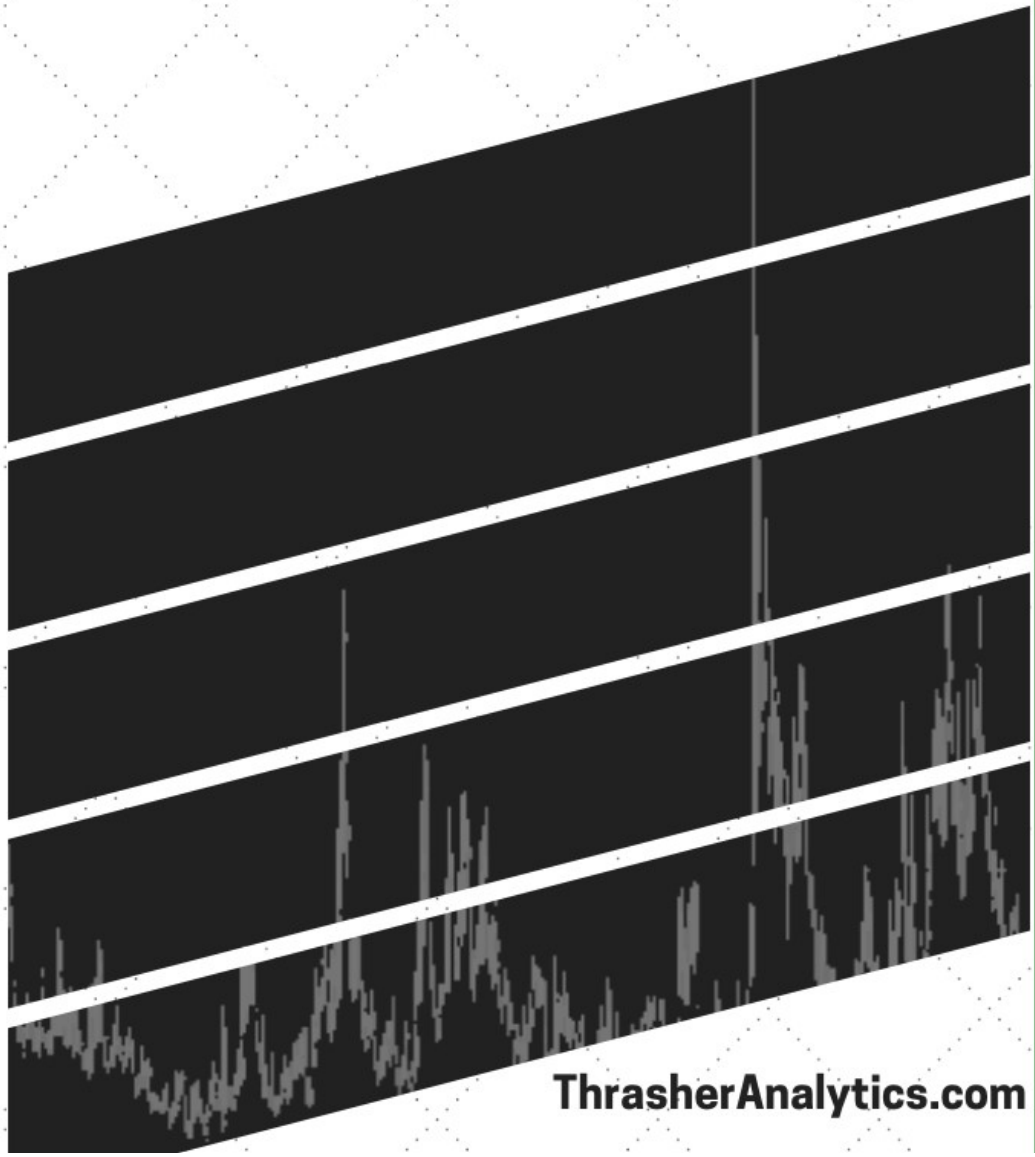
THRASHER ANALYTICS

WEEKLY RESEARCH & ANALYSIS



ThrasherAnalytics.com

Thrasher Analytics Market Dashboard

THRASHER ANALYTICS

Sector Rotation: August	
Technology	XLK
Consumer Disc.	XLY
Communication	XLC

Notable Breadth Data:	
SPX >50MA	63.56%
SPX >200MA	55.05%
Nasdaq >50MA	66.02%
Nasdaq >200MA	75.73%

Fixed Income Rotation: Q3	
Muni Bond	MUB
High Yield Corp.	HYG

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	

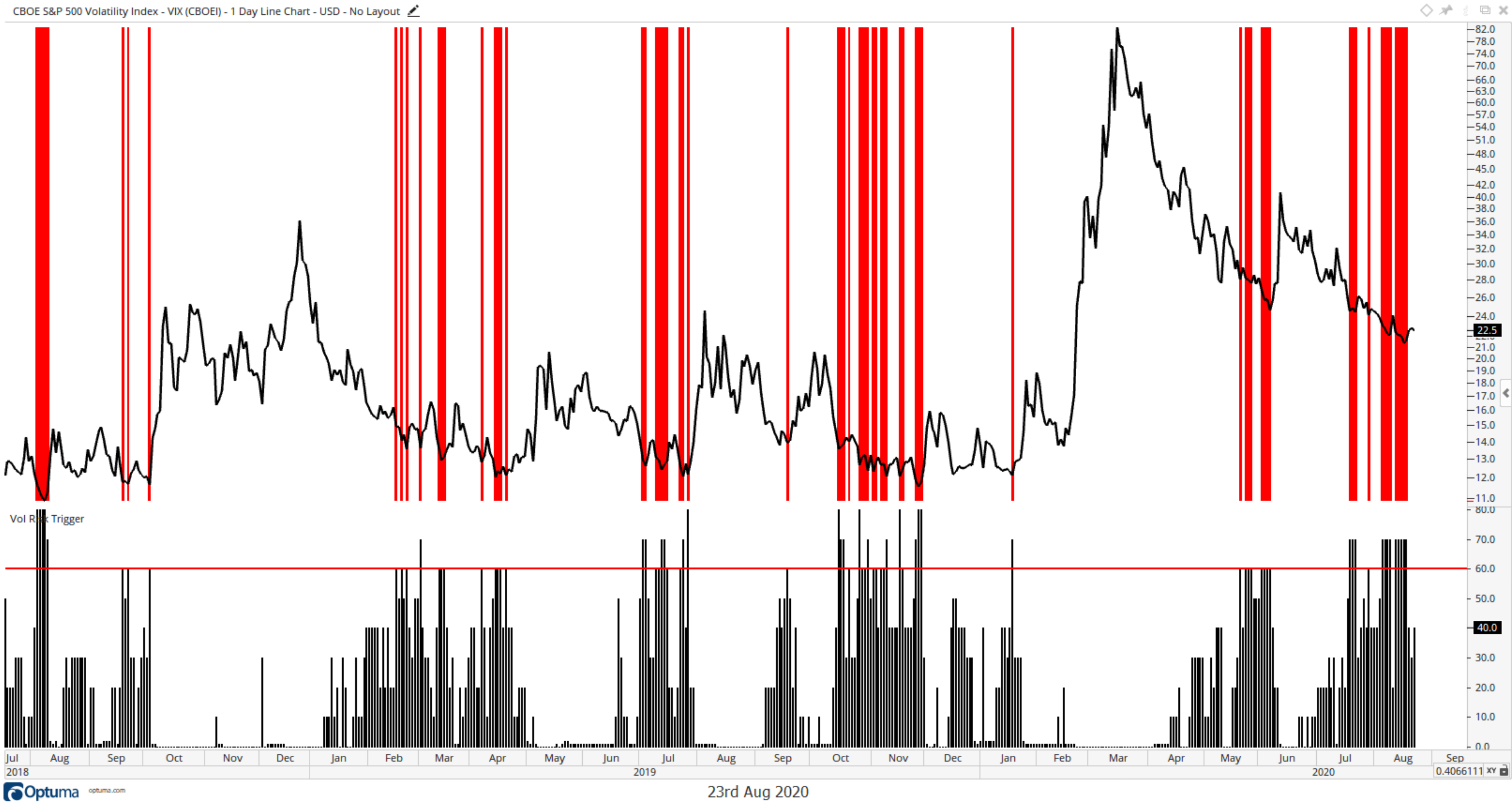
Daily Sentiment Index	% Bullish	5-day MA
S&P 500	81%	80%
Nasdaq 100	87%	85%
Nikkei	71%	78%
VIX	17%	13%
10yr Treasury	63%	59%
5yr Treasury	62%	61%
CRB Index	70%	77%
Gold	72%	76%
U.S. Dollar	21%	15%

**Green<25%   Red>80%*

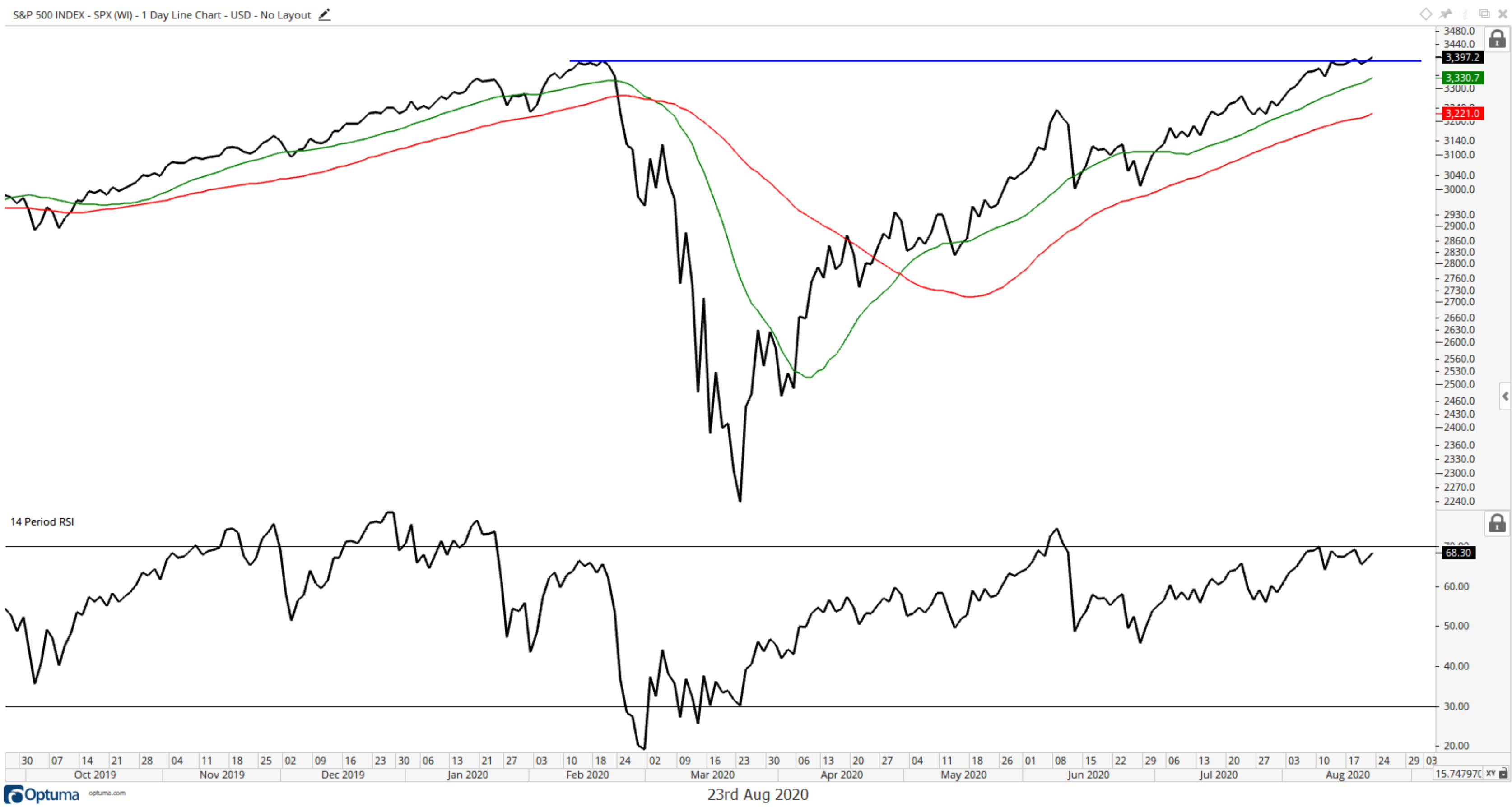
source: trade-futures.com

THRASHER ANALYTICS

Sector	> 50MA	> 200MA	1wk Perf	1mo Perf	3mo Perf	12mo Perf
SPDR Technology Select Sector Fund ETF	True	True	3.57%	8.74%	22.68%	47.43%
SPDR Consumer Discretionary Select Sector Fund ETF	True	True	1.8%	7.34%	20.4%	22.18%
SPDR Communication Services Select Sector ETF	True	True	1.54%	5.07%	13.79%	23.08%
SPDR Consumer Staples Select Sector Fund ETF	True	True	0.22%	4.55%	12.28%	6.62%
SPDR Real Estate Select Sector Fund ETF	True	False	0.11%	3.46%	12.19%	-7.66%
SPDR Health Care Select Sector Fund ETF	True	True	0.02%	0.96%	7.45%	16.99%
SPDR Materials Select Sector Fund ETF	True	True	-1.18%	1.19%	16.75%	9.17%
SPDR Industrial Select Sector Fund ETF	True	True	-1.39%	6.09%	19.66%	1.91%
SPDR Utilities Select Sector Fund ETF	True	False	-1.59%	-0.45%	6.37%	-4.28%
SPDR Financial Select Sector Fund ETF	True	False	-3.46%	0.00	10.5%	-8.61%
SPDR Energy Select Sector Fund ETF	False	False	-5.66%	-5.83%	-6.95%	-38.05%

