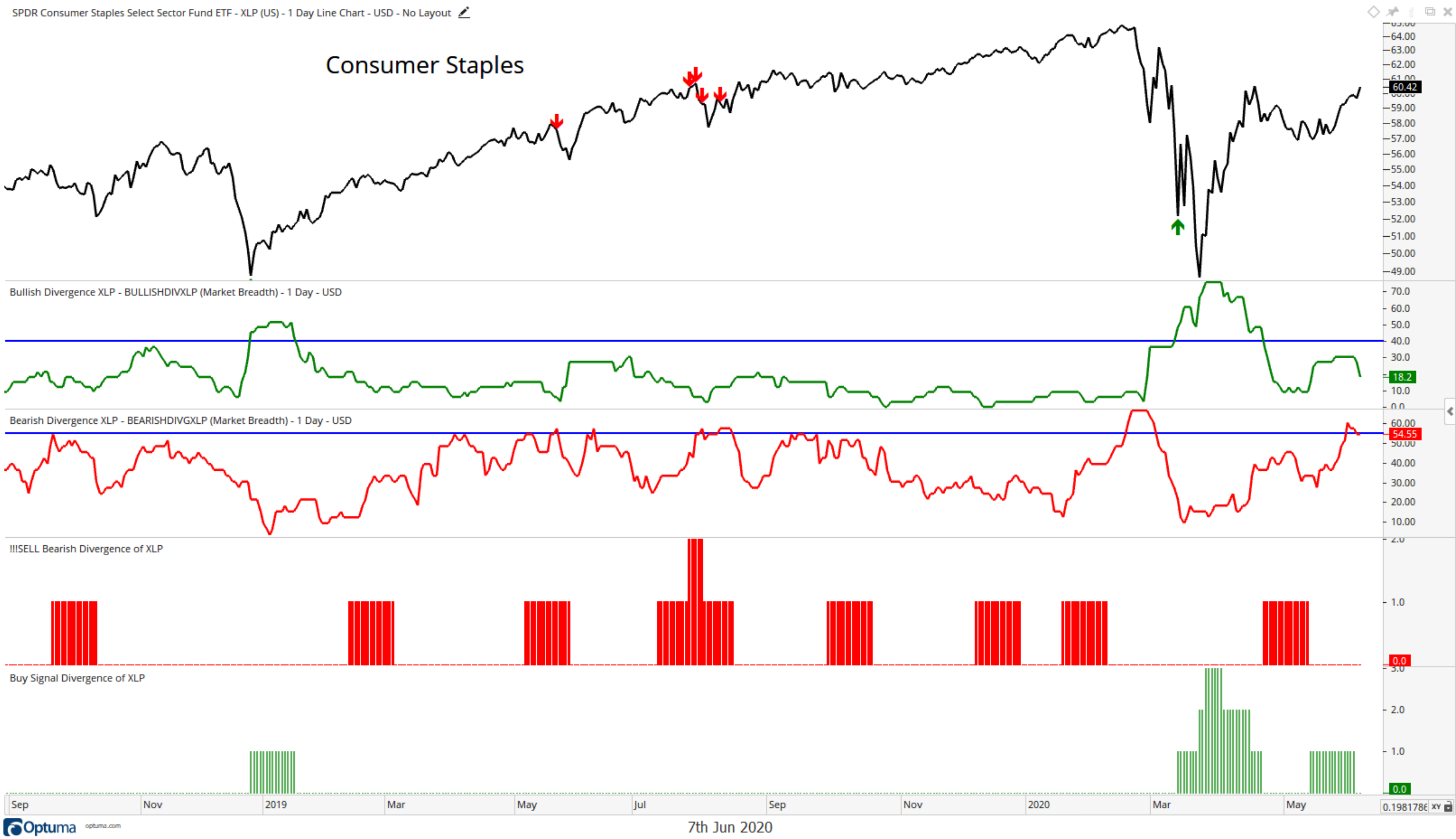
Breadth looks good for XLI..


SPDR Industrial Select Sector Fund ETF - XLI (US) - 1 Day Line Chart - USD - No Layout
Industrial
Buy Signal Divergence of XLI
!!!SELL Bearish Divergence of XLI
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Optuma
7th Jun 2020



XLP at prior short-term pivot point, possible resistance with price also at its 50-week MA.

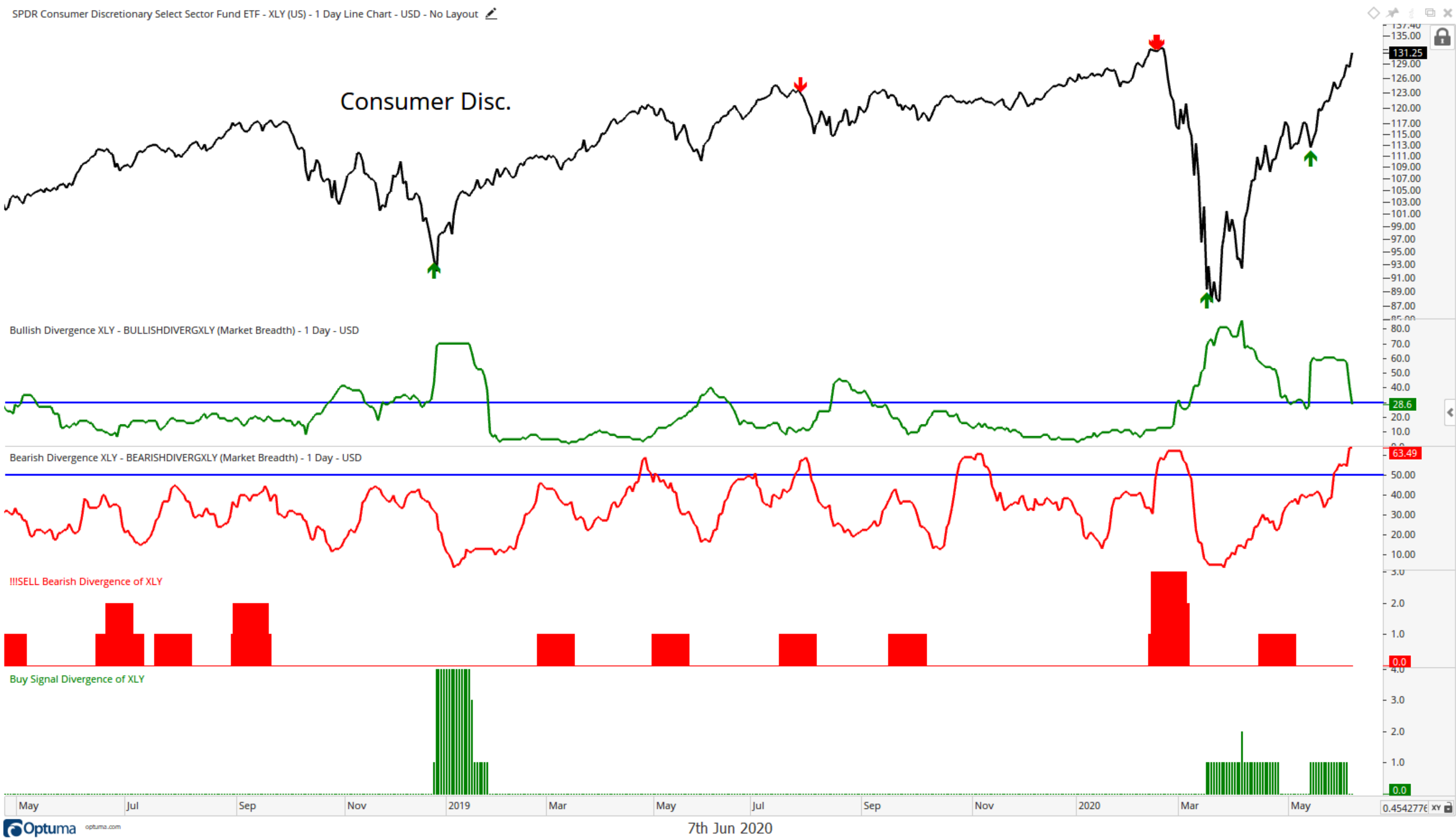
Breadth lines up with price, would like to see continued expansion in % above 200MA.