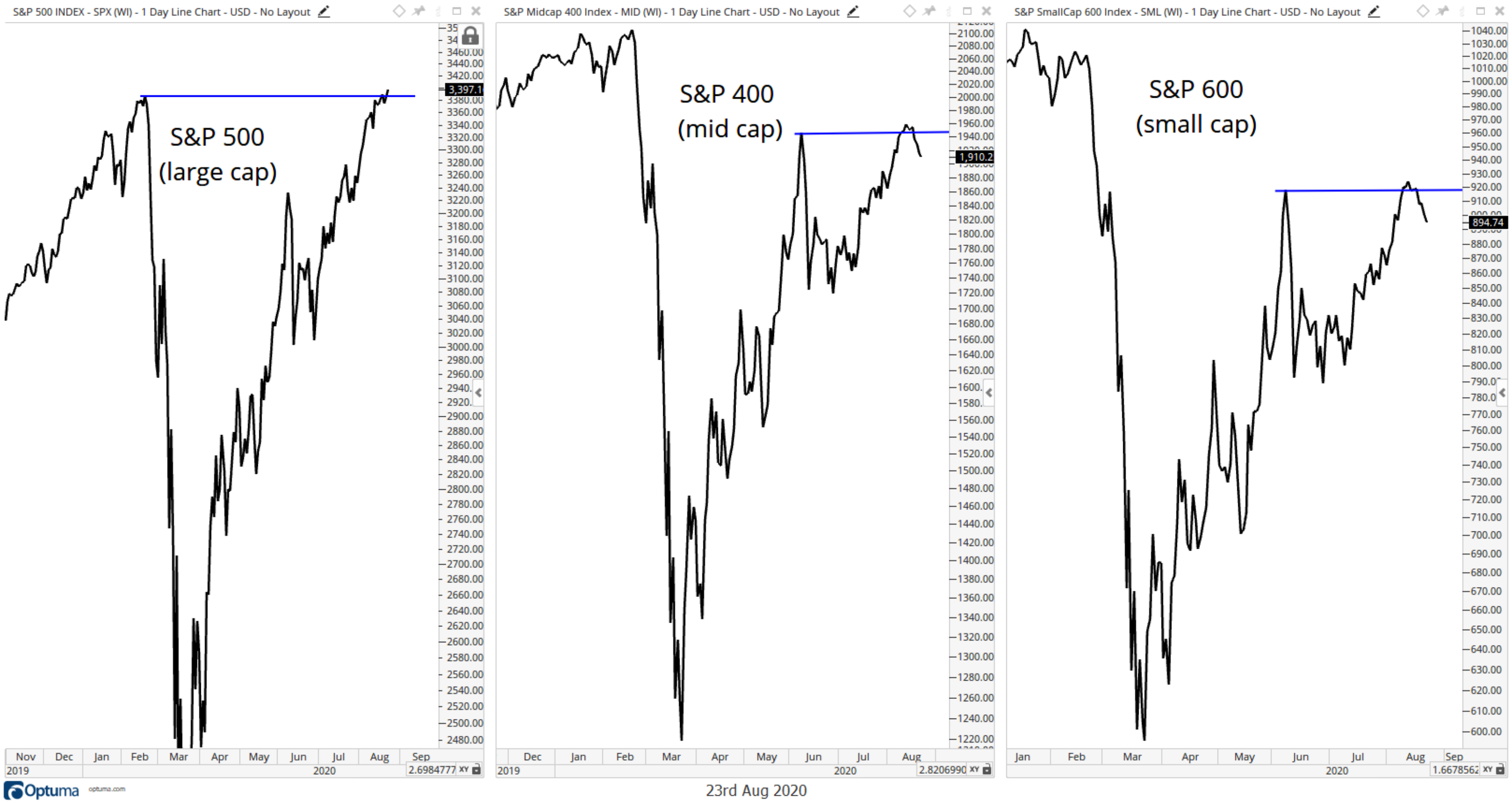


The VRT continues to give signals of heightened risk of a spike in the Volatility Index. Thus far, the market has ignored these concerns, with the VIX moving to its lowest level since March last week. Is this latest move down the setup for a seasonal bounce in volatility that August has grown known for? We'll see.



The S&P 500 closed at a new all-time high on Friday, which may have been the least exciting/minimal fanfare new high ever. The equity index has been on a slow crawl higher, rising less than 1% last week and up just 1.37% over the last two weeks during the move to fresh highs. Meanwhile, the 14-day RSI hasn't broken above 70 since June, skirting the line for the last month. We'll be looking quite a bit at this new high in this letter. Sector leadership remains firm with tech, communications, and consumer disc. which fortunately have been the sector overweight's in the Thrasher Analytics Sector Rotation model for several months now.

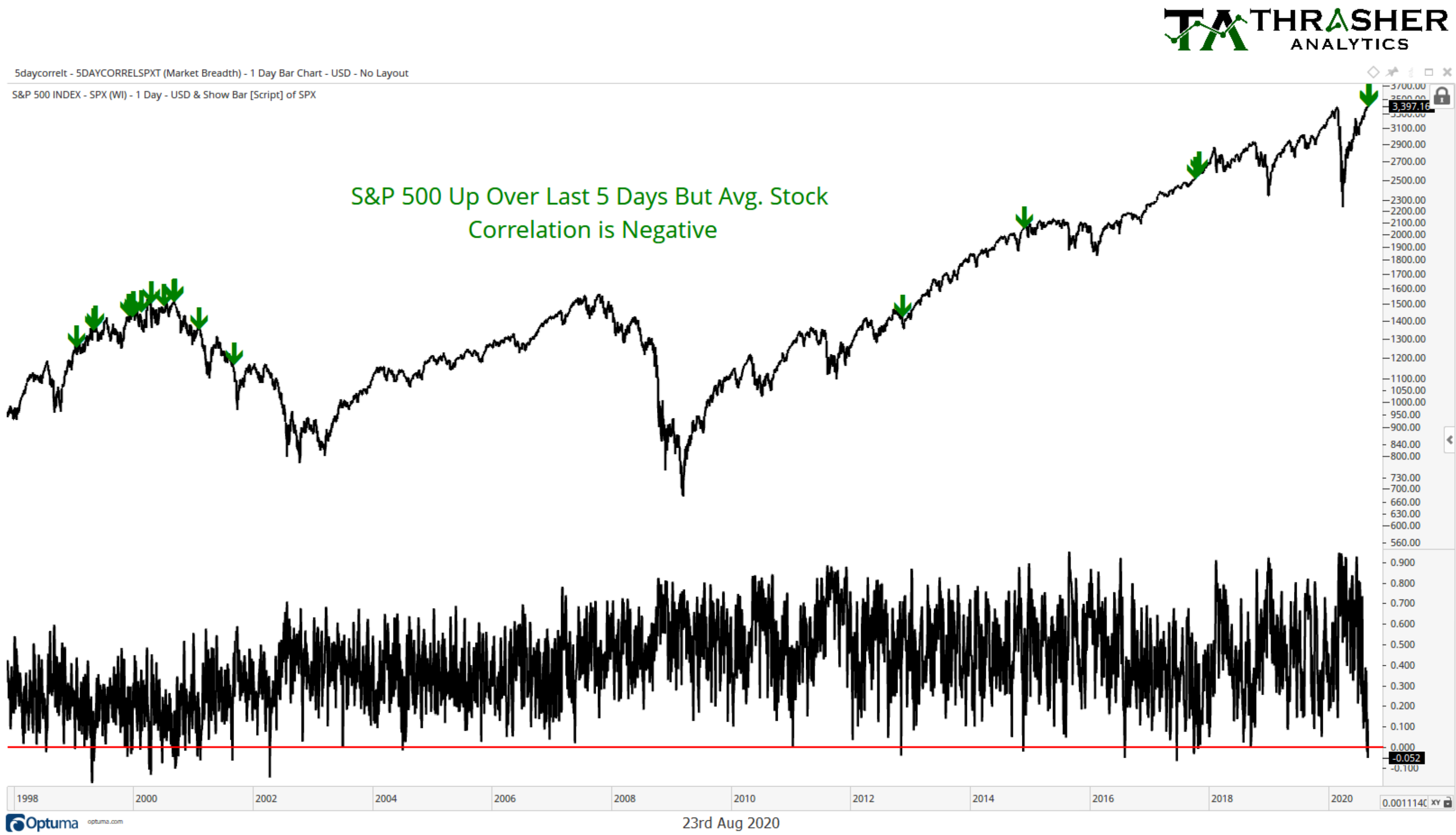
This week earnings focus will likely be on software and retail stocks such as CRM, WDAY, LULU, BBY, ULTA, INTU, PANW, and GPS. We also will have a speech on Thursday from Powell during the annual Jackson Hole Fed conference which is the same day the second attempt to calculate Q2 GDP will be released. The market didn't respond well to the minutes from the last FOMC meeting, so Powell will likely walk cautious through his remarks, holding to the belief the Fed will do any and everything in its power to backstop the financial markets with liquidity.



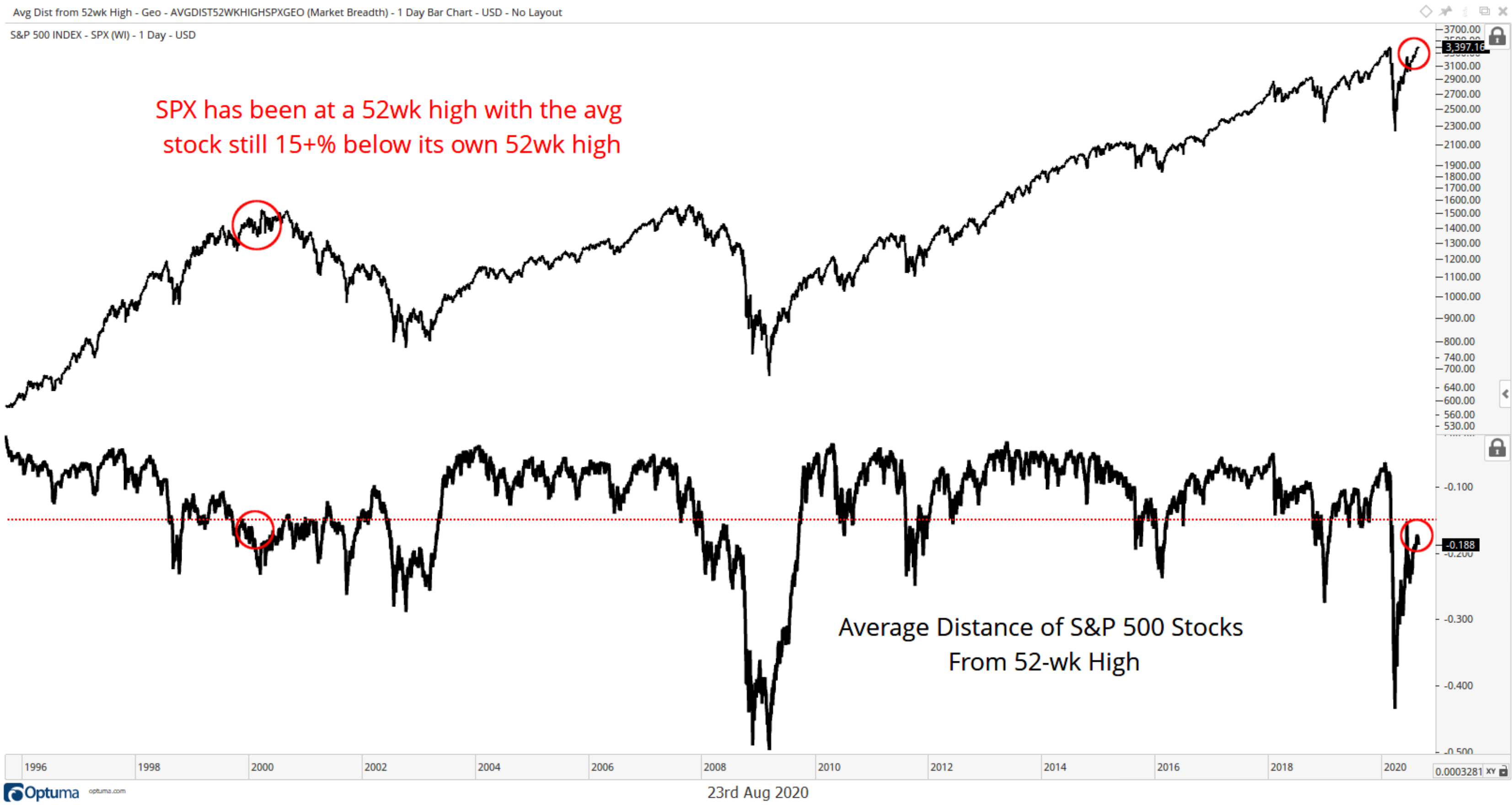
23rd Aug 2020

This chart was in my public blog post from last week but I feel its worth sharing again. Its one of the charts that truly stands out right now, with the large cap index hitting clear sky's the mid & small caps are falling back below their prior June highs. It's not that small/mid are under-performing, that wouldn't be a huge issue, but hey are flat out moving lower! This doesn't happen very often. In fact, going back to 1992, the S&P 400 has never been more than 9% off its 52-week high when the S&P 500 was making a new high.

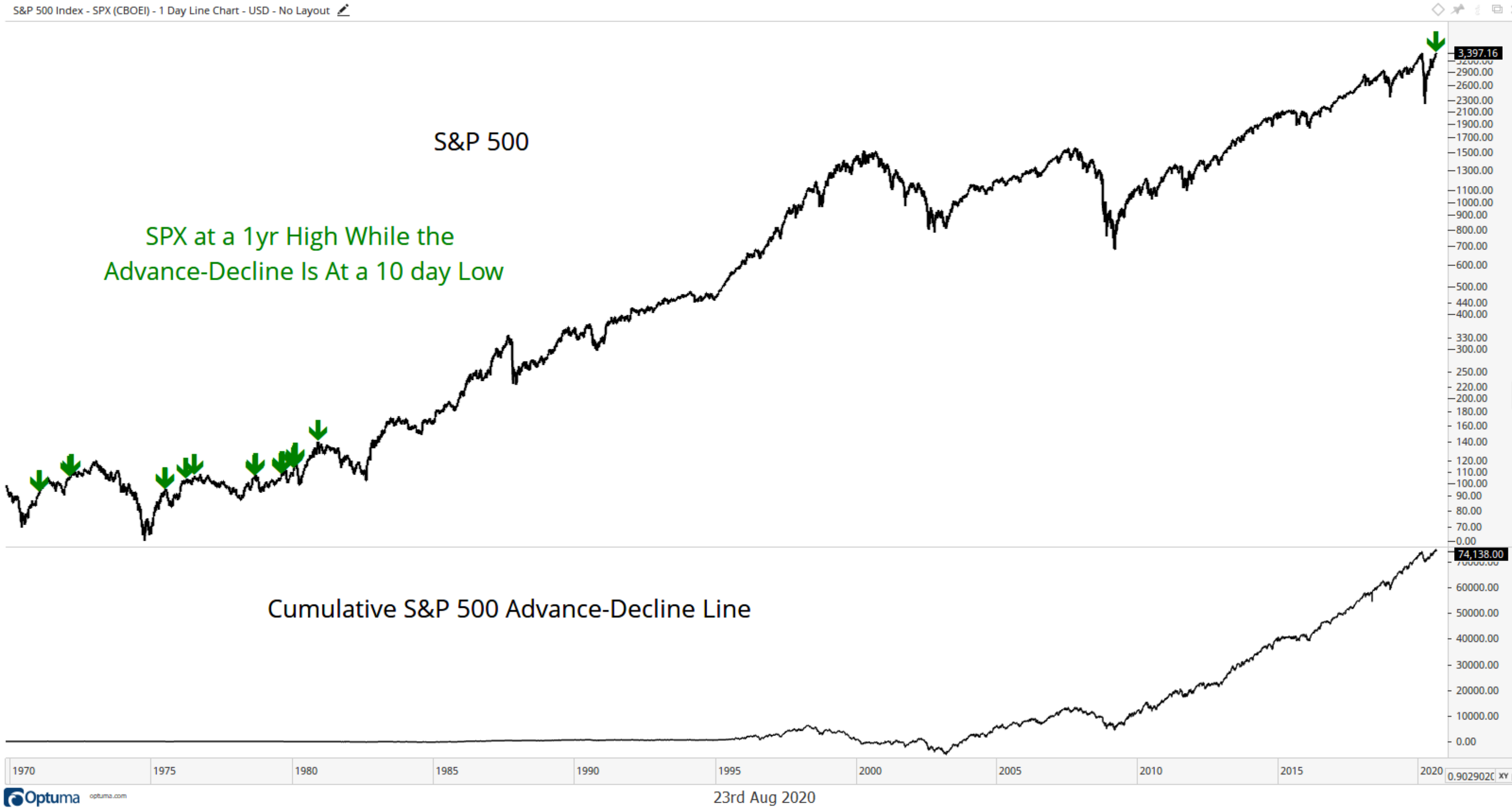
Looking at the difference in the mid/small and large cap price performance, the above chart shows when the SPX is at a new high but the mid/small are trading under their 20-day moving average. This has happened just a couple of times in the last decade. Most recently, just before the big move in late ‘17 and again before the first drop in 2014. Then we’d have to go back to 2004 and the late-1990s. The point is, we don’t see price action like this very often.