SPDR Consumer Staples Select Sector Fund ETF - XLP (US) - 1 Day Line Chart - USD - No Layout
Consumer Staples
Bullish Divergence XLP - BULLISHDIVXLP (Market Breadth) - 1 Day - USD
Bearish Divergence XLP - BEARISHDIVGXLP (Market Breadth) - 1 Day - USD
!!!SELL Bearish Divergence of XLP
Buy Signal Divergence of XLP
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Optuma
7th Jun 2020

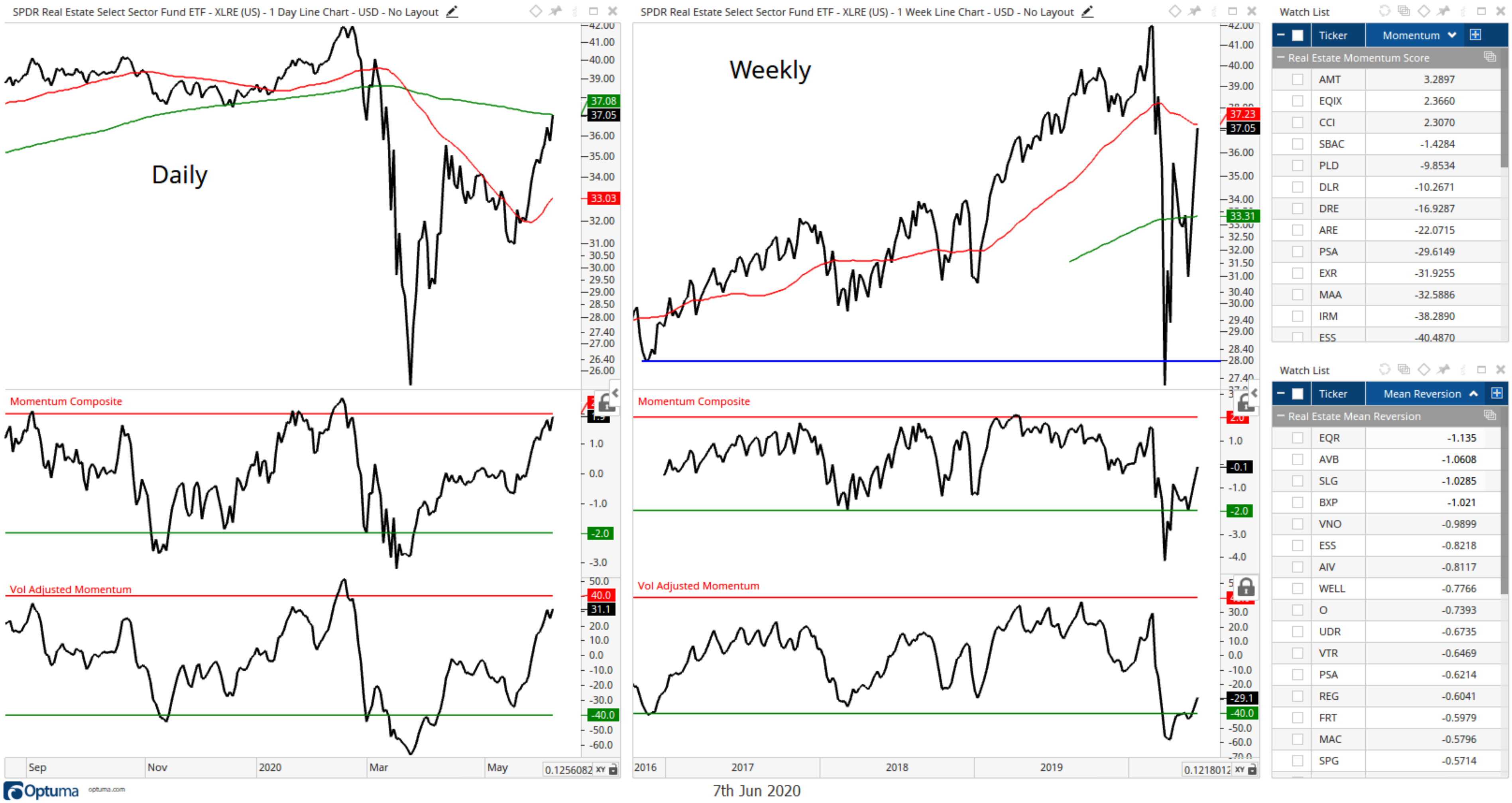
XLY is back at its prior high with VaM overbought and momentum close. Watching if it can break and hold above prior high.

Breadth is positive.