It's not just the small/mid cap stocks that aren't performing with the S&P 500. The average SPX stock has one of the lowest 5-day correlations since 2002! The above chart shows when the S&P 500 index has risen over the last five days but the average correlation was negative, meaning the index was up but if the correlation is negative, then the average stock was not rising with the index. This happened quite a bit in the late 90s, a period many traders point to in comparison to today—when many stocks were no longer moving with the index, relying on just a handful of equities to carry the broad market higher.

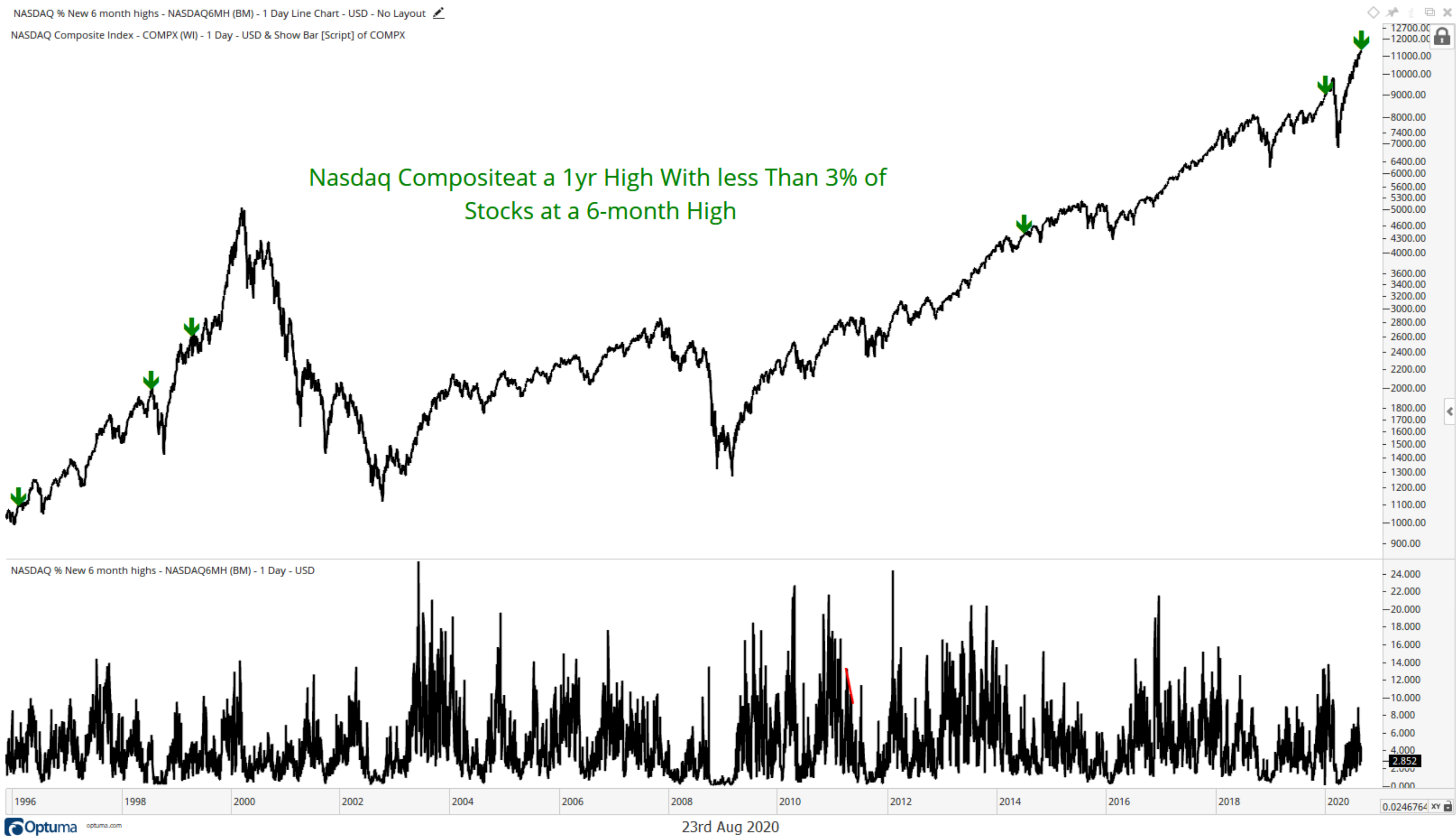


Speaking of the late 90s, we have to go back to early 2000 to find a time where the market was at a new 52-week high but the average stock was still more than 15% below its own 1 year high watermark. No other time since then has there been such a large spread in average stock recovery and the index itself. Did this send stocks lower immediately in 2000? No. But it showed the underlying health of the market going into what ended up being a major high for equities. I'm not expecting the same type of price action to follow today, each trend in the market is unique, but the internals are about as weak as they were back then.



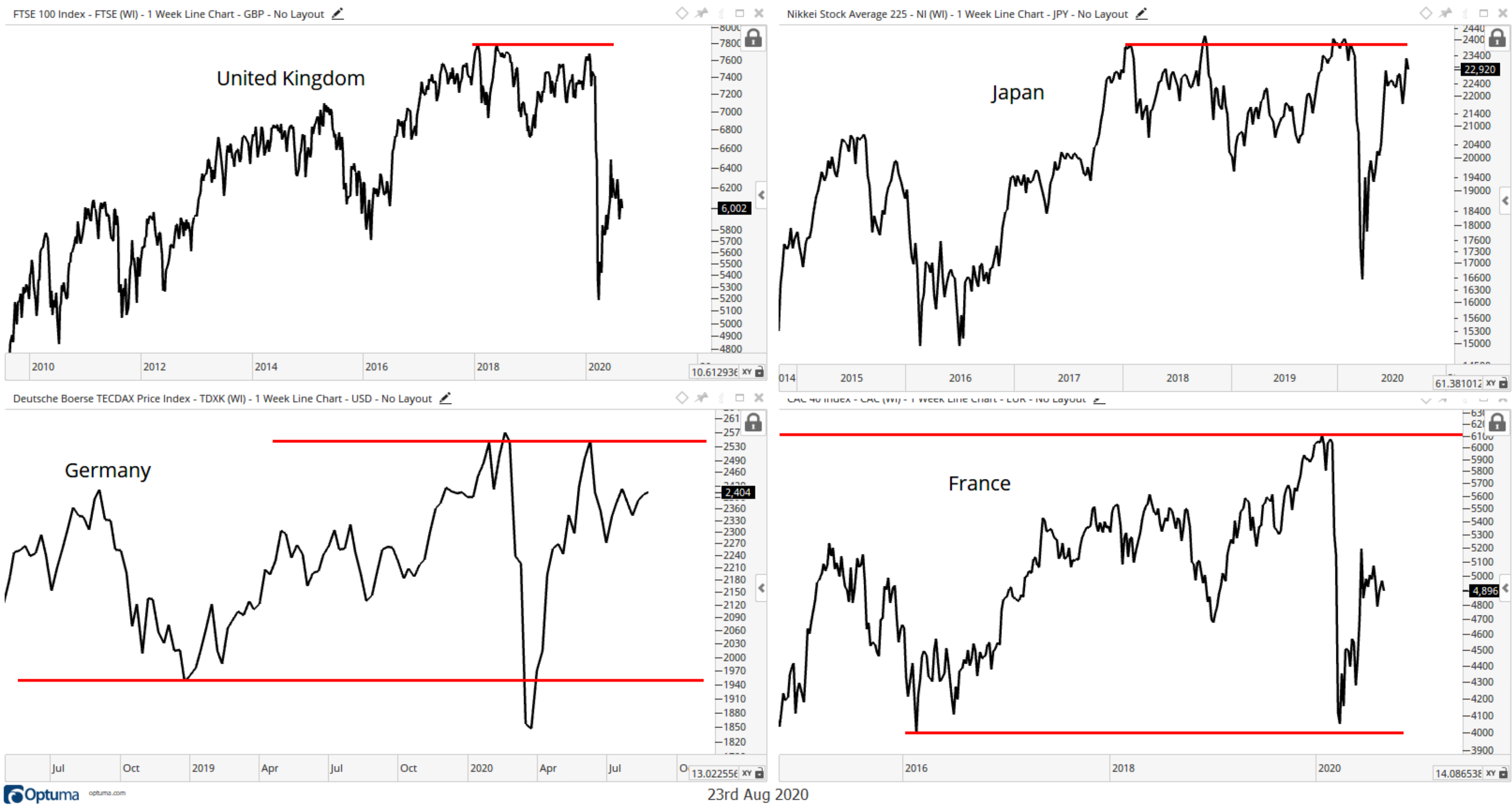
It’s been over thirty years since we last had a period of time where the S&P 500 Advance-Decline Line was at a 10-day low while the index hit a new high. We’d have tog o back to the start of the multi-year down turn that kicked off the 80s for the last time this occurred.

The point I’m trying to make here with all of these charts singing the same song, is it’s not a matter of poor relative performance of the individual equity, it’s not that the Facebook, Amazon, Google, Apple, and Microsoft’s of the world are showing greater strength, it’s that they are showing the ONLY strength (yes, this is hyperbole). The A-D Line has almost perfect correlation with the index, as you can see on the above chart, so when it drops like this, it takes quite a bit of internal math to get a divergence. This divergence is of the short-term nature, but as I noted above, still quite rare.

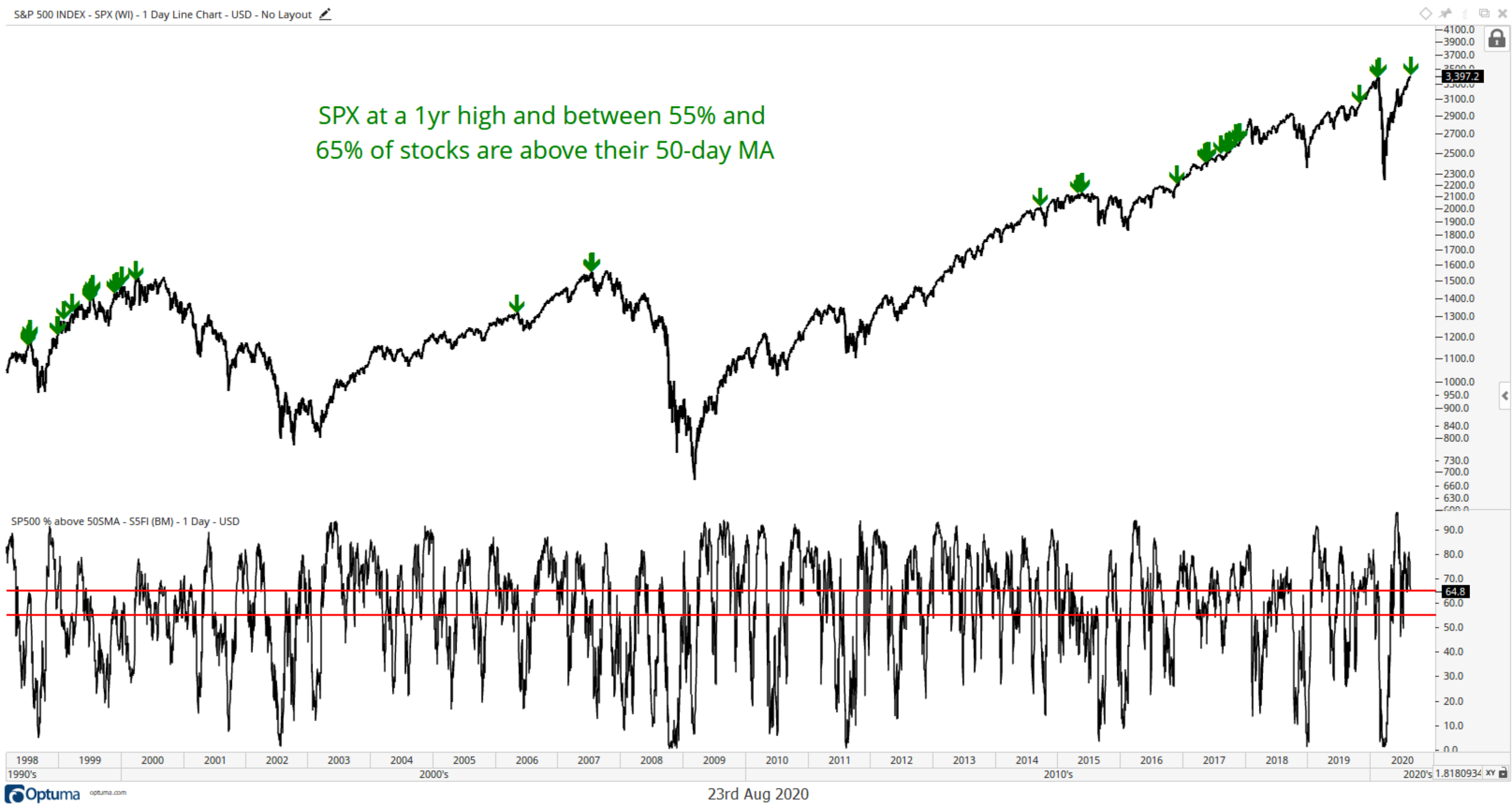


The Nasdaq 100 gets the most focus, but I still watch the broader Composite as well. On Friday, like the Nas 100, it hit a new high. And how many of its underlying stocks even made just a 6-month high along with it? 2.8%. We saw this going into the Feb. peak earlier this year, in 2014, and a couple of times in the late 90s—that's it.

To show just how big the FAAMG names have gotten, Mike O'Rourke, CMT of JonesTrading wrote last week that "Another 10% rally in Apple's shares will make it as valuable as the Industrials, Consumer Staples, and the Russell 2000."