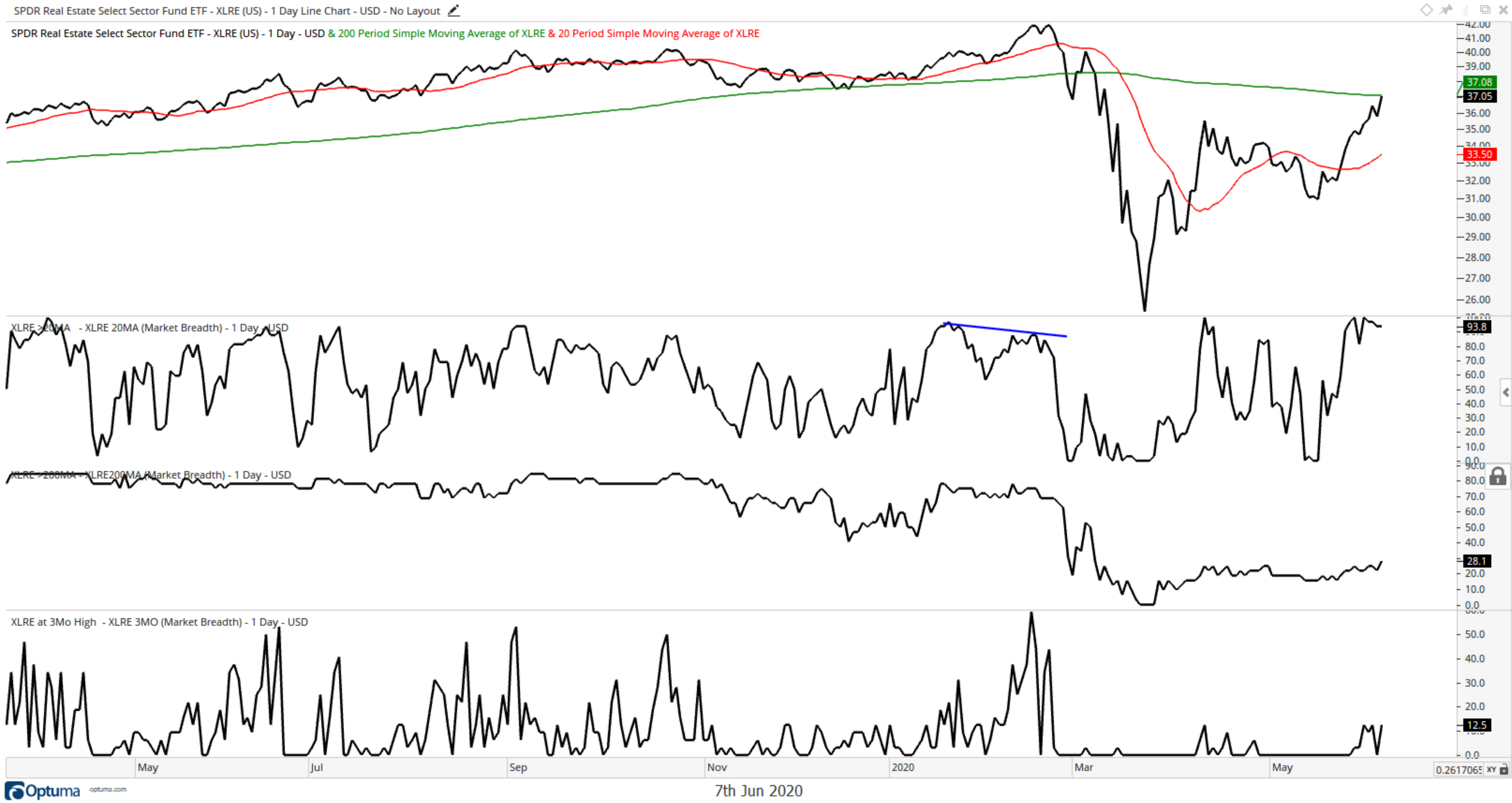
Consumer Discretionary Sector



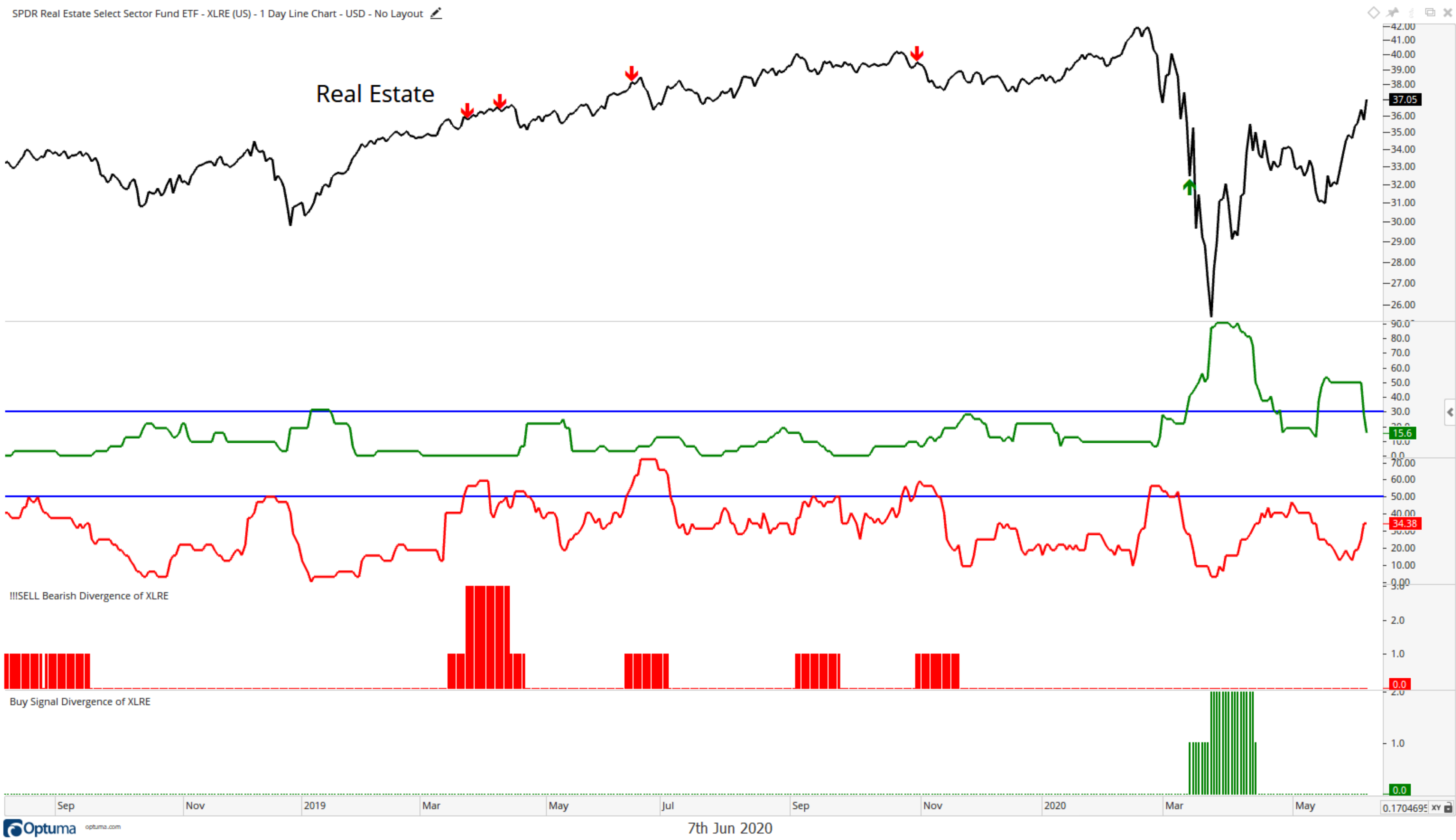
Real Estate Sector



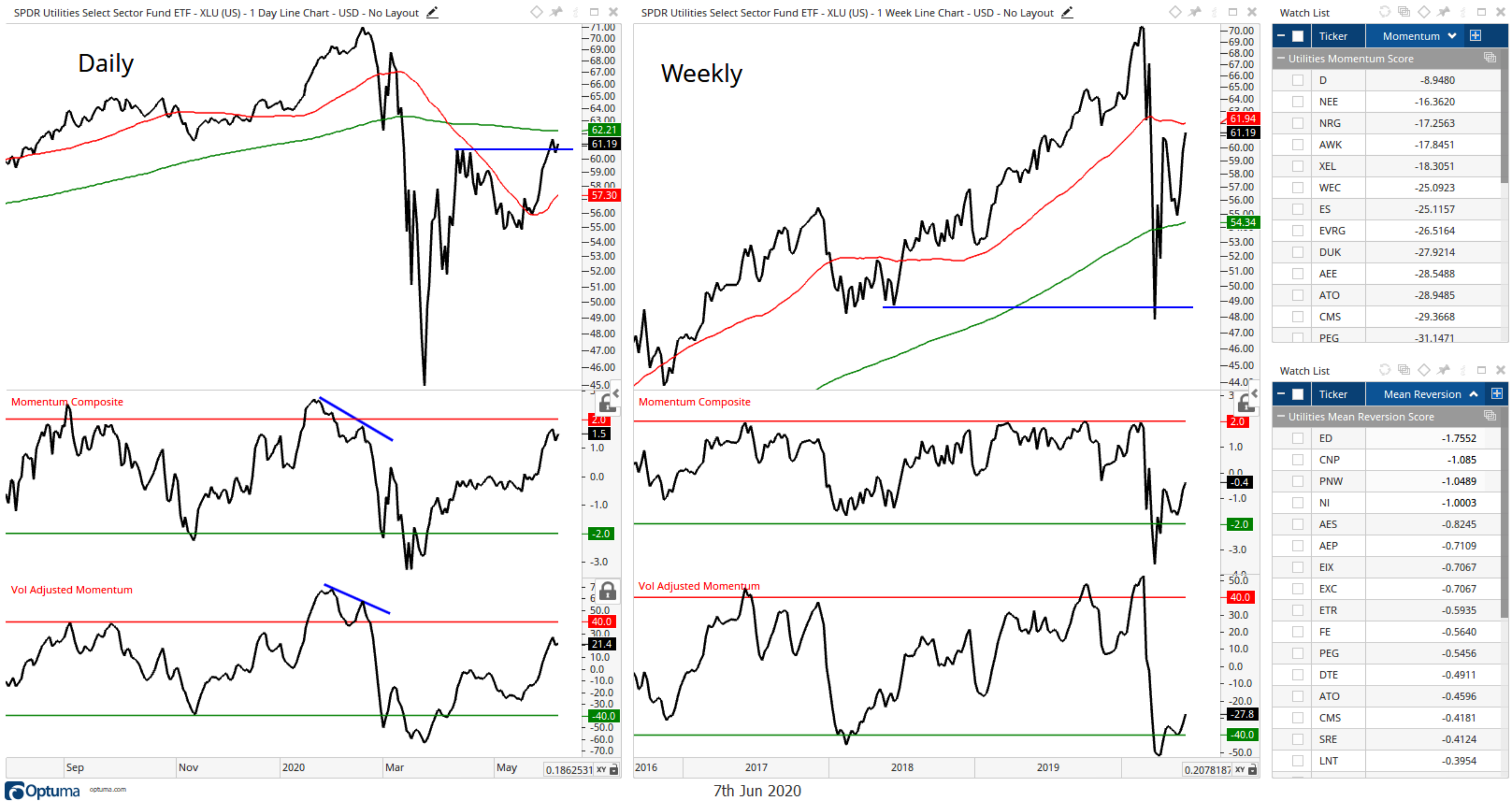
XLRE is testing the 200-day MA with momentum close to being overbought.



Breath is positive.

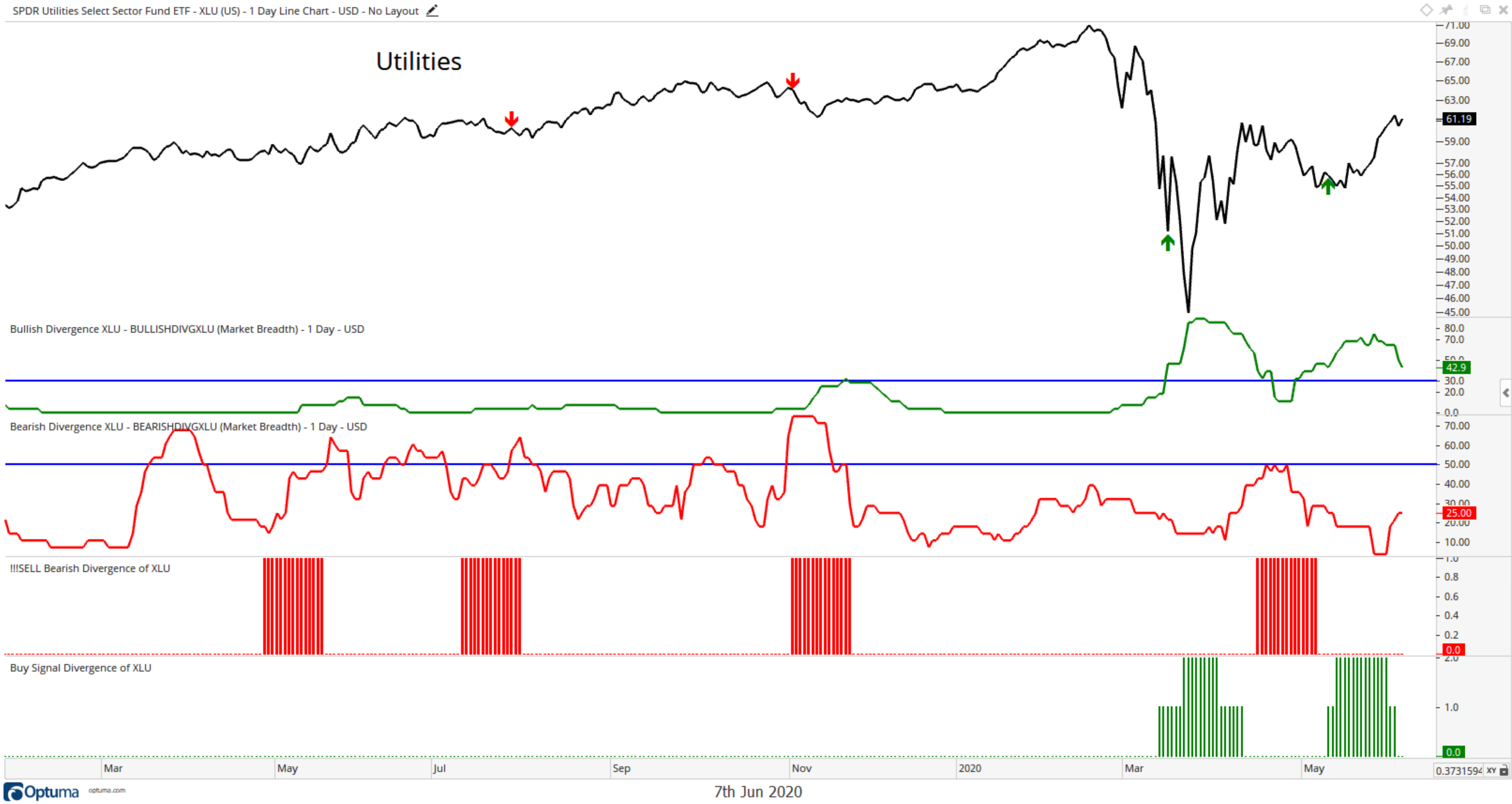


Breath is positive.



XLU trying to break above March high.

Breadth uninspired.