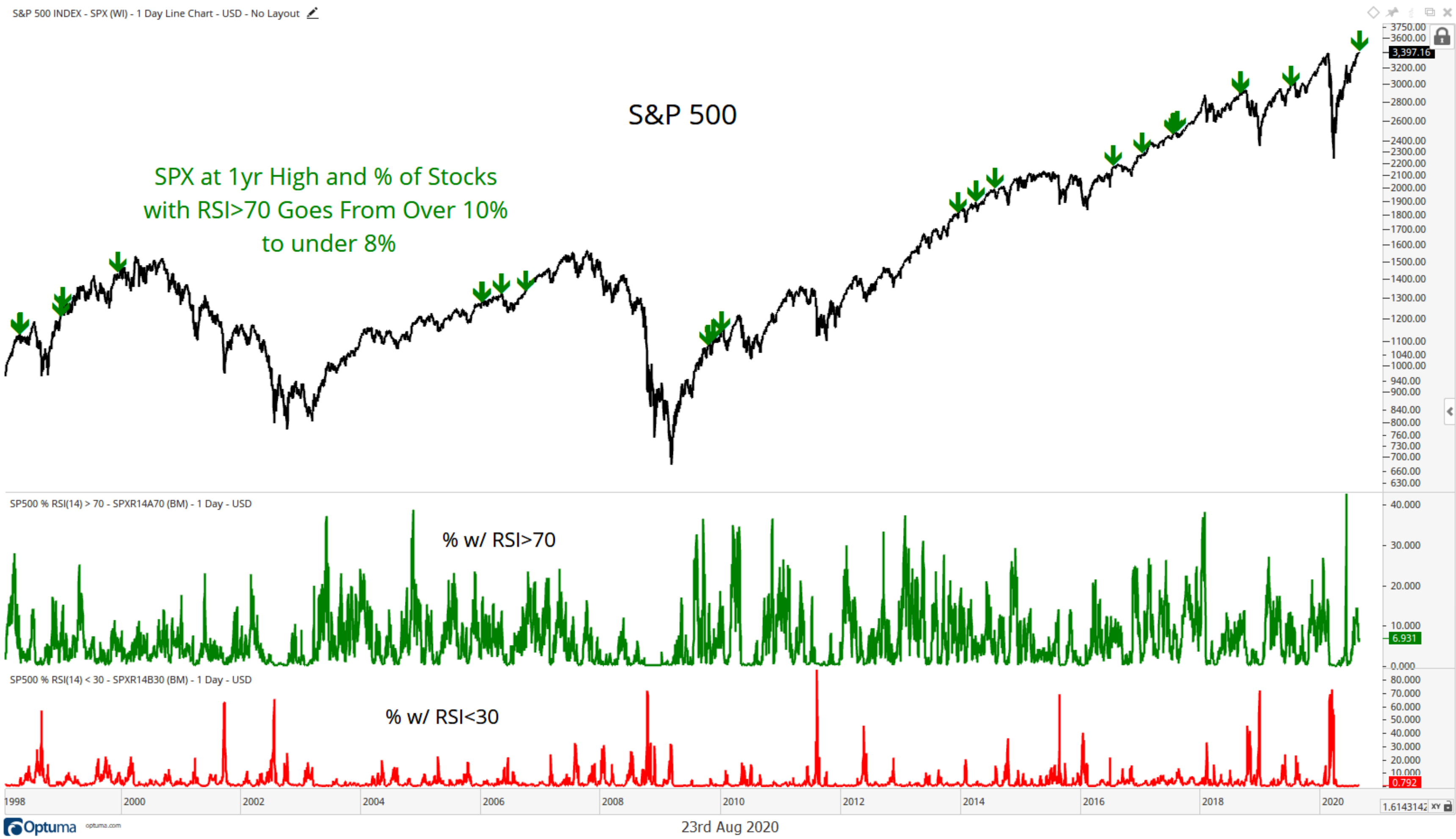


On Friday, EAFE fell back below its prior June high. Four of the primary countries with the EAFE index are the UK, Japan, Germany, and France—charted above. As you can see, they don't look very similar to the U.S. large cap markets. Besides Japan, they aren't even close to making new 2020 highs. While some of the smaller foreign equity markets may be strengthening, these are the four that move the needle for the major int'l index and currently aren't showing the same level of strength as we have here in the U.S.

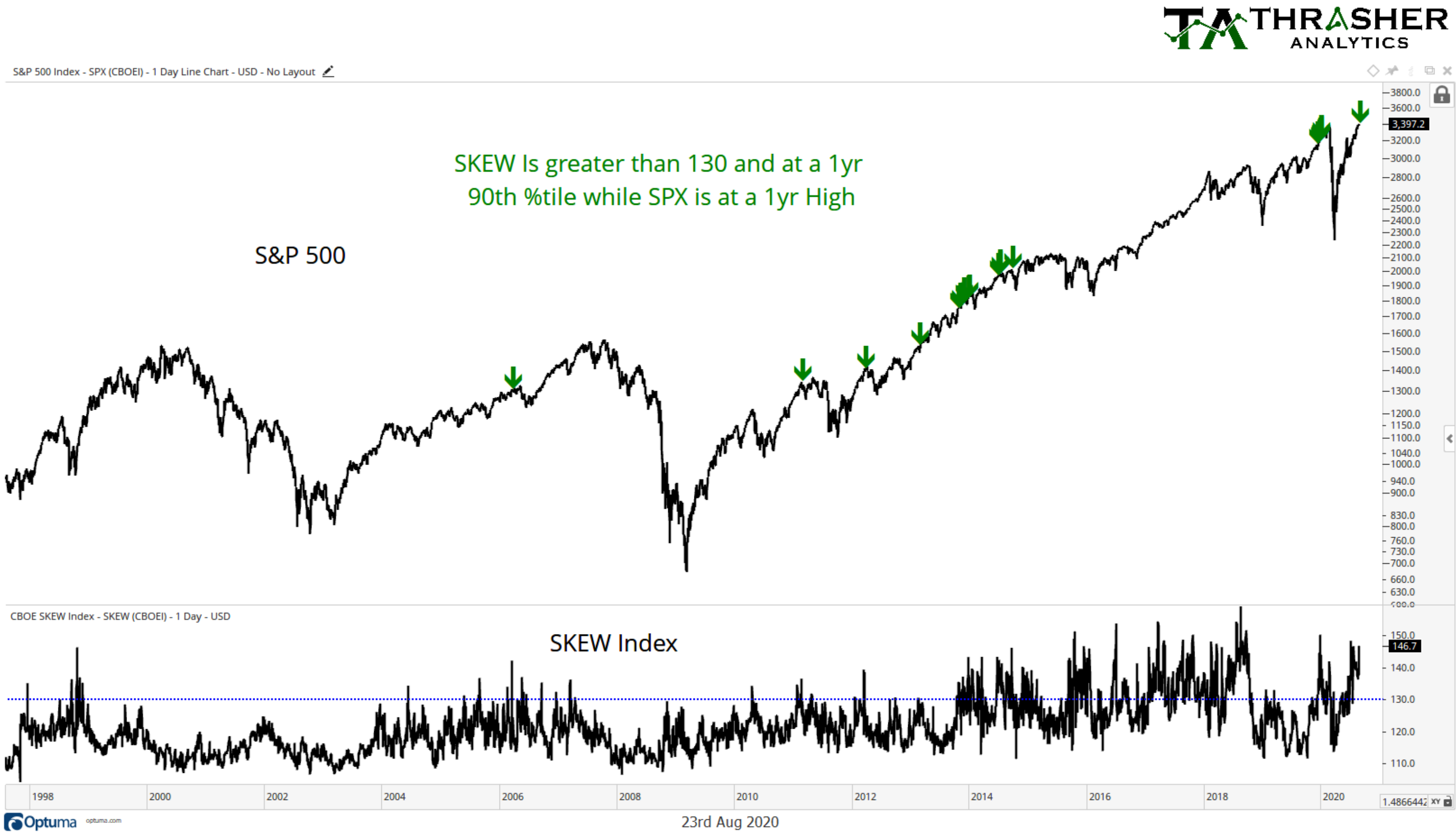


The percentage of stocks in the S&P 500 that are above the 50-day MA is still a healthy 64%. I wouldn't expect us to stay near 90% like we saw earlier this year, but this figure has been declining, As we closed out the week at a new high for the index, the above chart shows when this happens and we have less than 65% but more than 55% of stocks above their 50-day moving average. As you can see, the results are quite mixed w/ the following price action. In 2017 this was hardly a problem while in '14/'15 stocks struggled, and of course in February of this year we know what price did. Back in 2007 equities peaked, 206 we saw a pullback, and several pullbacks followed the occurrences in the 90s but never ended the bullish trend until the figure really began to breakdown in 2000.

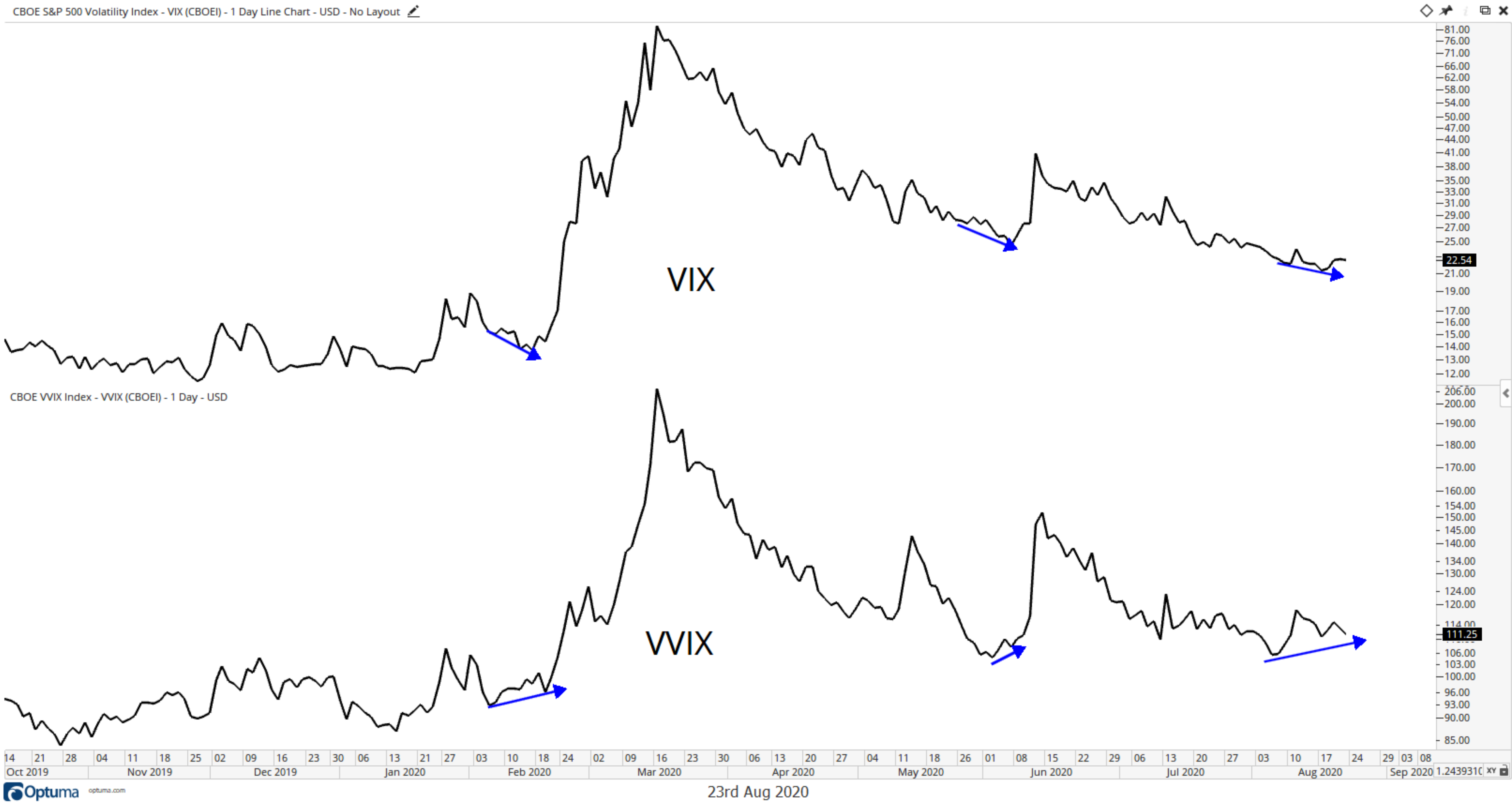
While we don't have a lot of strong stocks, do we have falling stocks? The % of stocks at a 1-month low inched up to 12.3% - a low level but has been slowly rising since mid-July.



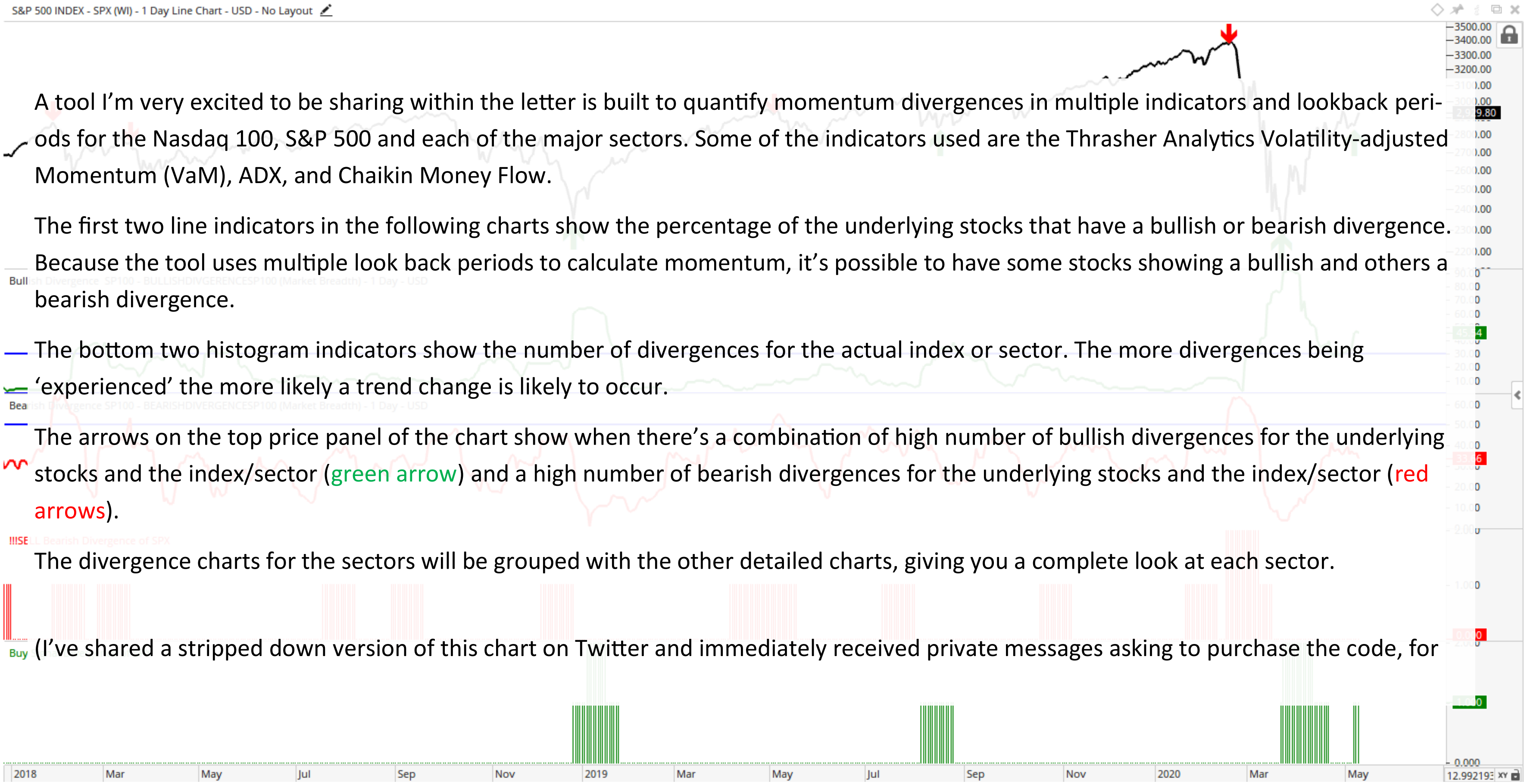
One of the bullish arguments over the last couple of weeks has been the expansion in number of stocks with ‘overbought’ momentum. Remember, ‘overbought’ momentum is a good thing long-term, it shows a strong trend higher for that stock so seeing a growing number of stocks ‘overbought’ suggests a strong momentum trend for the underlying securities. Unfortunately, this trend ended last week with a drop to 6.9% of stocks as of Friday, after being north of 10% in the last month. The above chart shows when this has occurred in the past, notably in Q4 ‘18. Most occurrences saw at least a mild pullback in the SPX, except in 2017 and took a few weeks in early 2010.