SPDR Utilities Select Sector Fund ETF - XLU (US) - 1 Day Line Chart - USD - No Layout
Utilities
Bullish Divergence XLU - BULLISHDIVGXLU (Market Breadth) - 1 Day - USD
Bearish Divergence XLU - BEARISHDIVGXLU (Market Breadth) - 1 Day - USD
!!!SELL Bearish Divergence of XLU
Buy Signal Divergence of XLU
61.19
42.9
25.00
Mar
May
Jul
Sep
Nov
2020
Mar
May
7th Jun 2020

1 Day - Watch List - No Layout

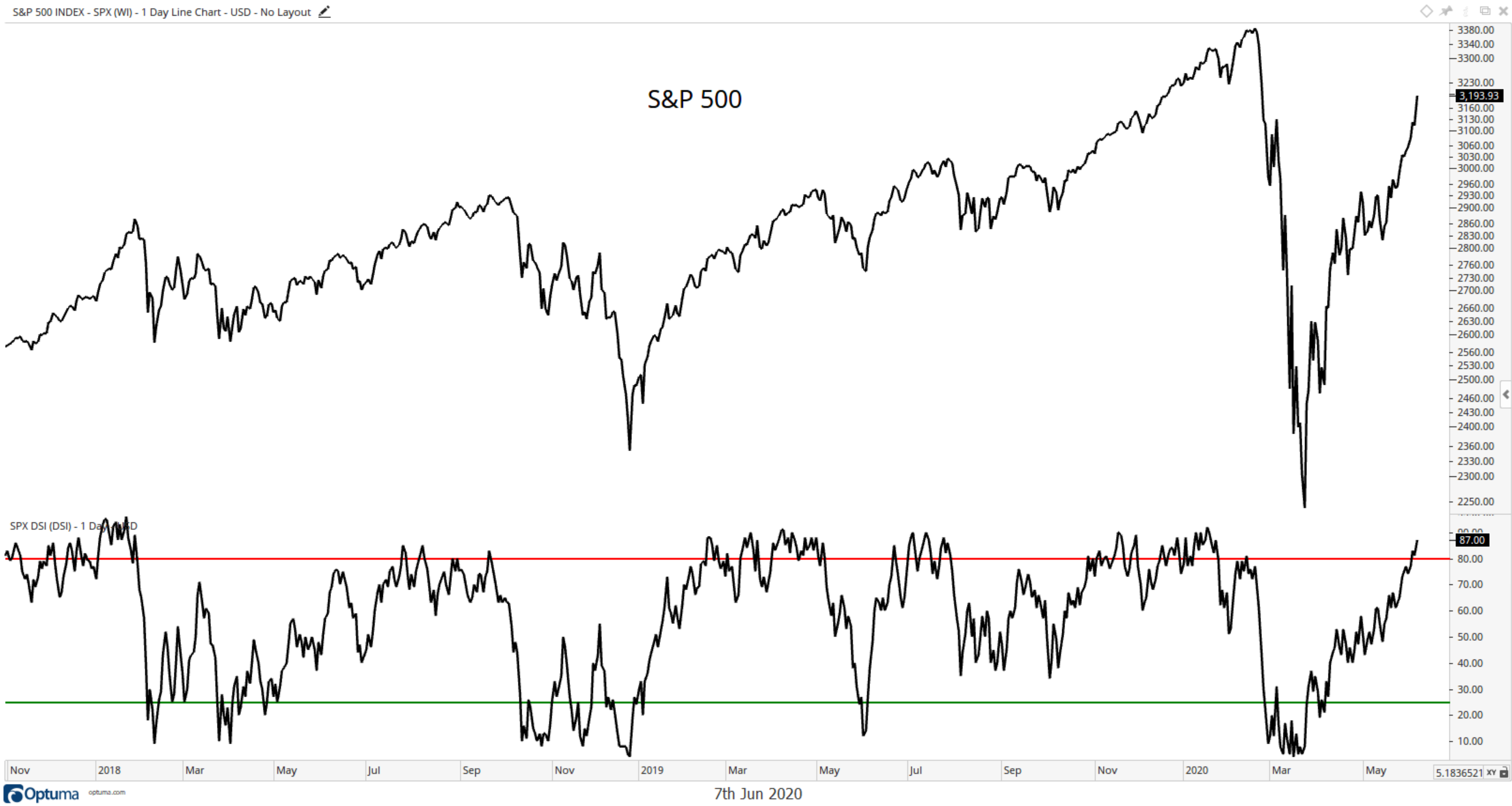
Market	% Bullish	5MA	History
VIX DSI	12	17.8	
Natural Gas DSI	13	14	
Coffee DSI	20	16.8	
Lean Hog DSI	23	23.8	
Cocoa DSI	27.00	25	
10Y DSI	27.00	39.80	
US Dollar DSI	31.00	35.20	
Wheat DSI	37.00	43.60	
Corn DSI	40.00	30.60	
Lumber DSI	41.00	39.80	
5YR DSI	43.00	49.20	
Swiss Franc DSI	45.00	41.40	
Gold DSI	57.00	66.20	
Cattle DSI	57.00	59.00	
Platinum DSI	60.00	70.00	
British Pound DSI	64.00	59.20	
Palladium DSI	65.00	66.00	

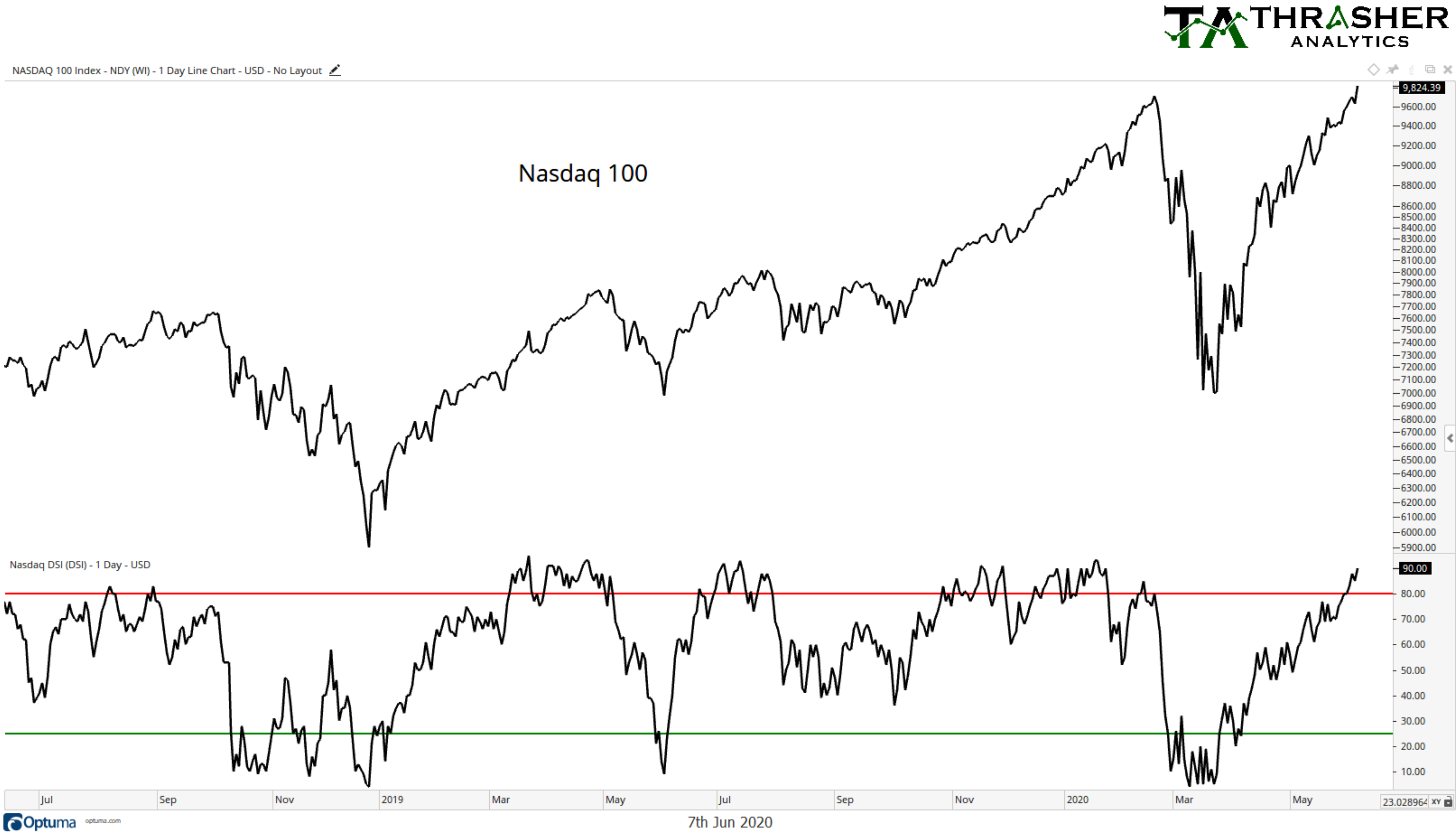
1 Day - Watch List - No Layout

Code	% Bullish	5MA	History
Mexican Peso DSI	66.00	62.20	
EuroDollar DSI	68.00	71.20	
Euro DSI	69.00	65.80	
CRB Index DSI	69.00	74.60	
Silver DSI	70.00	80.8	
Orange Juice DSI	70.00	66.60	
Heating Oil DSI	70.00	65.60	
Gasoline DSI	71.00	63.80	
Sugar DSI	73.00	65.00	
Cotton DSI	73.00	66.00	
Crude Oil DSI	82	79.80	
Copper DSI	83	81.4	
SPX DSI	87	80.4	
Australian Dollar DSI	87	85	
Nasdaq DSI	90	85.2	
Nikkei DSI	91	91.6	
New Zealand Dollar DSI	93	87.8	