The SKEW Index attempts to measure the activity in deep out of the money options, believed that as interest in deep OTM options grows is a sign of market expectation for a large “tail” event in equities. Many traders discount the SKEW Index for its few faults, of which I don’t disagree but also don’t completely abandon the tool either. I believe it does have some use when viewed in the proper context. The above chart shows when the SKEW is at a 1 year 90th percentile and above 130 while the SPX is at a 1yr high as well. This indicates that not only is SKEW elevated (above 130) but also recently near the high end of its 1year range (90th %tile) while the equity market is at a fresh high. We saw this happen a few days earlier this year and then notably in 2011 and 2006 as well as a few times in 2012 and 2014.



I shared this chart two weeks ago and it still is holding up today. The VVIX is showing a bullish divergence to the VIX, making a higher low to the latest lower-low the in the VIX. While the Volatility Index firmed up at the end of last week, closing off its weekly low, it remains below 24.5 which has been a ceiling in recent weeks for volatility.



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.

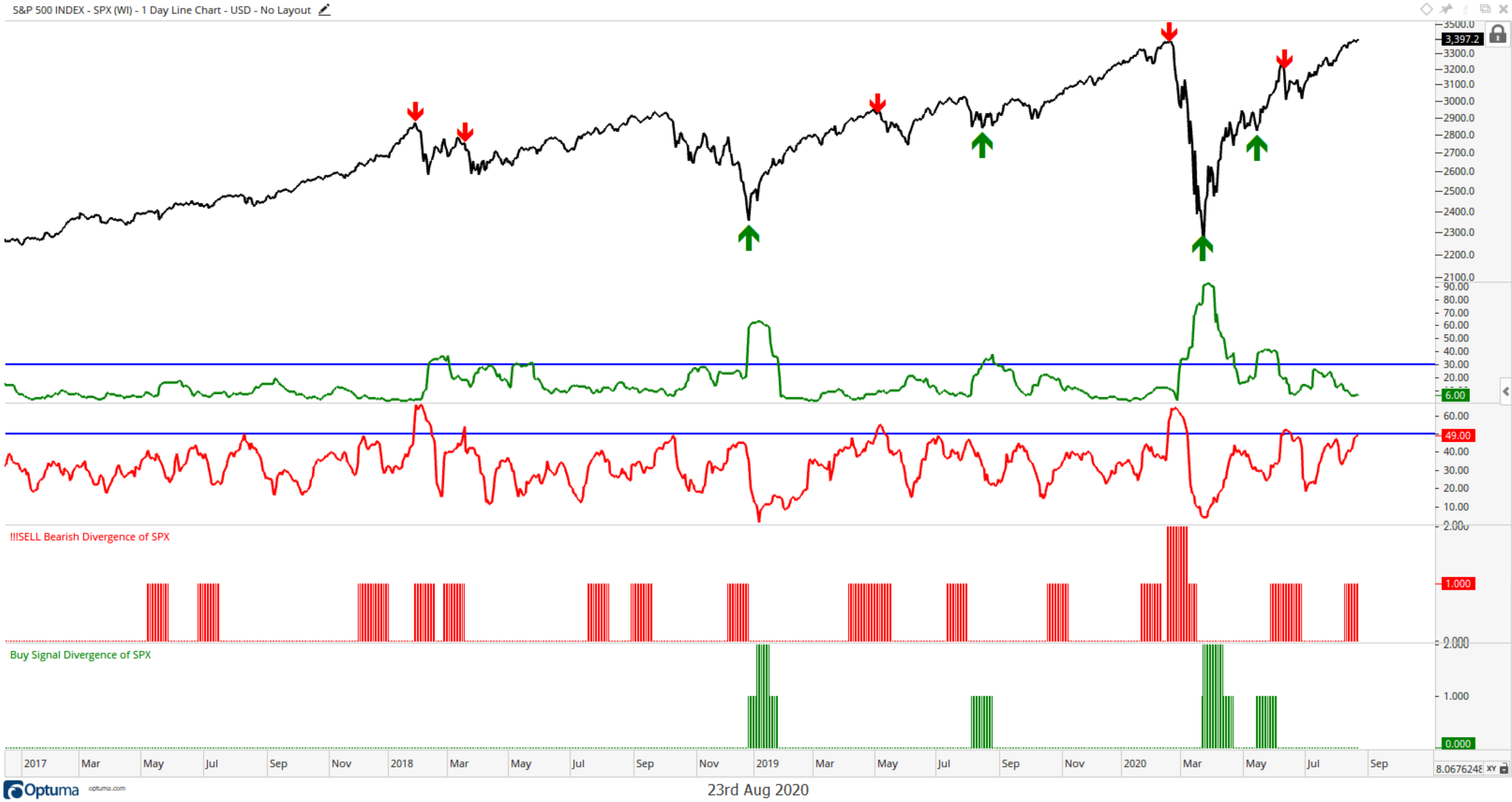
The first two line indicators in the following charts show the percentage of the underlying stocks that have a bullish or bearish divergence. Because the tool uses multiple look back periods to calculate momentum, it's possible to have some stocks showing a bullish and others a bearish divergence.

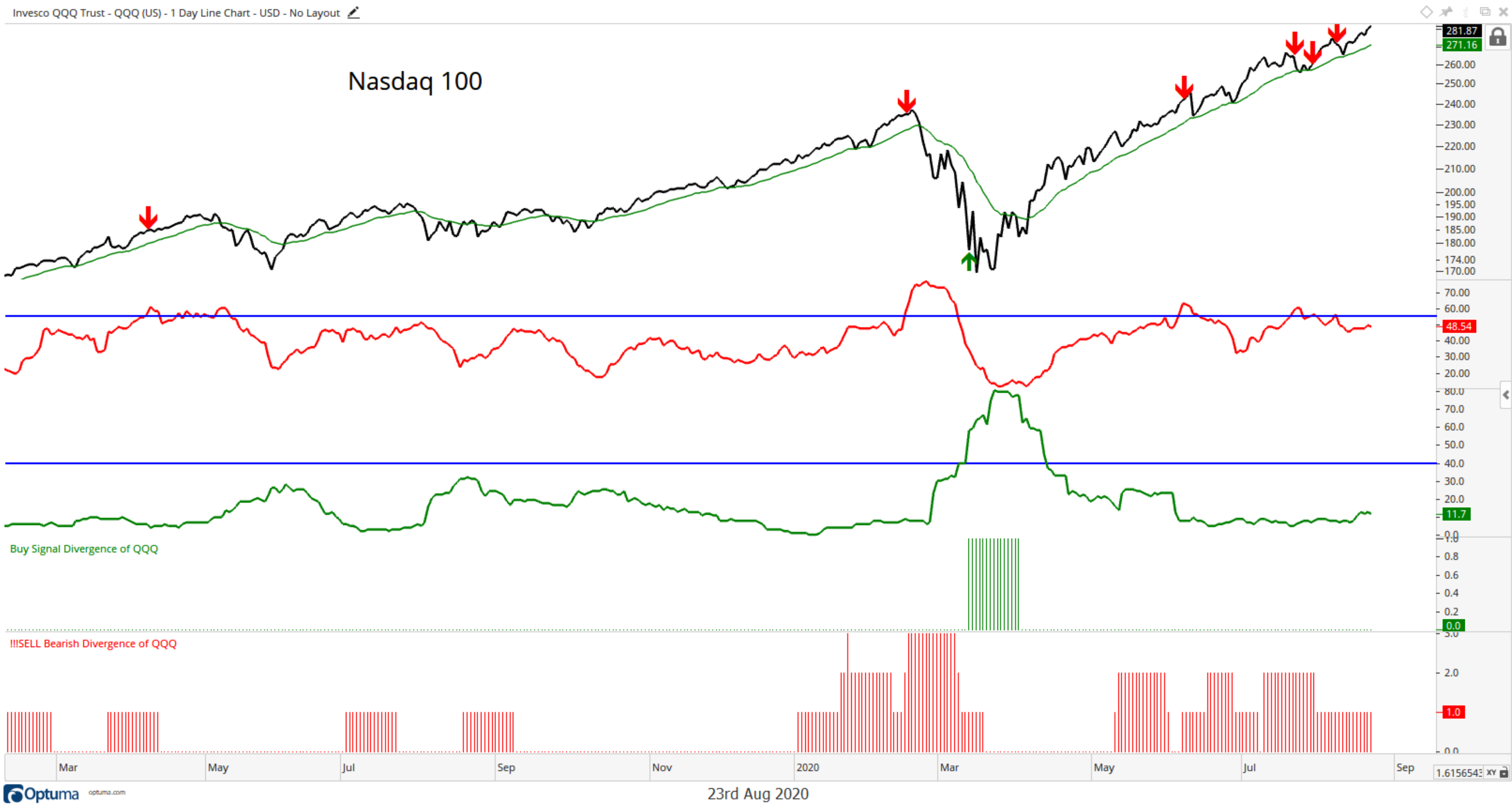
The bottom two histogram indicators show the number of divergences for the actual index or sector. The more divergences being 'experienced' the more likely a trend change is likely to occur.

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


S&P 500 INDEX - SPX (WI) - 1 Day Line Chart - USD - No Layout
!!!SELL Bearish Divergence of SPX
Buy Signal Divergence of SPX
2017
Mar
May
Jul
Sep
Nov
2018
2019
2020
3,397.2
49.00
6.00
23rd Aug 2020


Invesco QQQ Trust - QQQ (US) - 1 Day Line Chart - USD - No Layout
Nasdaq 100
Buy Signal Divergence of QQQ
!!!SELL Bearish Divergence of QQQ
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
Sep
Optuma
23rd Aug 2020

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.

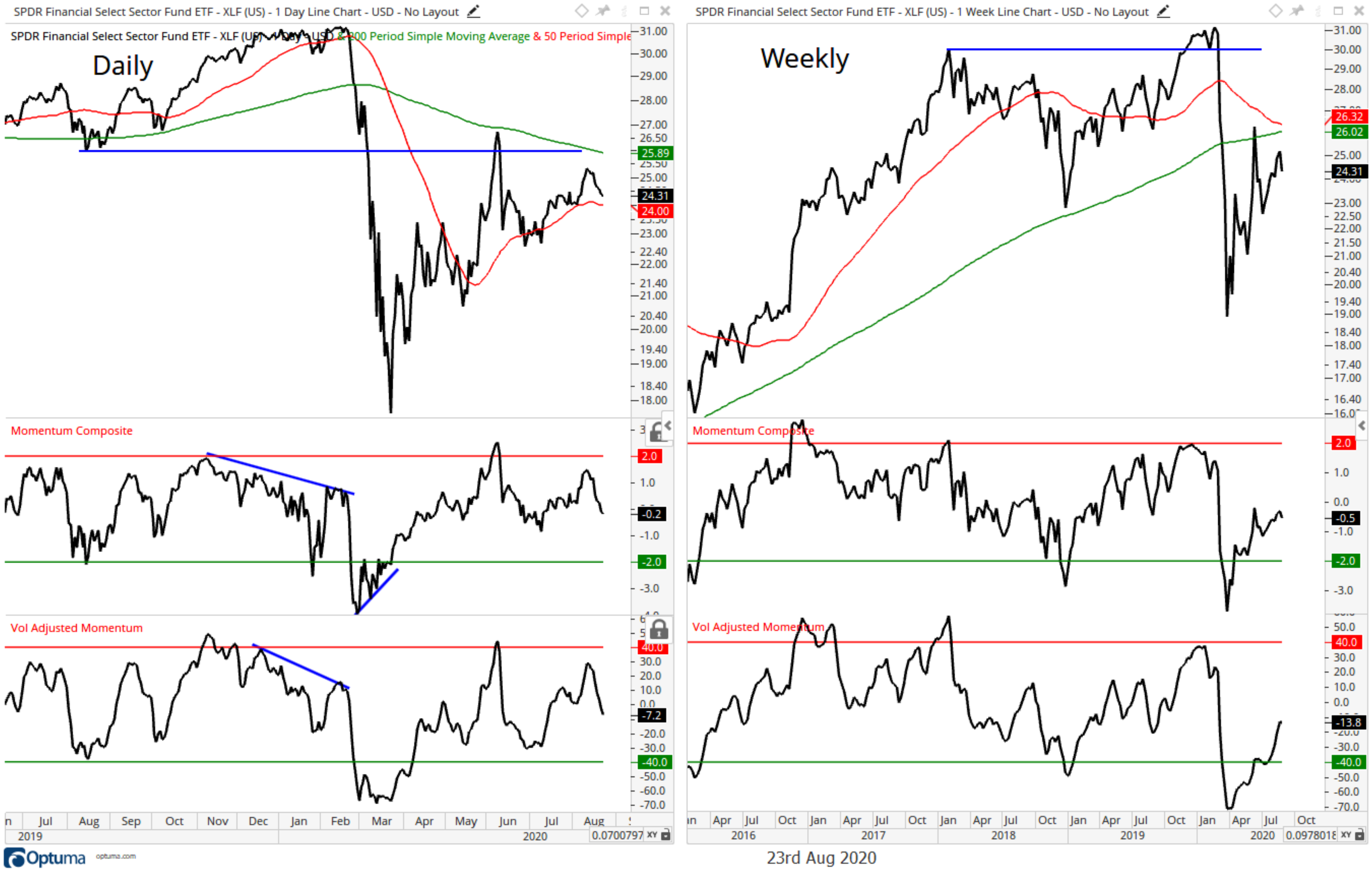
When used together, a great detail can be gleaned from what momentum is showing for the daily and weekly charts of each sector and I'll of course provide brief commentary to accompany them.

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.