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

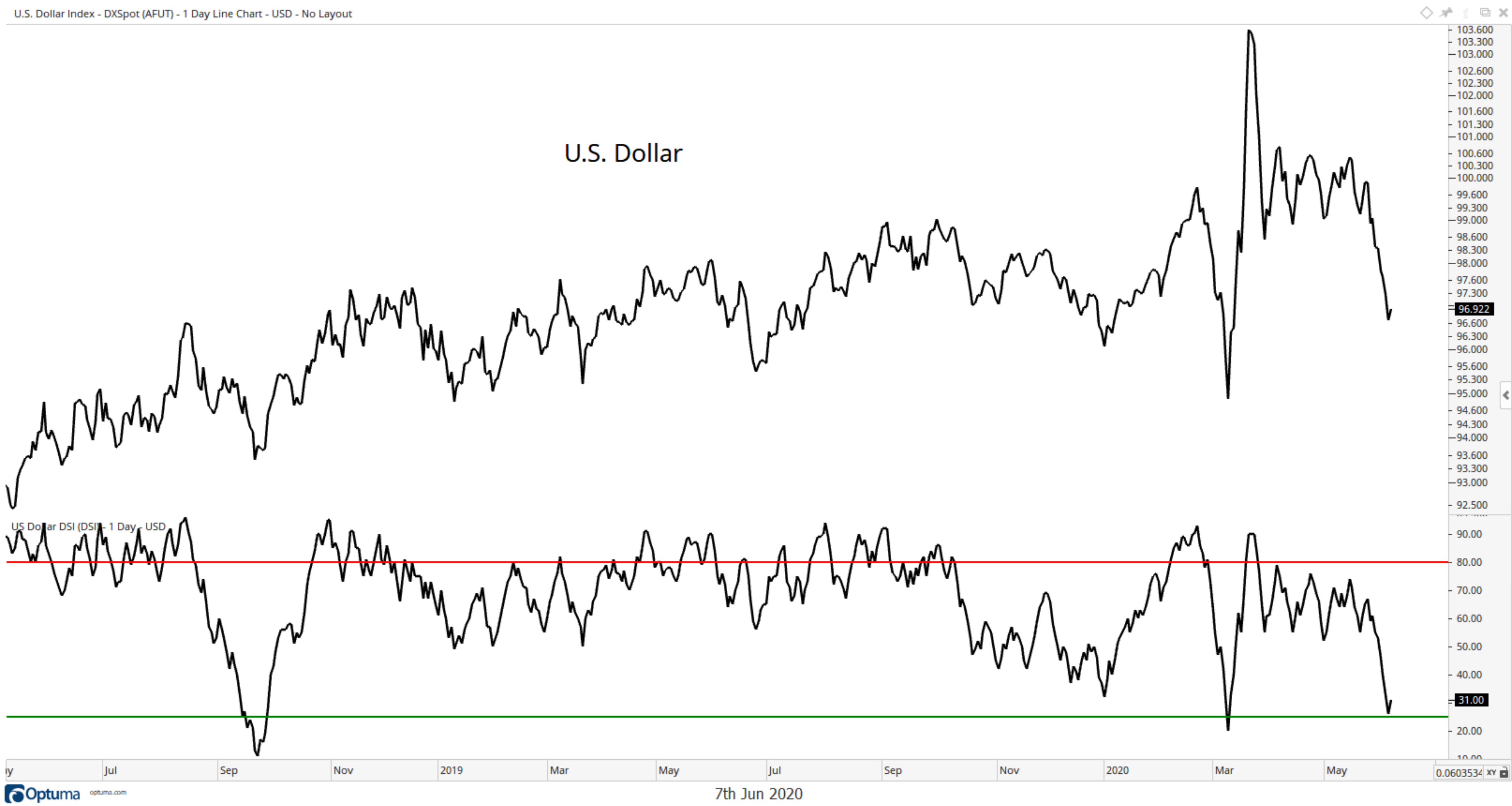

10-Year T-Note (P) Continuation - TY_FSpot (CBOT) - 1 Day Line Chart - USD - No Layout
10yr Treasury Bond
10Y DSI (DSI) - 1 Day - USD
137.09
27.00
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Optuma
7th Jun 2020


S&P 500 INDEX - SPX (WI) - 1 Day Line Chart - USD - No Layout
S&P 500
3,193.93
SPX DSI (DSI) - 1 Day - USD
87.00
Nov
2018
Mar
May
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Optuma
7th Jun 2020


THRASHER ANALYTICS
NASDAQ 100 Index - NDY (WI) - 1 Day Line Chart - USD - No Layout
Nasdaq 100
9,824.39
9600.00
9400.00
9200.00
9000.00
8800.00
8600.00
8500.00
8400.00
8300.00
8200.00
8100.00
8000.00
7900.00
7800.00
7700.00
7600.00
7500.00
7400.00
7300.00
7200.00
7100.00
7000.00
6900.00
6800.00
6700.00
6600.00
6500.00
6400.00
6300.00
6200.00
6100.00
6000.00
5900.00
Nasdaq DSI (DSI) - 1 Day - USD
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
23.028964
Optuma
7th Jun 2020

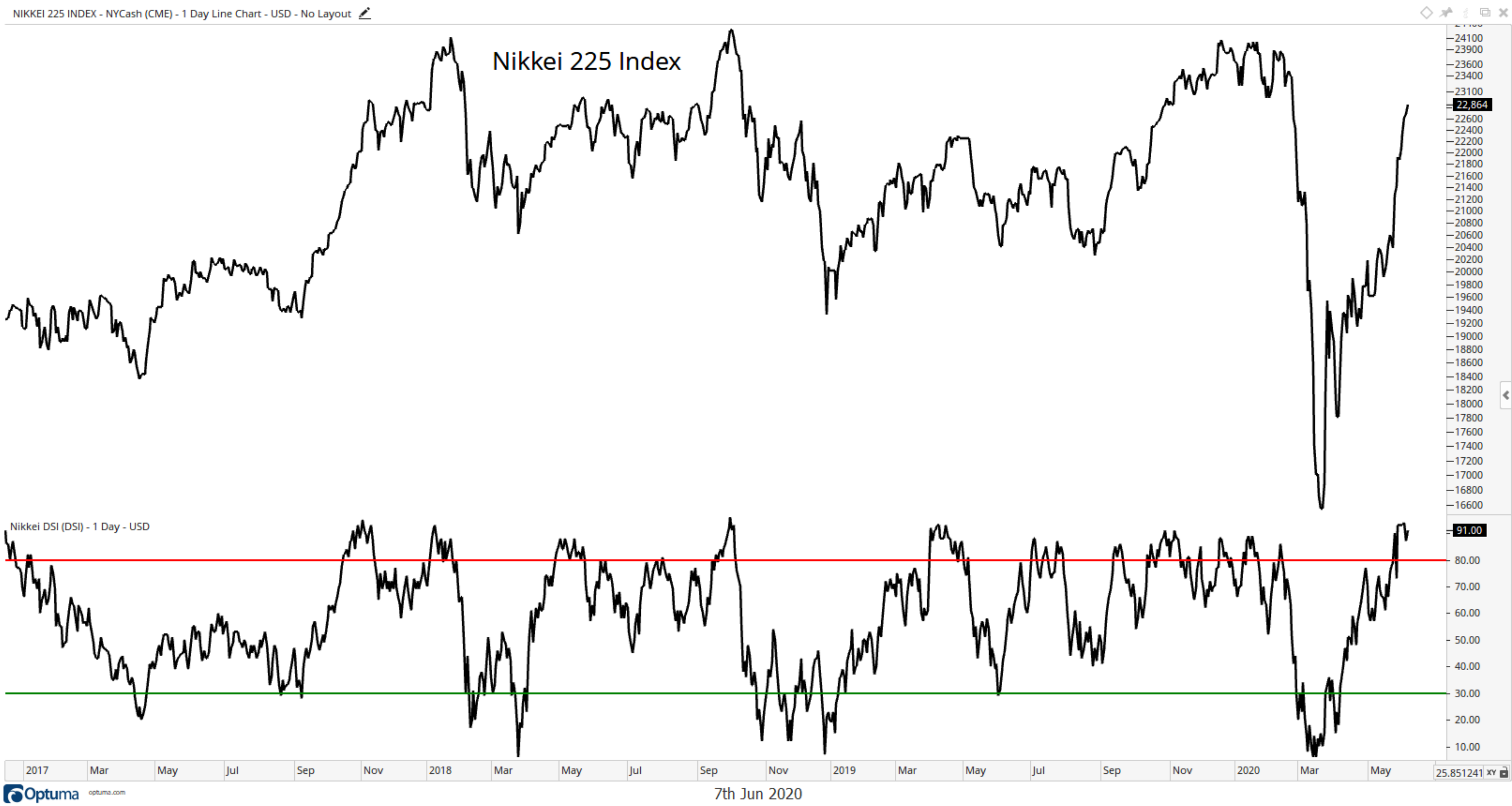

Gold Futures - GCSpot (NYMEX) - 1 Day Line Chart - USD - No Layout
Gold
1,683.00
Gold DSI (DSI) - 1 Day - USD
57.00
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Optuma
7th Jun 2020

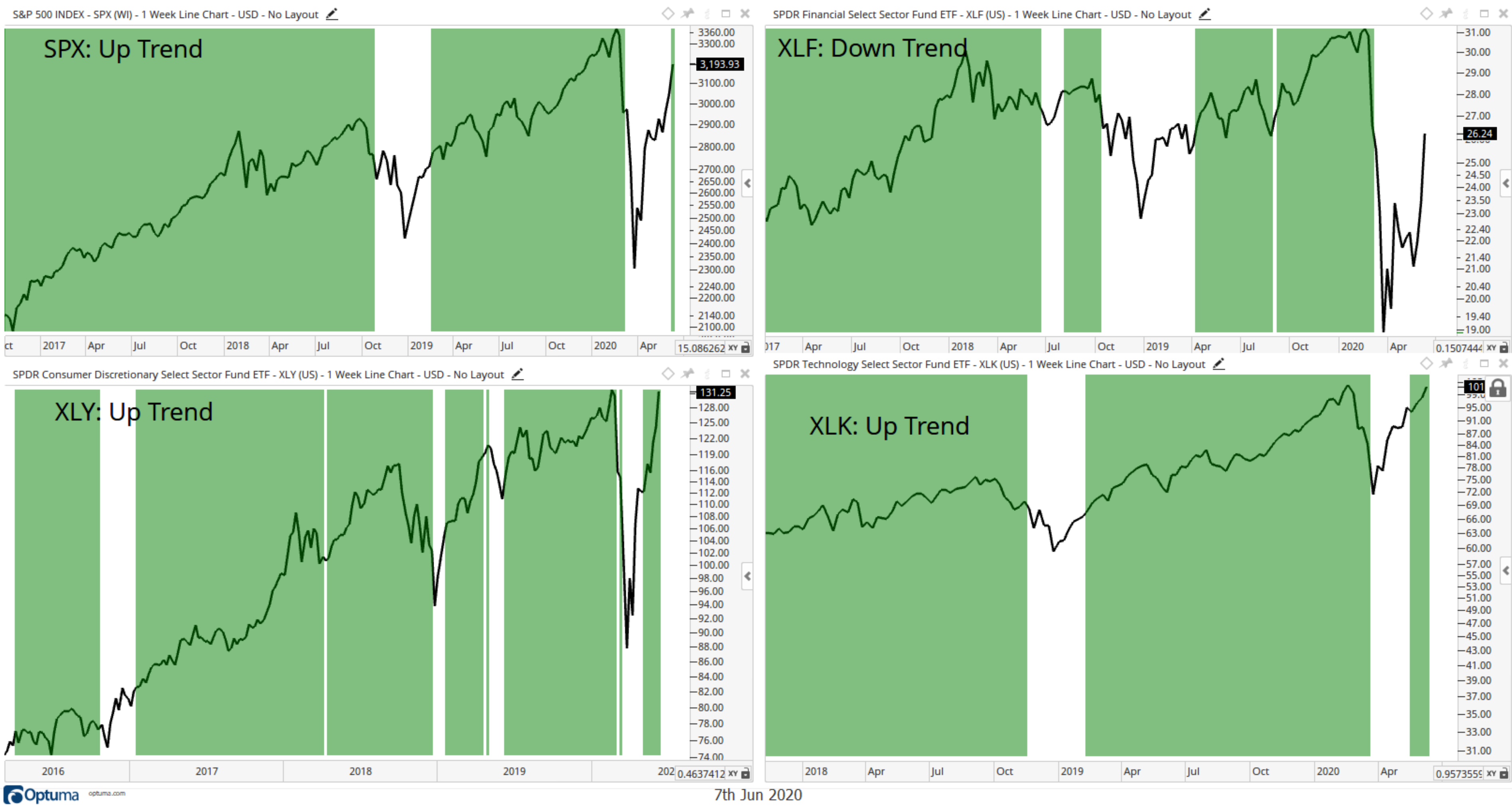
Daily Sentiment Index U.S. Dollar

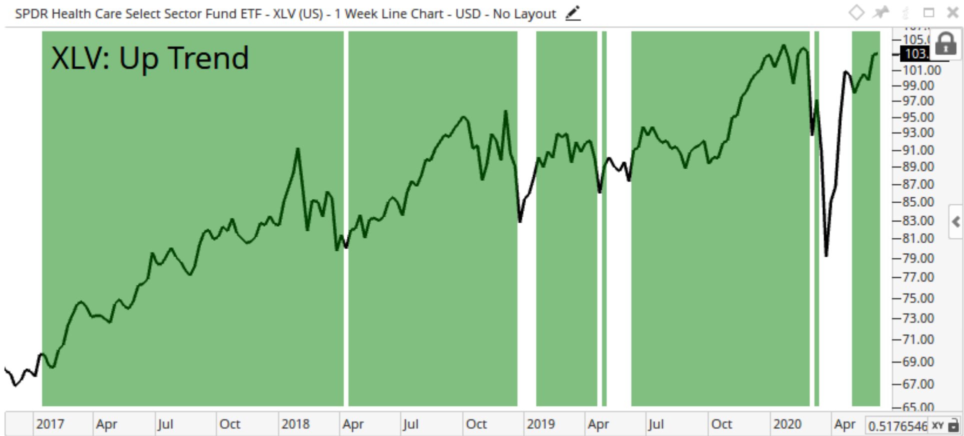


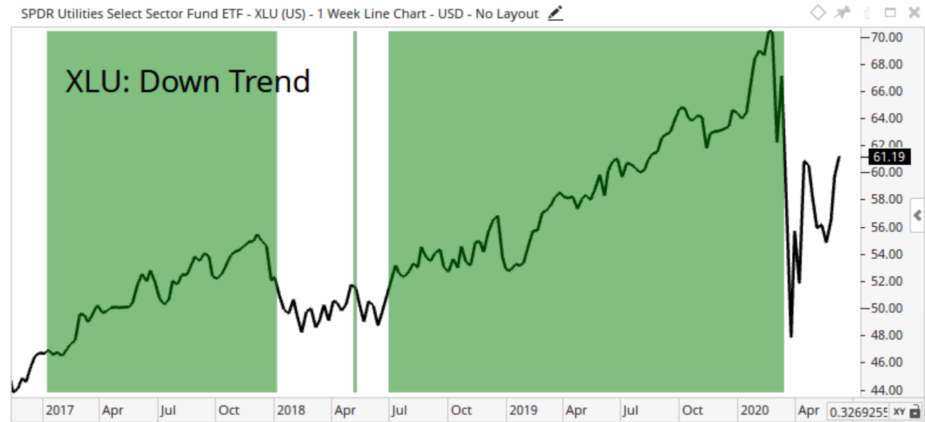

CBOE S&P 500 Volatility Index - VIX (CBOEI) - 1 Day Line Chart - USD - No Layout
VIX
VIX DSI (DSI) - 1 Day - USD
24.52
12.00
ov
2018
Mar
May
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
7th Jun 2020
Optuma

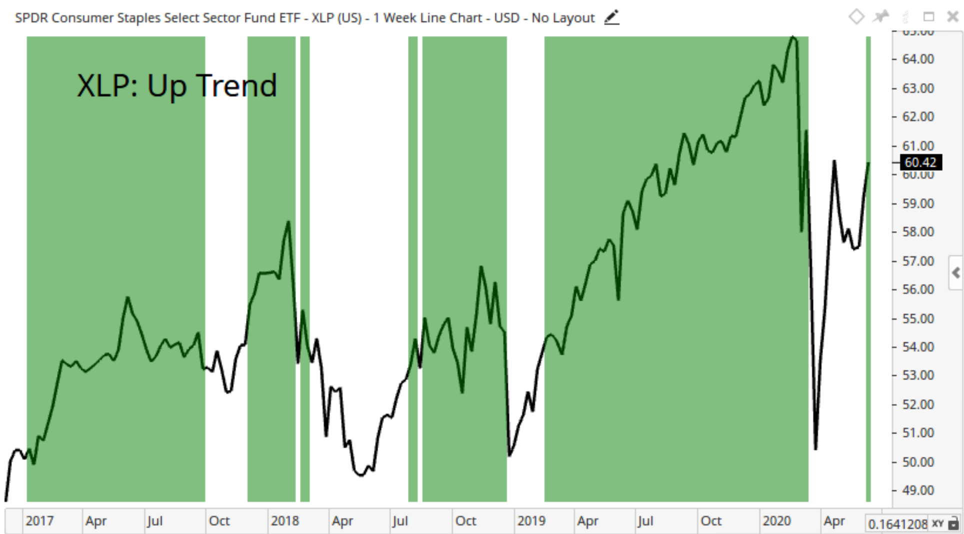
Daily Sentiment Index Nikkei 225

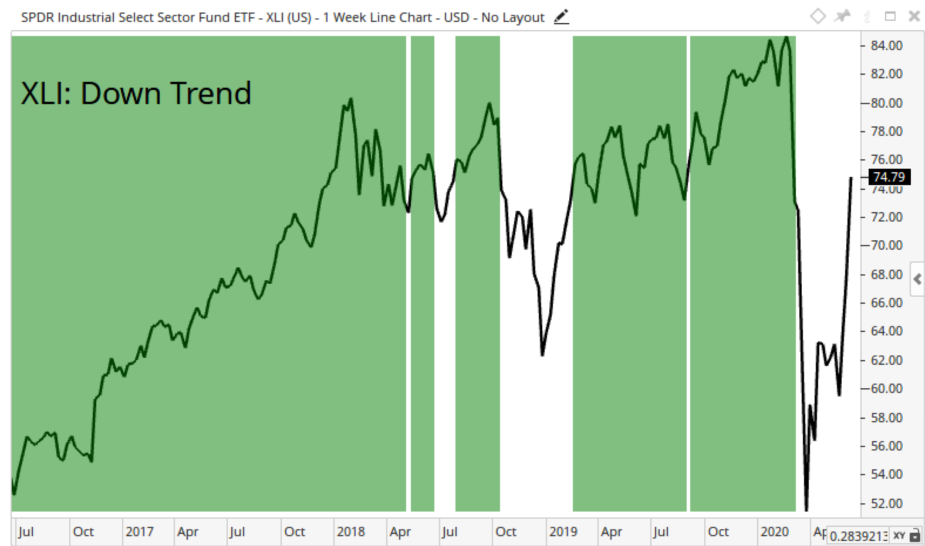



S&P 500 INDEX - SPX (WI) - 1 Week Line Chart - USD - No Layout
SPX: Up Trend
SPDR Financial Select Sector Fund ETF - XLF (US) - 1 Week Line Chart - USD - No Layout
XLF: Down Trend
SPDR Consumer Discretionary Select Sector Fund ETF - XLY (US) - 1 Week Line Chart - USD - No Layout
XLY: Up Trend
SPDR Technology Select Sector Fund ETF - XLK (US) - 1 Week Line Chart - USD - No Layout
XLK: Up Trend
Optuma
7th Jun 2020