Watch List

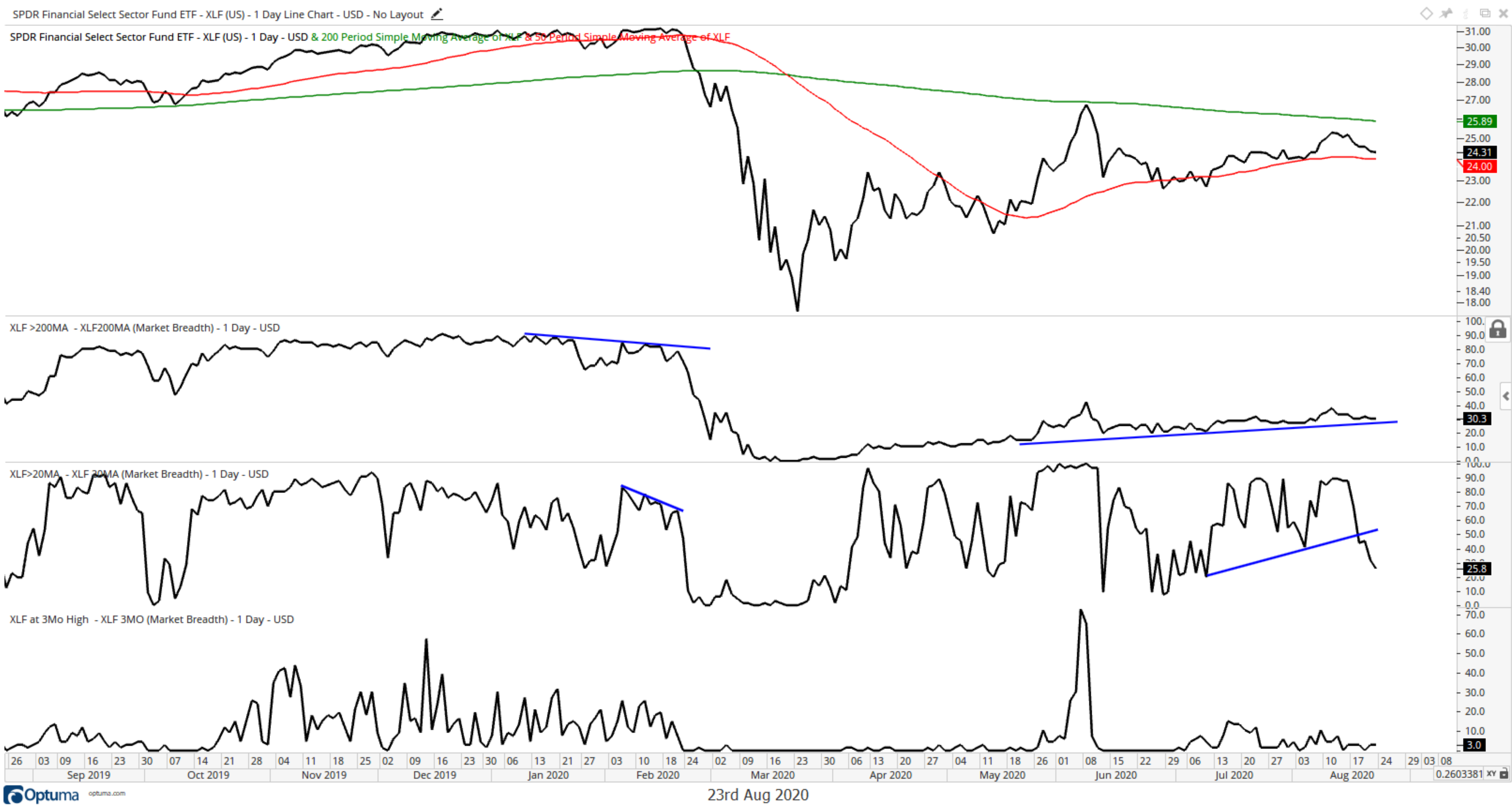
Ticker	Momentum
Financial Momentum Score	
SPGI	32.7950
ICE	22.5540
NDAQ	22.3534
BLK	20.2976
PGR	19.4428
TROW	14.0696
AJG	13.2405
MMC	11.5356
ETFC	10.8626
MSCI	9.0256
AMP	7.1883

Watch List

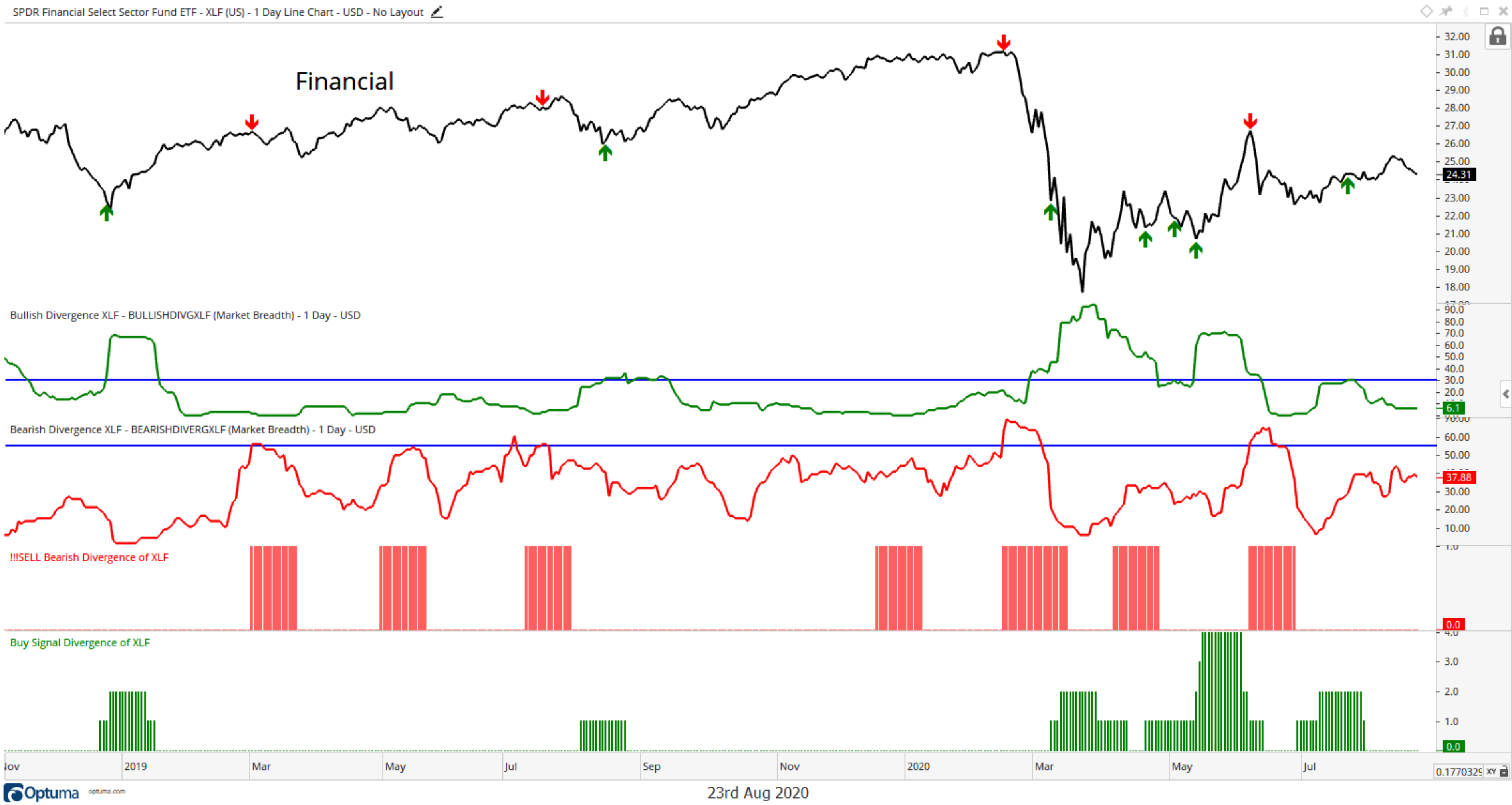
Ticker	Mean Reversion
Financial Mean Revision Score	
PBCT	-1.3583
WFC	-1.2621
CBOE	-1.2223
USB	-1.0605
AIG	-1.0388
CME	-1.0336
MTB	-1.0226
HIG	-0.9625
ALL	-0.9479
C	-0.9123
KEY	-0.9055
AFL	-0.8918
CB	-0.8903
BK	-0.8903
COF	-0.8851
L	-0.8820
PNC	-0.8776
ZION	-0.8634

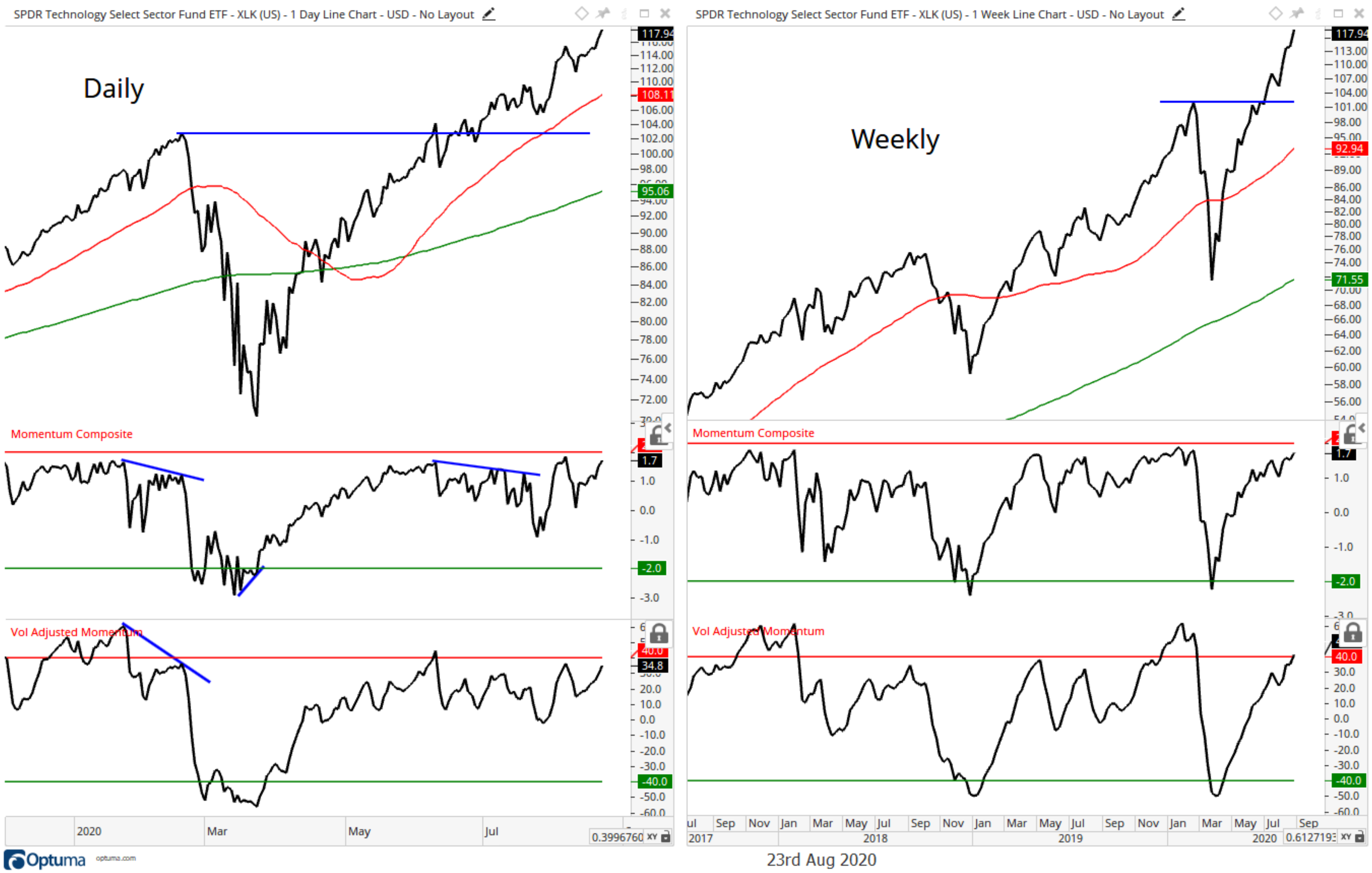
23rd Aug 2020

XLF has held above the 50-day MA but struggles to regain its 200-day MA.



% above 200-day MA is still rising but short-term break has broken down.


SPDR Financial Select Sector Fund ETF - XLF (US) - 1 Day Line Chart - USD - No Layout
Financial
Bullish Divergence XLF - BULLISHDIVGXLF (Market Breadth) - 1 Day - USD
Bearish Divergence XLF - BEARISHDIVERGXLF (Market Breadth) - 1 Day - USD
!!!SELL Bearish Divergence of XLF
Buy Signal Divergence of XLF
24.31
6.1
37.88
0.0
0.0
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
23rd Aug 2020



Watch List

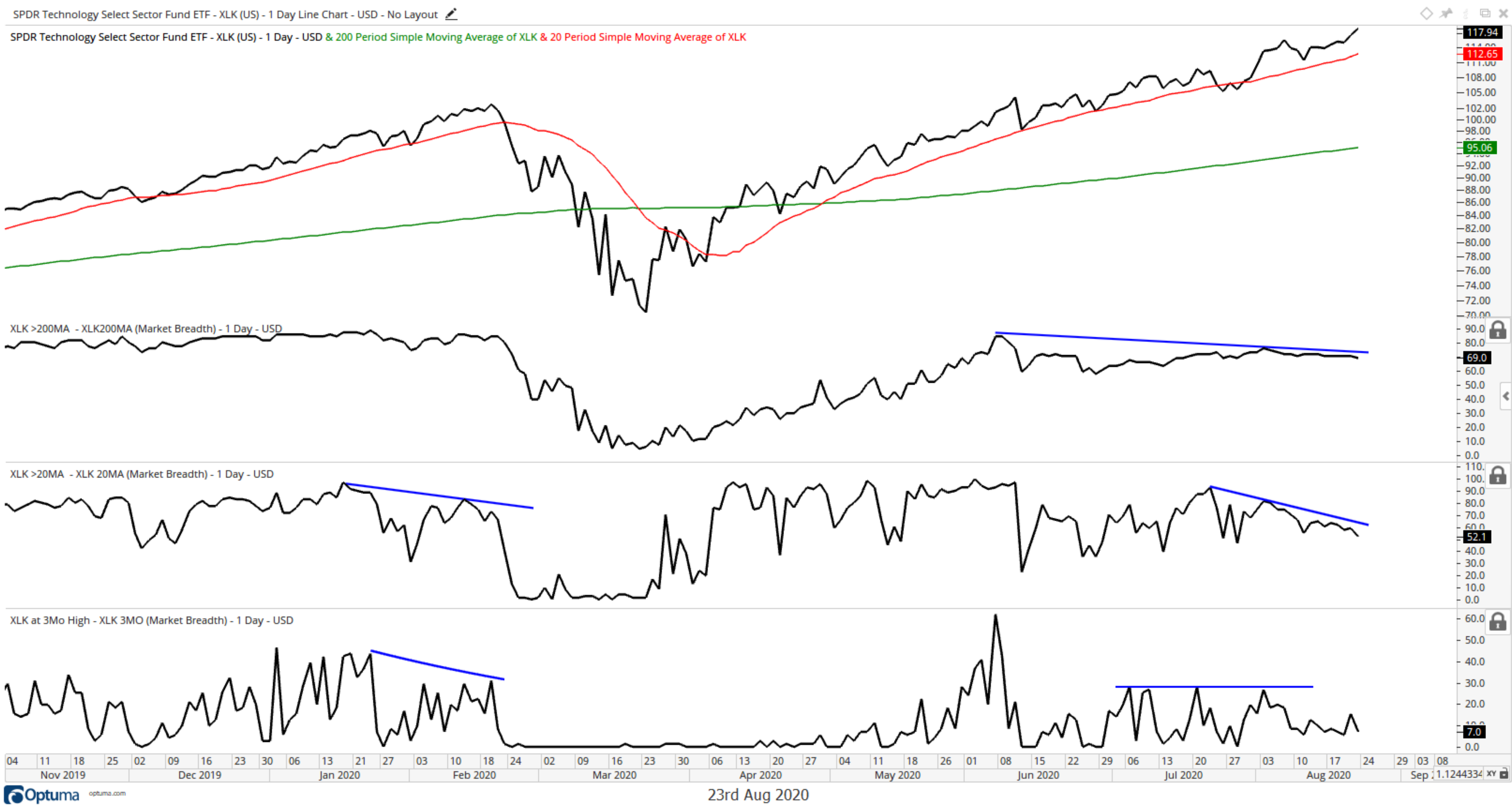
Ticker	Momentum
Tech Sector Momentum Score	
NVDA	62.9356
AAPL	60.6688
CDNS	47.1512
PYPL	43.1288
NOW	39.2153
SNPS	38.0479
ACN	37.5371
QCOM	35.1502
ANSS	32.7193
GLW	31.1456

Watch List

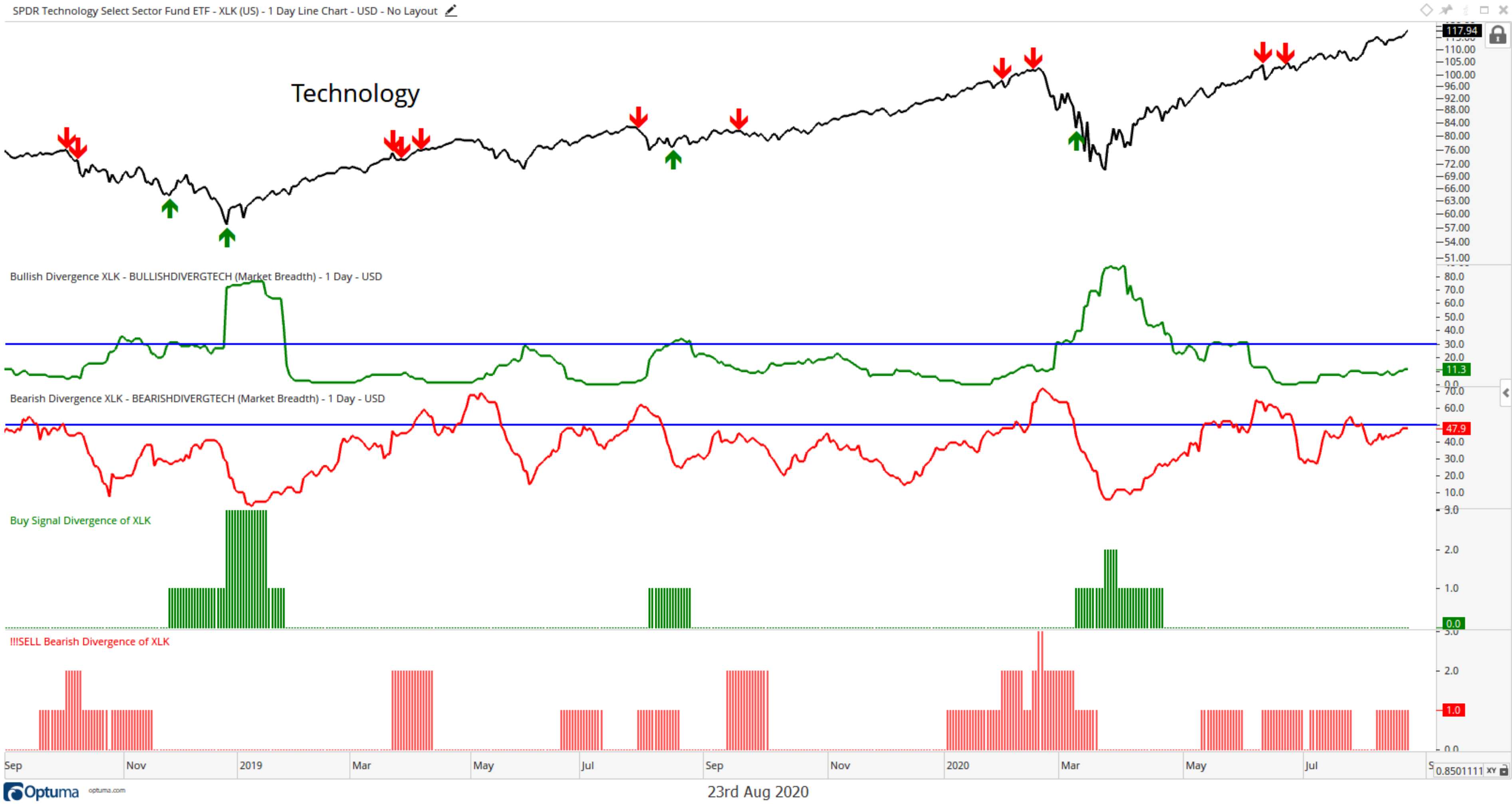
Ticker	Mean Reversion
Tech Sector Mean Reversion Score	
WDC	-1.6394
FLIR	-1.4192
STX	-1.2267
ADP	-1.1718
INTC	-1.1396
MU	-1.0471
FISV	-1.0359
FLT	-0.9661
NTAP	-0.9348
CSCO	-0.8582
XRX	-0.7694
ADS	-0.7083
CDW	-0.5856
LDOS	-0.5853
IBM	-0.5522
PAYX	-0.4530
GPN	-0.3549
MSI	-0.3458
KEYS	-0.3315

23rd Aug 2020

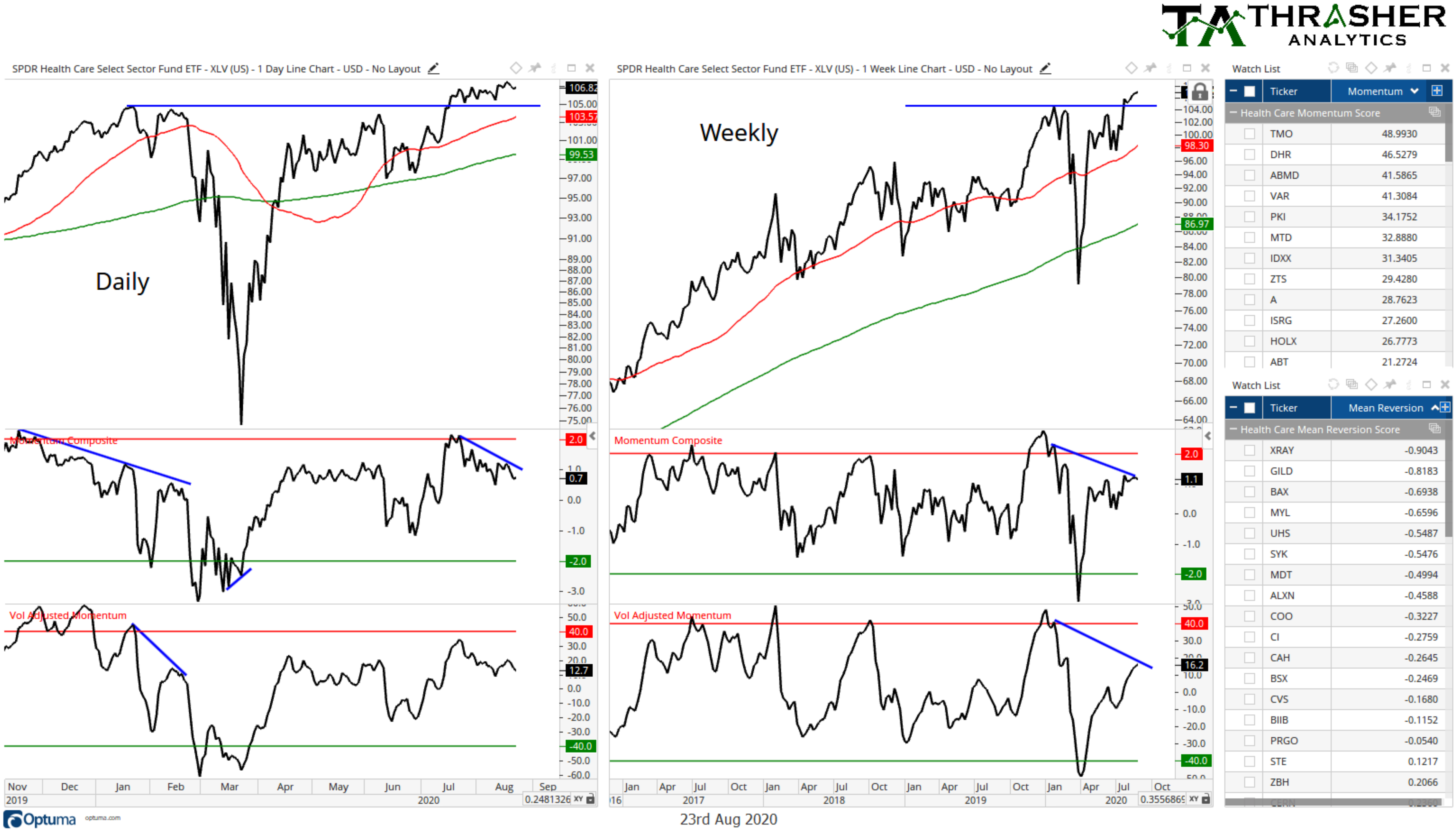
XLK has cleared its bearish momentum divergence with price holding above its breakout point. Weekly VaM is now ‘overbought’



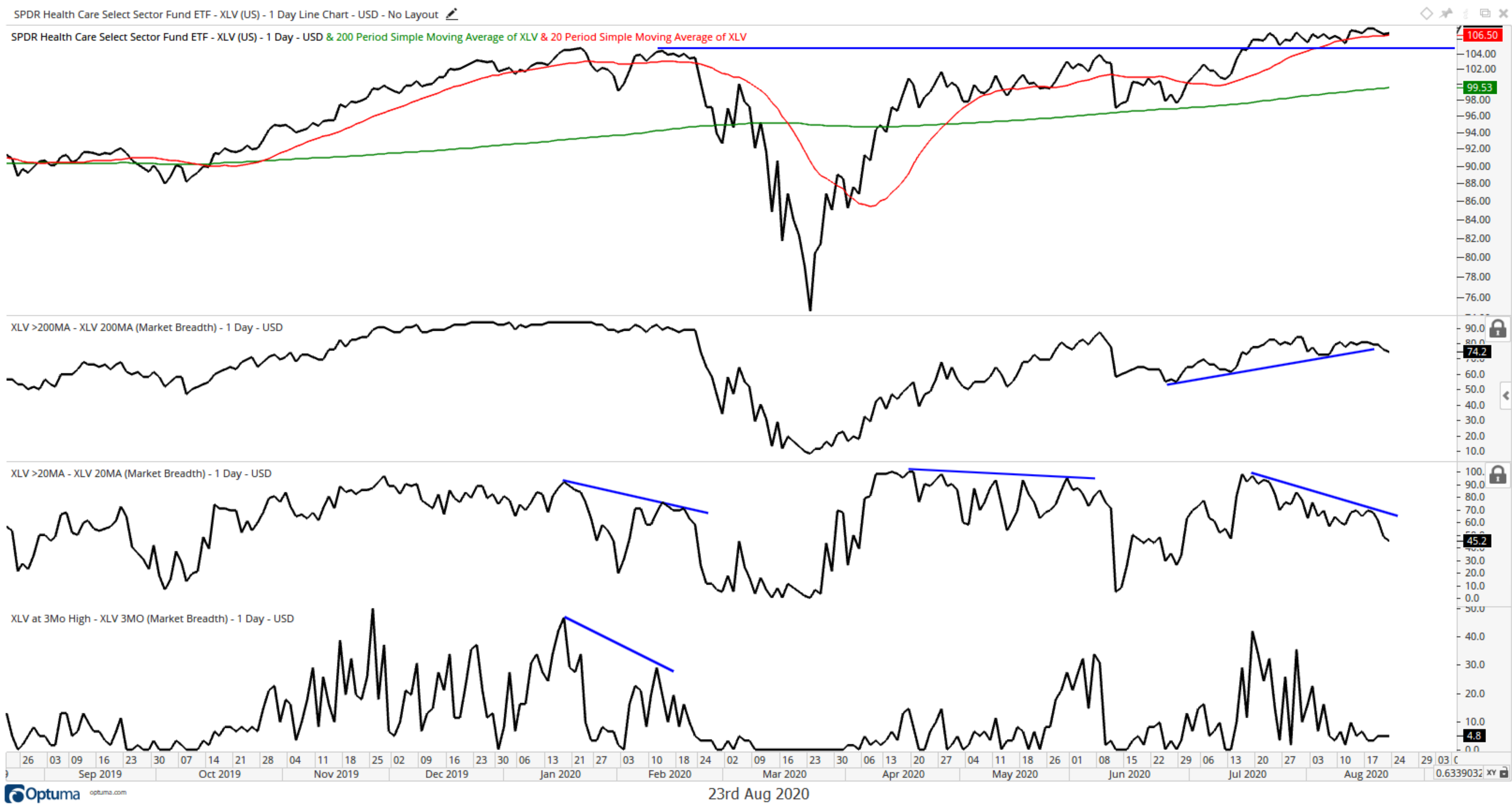
Declining % of tech stocks above the 200-day MA (top panel) with a ceiling on the % making 3-month high just under 30%. Breadth not looking great for tech.