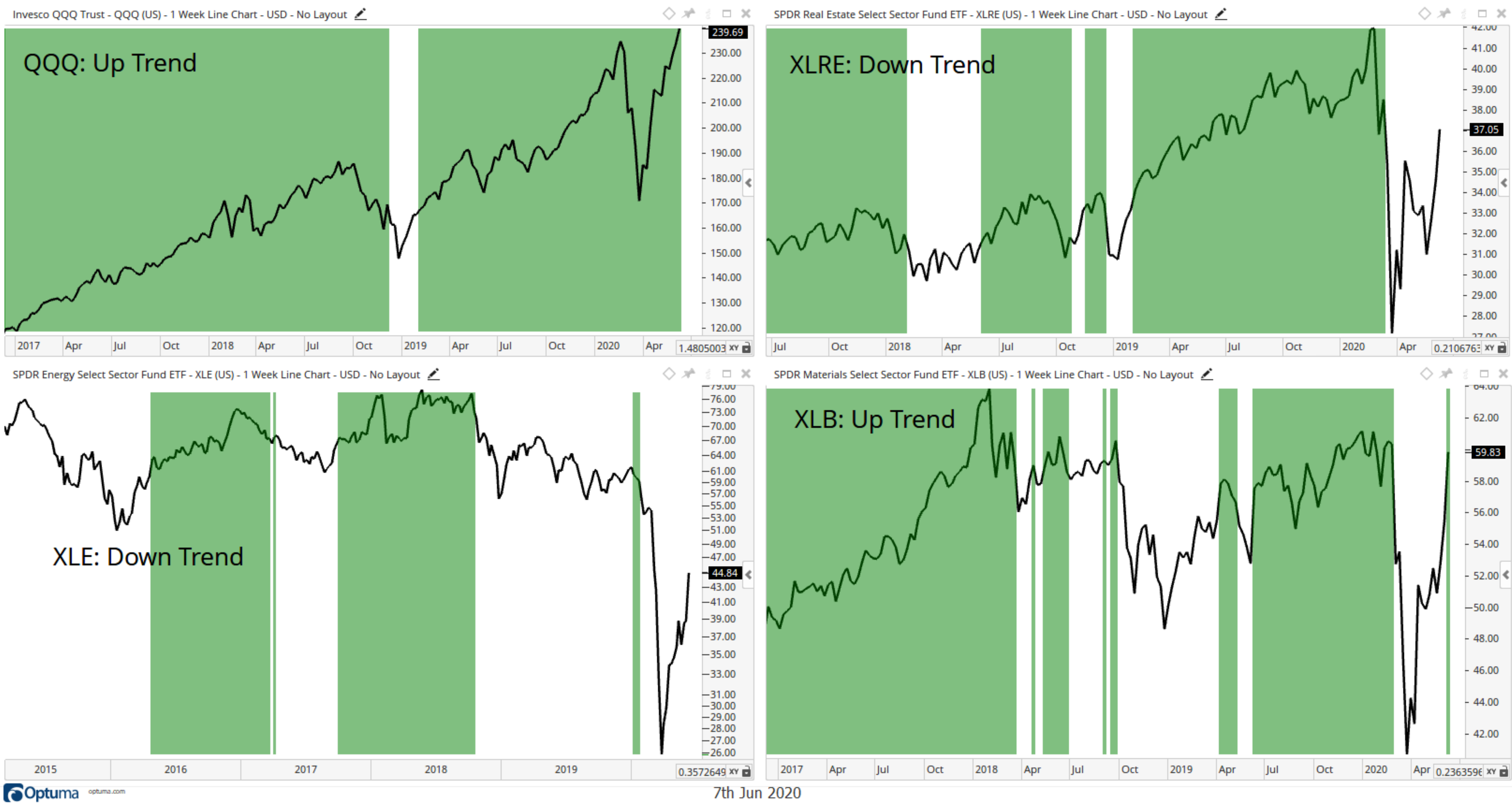






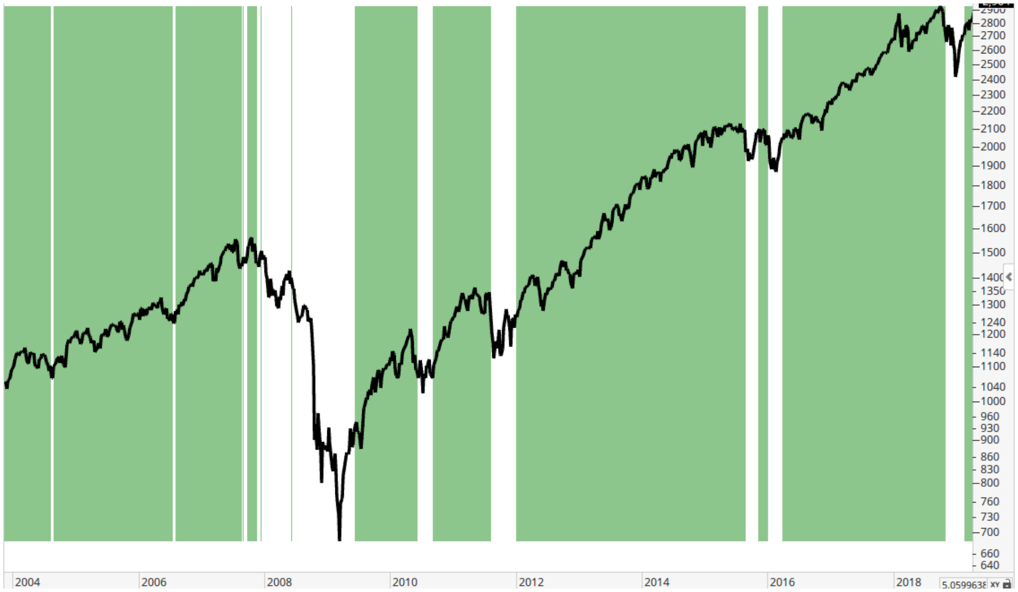
Optuma

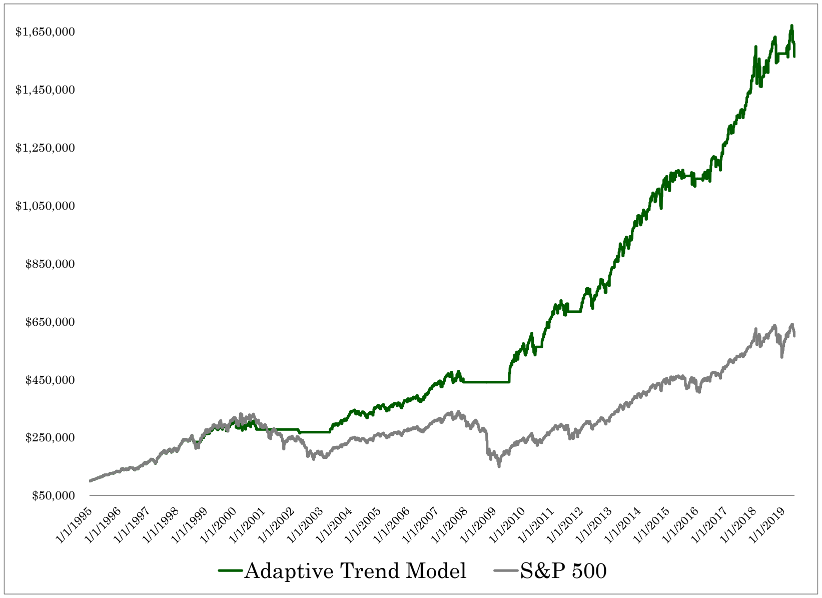
7th Jun 2020


Invesco QQQ Trust - QQQ (US) - 1 Week Line Chart - USD - No Layout
QQQ: Up Trend
SPDR Real Estate Select Sector Fund ETF - XLRE (US) - 1 Week Line Chart - USD - No Layout
XLRE: Down Trend
SPDR Energy Select Sector Fund ETF - XLE (US) - 1 Week Line Chart - USD - No Layout
XLE: Down Trend
SPDR Materials Select Sector Fund ETF - XLB (US) - 1 Week Line Chart - USD - No Layout
XLB: Up Trend
Optuma
7th Jun 2020

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.



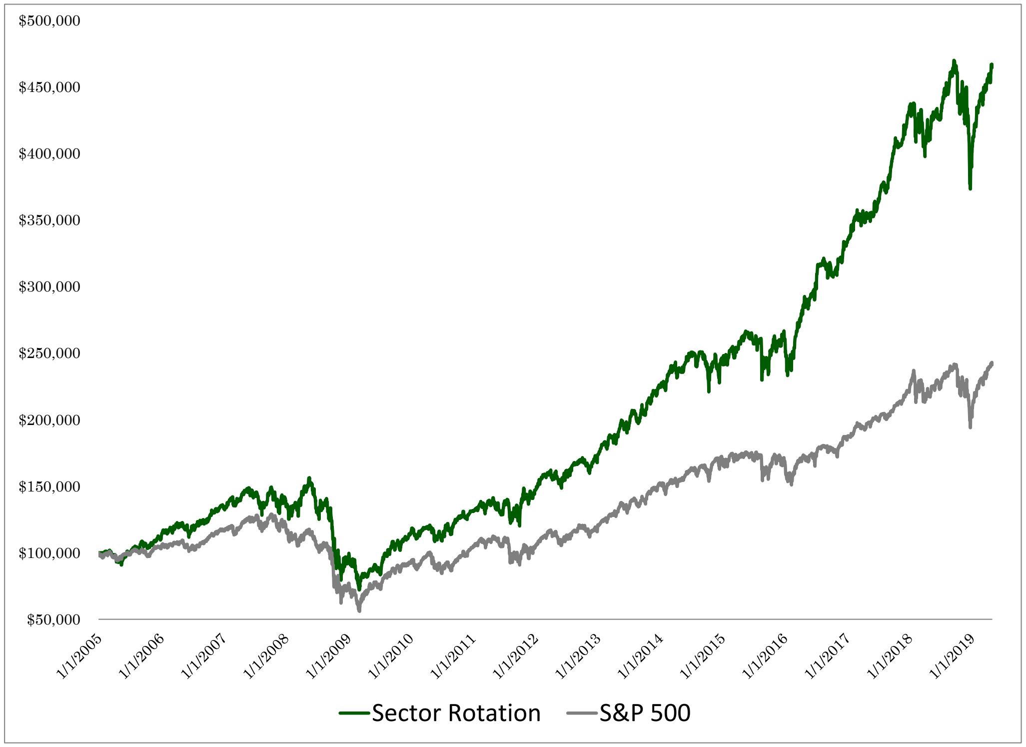


	Annualized Return	Annualized Volatility	Beta	Sharpe	Maximum Drawdown
Adaptive	12.5%	10.3%	0.47	0.97	14.1%
S&P 500	8.9%	15.3%	1	0.42	56.6%

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.

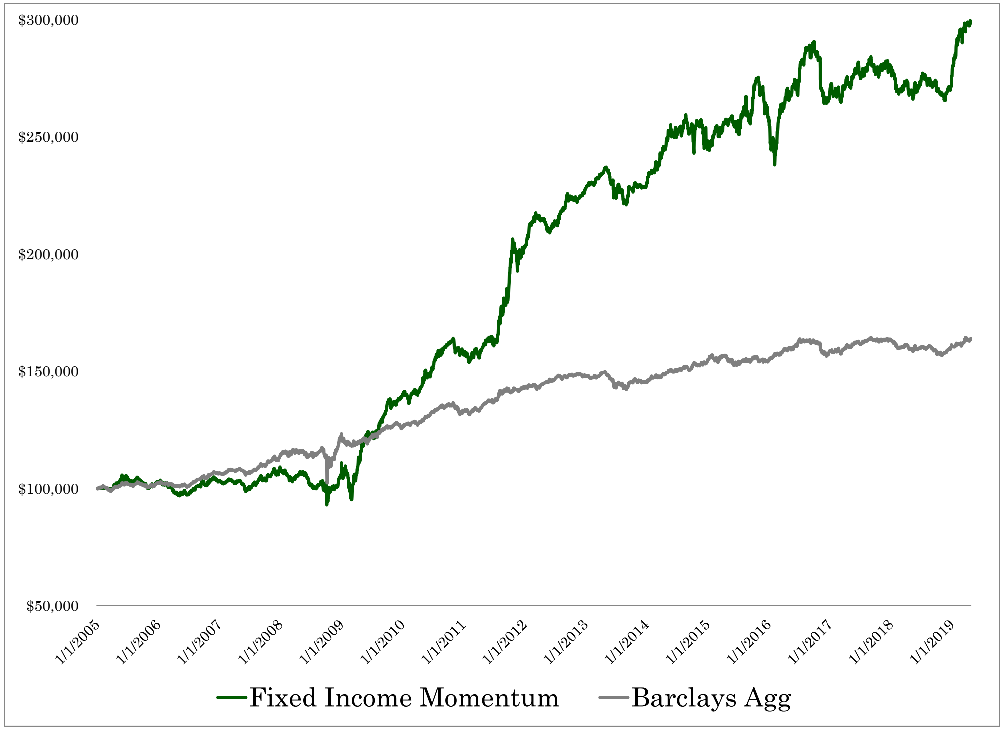


	Annualized Return	Annualized Volatility	Beta	Sharpe	Maximum Drawdown
Sector	12.7%	15.9%	0.96	0.64	53.9%
S&P 500	7.5%	14.8%	1	0.34	56.6%

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	Maximum Drawdown
Fixed Income	8.3%	8.2%	1.04	0.7	14.9%
Barclays Agg	3.6%	3.7%	1	0.29	11.0%

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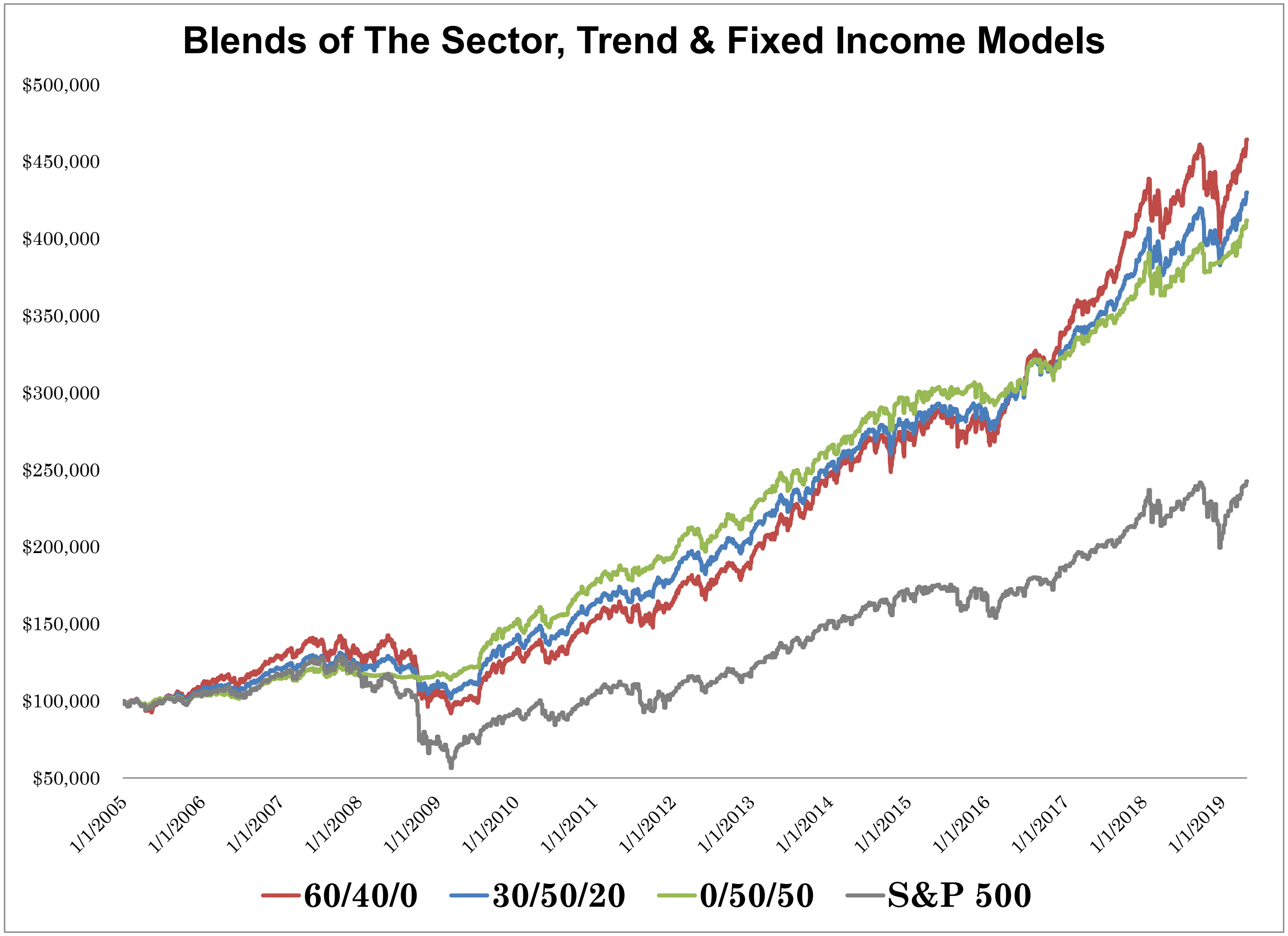
Please see complete disclosure for additional information.

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.



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.

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.

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Trend (weekly)	Sector Rotation (monthly)	Fixed Income Momentum (quarterly)
Positive	XLK	PCY
	XLV	CWB
	XLC	

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.

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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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