SPDR Technology Select Sector Fund ETF - XLK (US) - 1 Day Line Chart - USD - No Layout
Technology
Bullish Divergence XLK - BULLISHDIVERGTECH (Market Breadth) - 1 Day - USD
Bearish Divergence XLK - BEARISHDIVERGTECH (Market Breadth) - 1 Day - USD
Buy Signal Divergence of XLK
!!!SELL Bearish Divergence of XLK
117.94
11.3
47.9
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
23rd Aug 2020

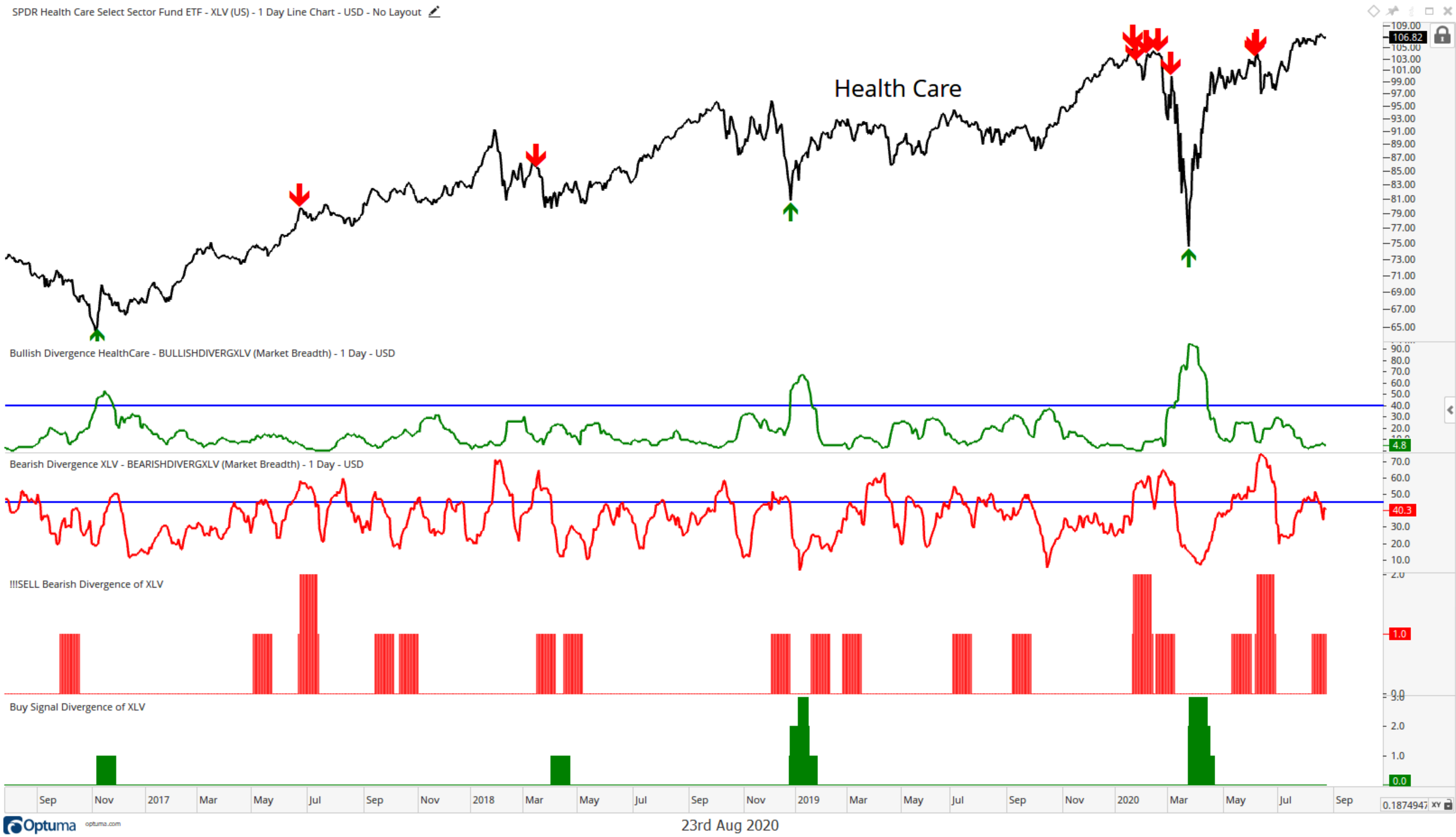
Health Care Sector

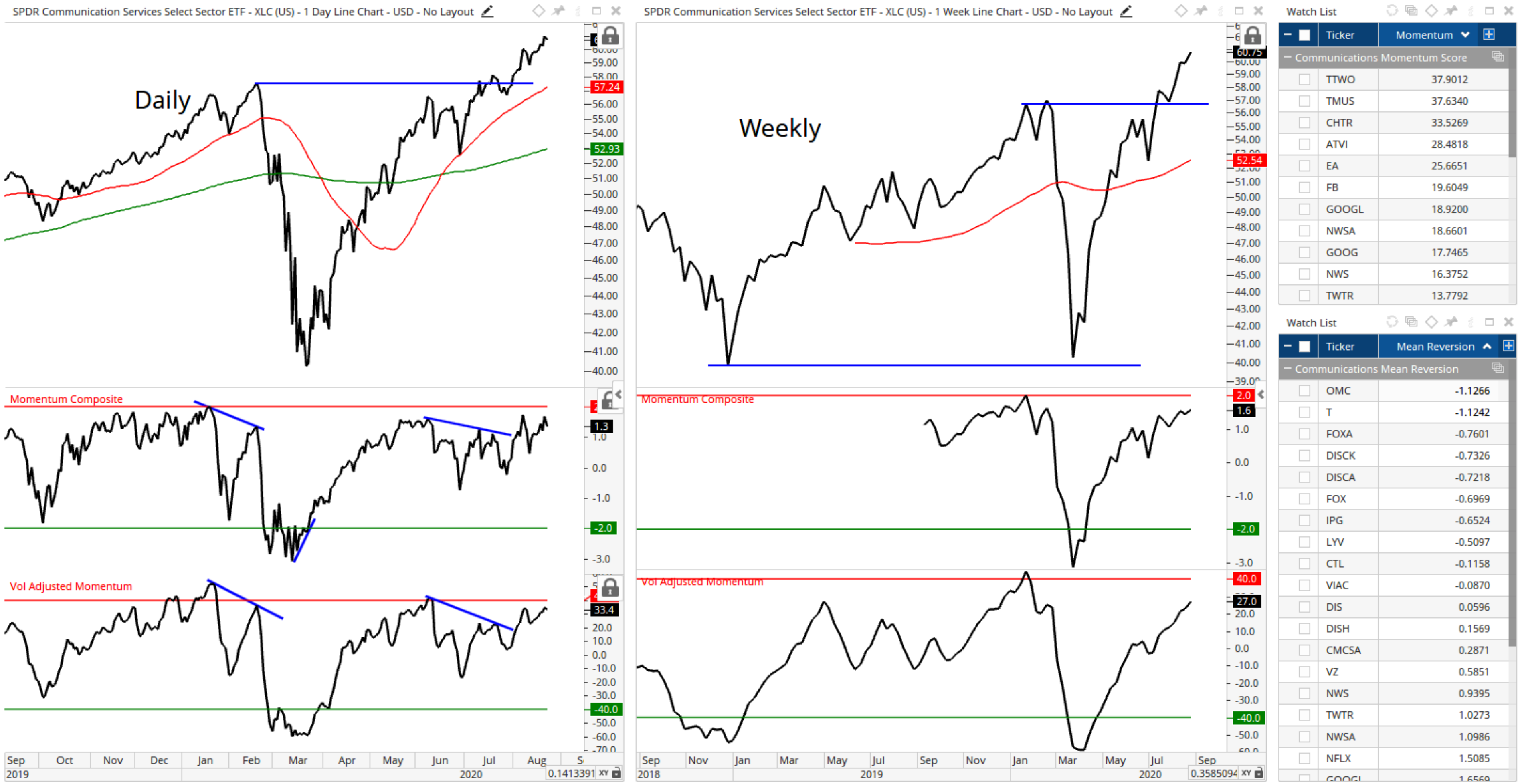


Momentum divergence with XLV on daily and weekly charts.



Breadth beginning to weak with a drop in %20MA and a possible breaking of the up trend in %200MA.


SPDR Health Care Select Sector Fund ETF - XLV (US) - 1 Day Line Chart - USD - No Layout
Health Care
Bullish Divergence HealthCare - BULLISHDIVERGXLV (Market Breadth) - 1 Day - USD
Bearish Divergence XLV - BEARISHDIVERGXLV (Market Breadth) - 1 Day - USD
!!!SELL Bearish Divergence of XLV
Buy Signal Divergence of XLV
Sep
Nov
2017
Mar
May
Jul
Sep
Nov
2018
Mar
May
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
Sep
106.82
4.8
40.3
Optuma
23rd Aug 2020



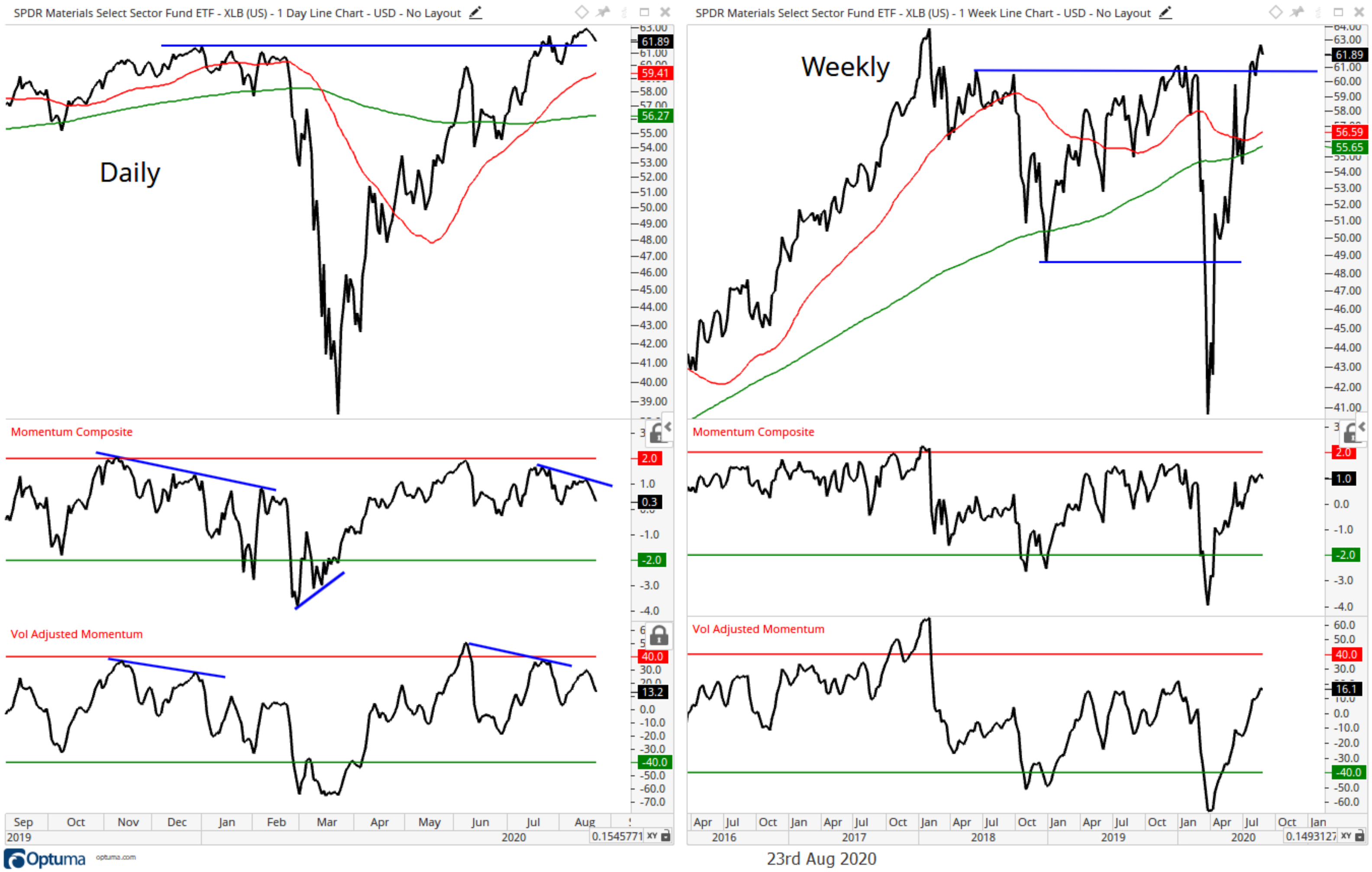
Optuma

23rd Aug 2020

XLC holding on to its breakout, closing out the bearish momentum divergences.

Supportive short-term breadth of %20MA but no improvement in 3 month high or %200MA.

SPDR Communication Services Select Sector ETF - XLC (US) - 1 Day Line Chart - USD - No Layout
Communications
Bullish Divergence XLC - BULLISHDIVGXLC (Market Breadth) - 1 Day - USD
Bearish Divergence XLC - BEARISHDIVGXLC (Market Breadth) - 1 Day - USD
!!!SELL Bearish Divergence of XLC
Buy Signal Divergence of XLC
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
Sep
23rd Aug 2020
Optuma



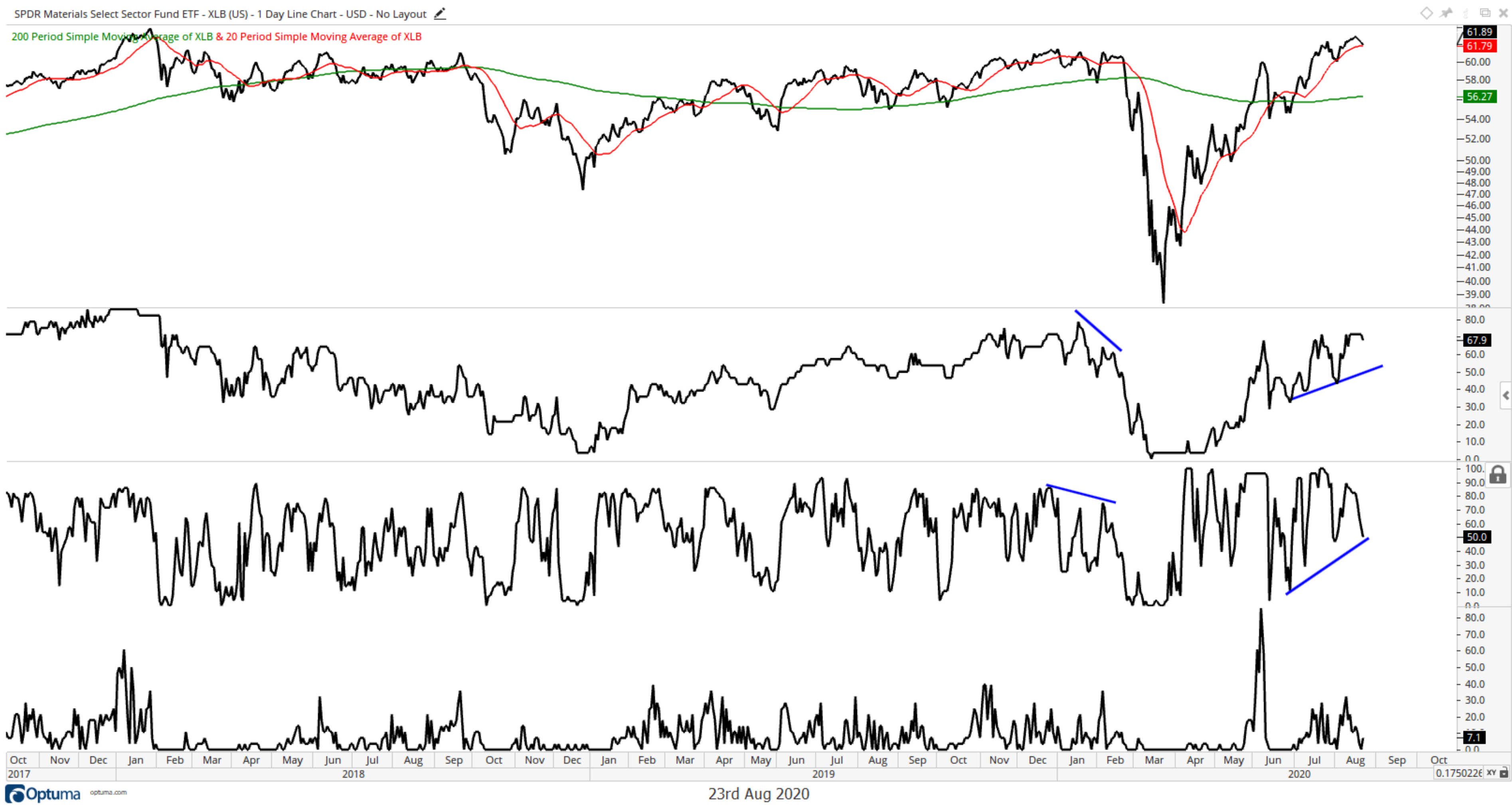
Watch List

Ticker	Momentum
Materials Momentum Score	
SHW	30.2331
FCX	29.9178
LIN	26.3975
APD	22.0024
SEE	21.7683
FMC	13.2977
AMCR	11.7672
BLL	10.6165
ALB	10.1250
PPG	9.6933
NEM	9.3184
MOS	5.8185

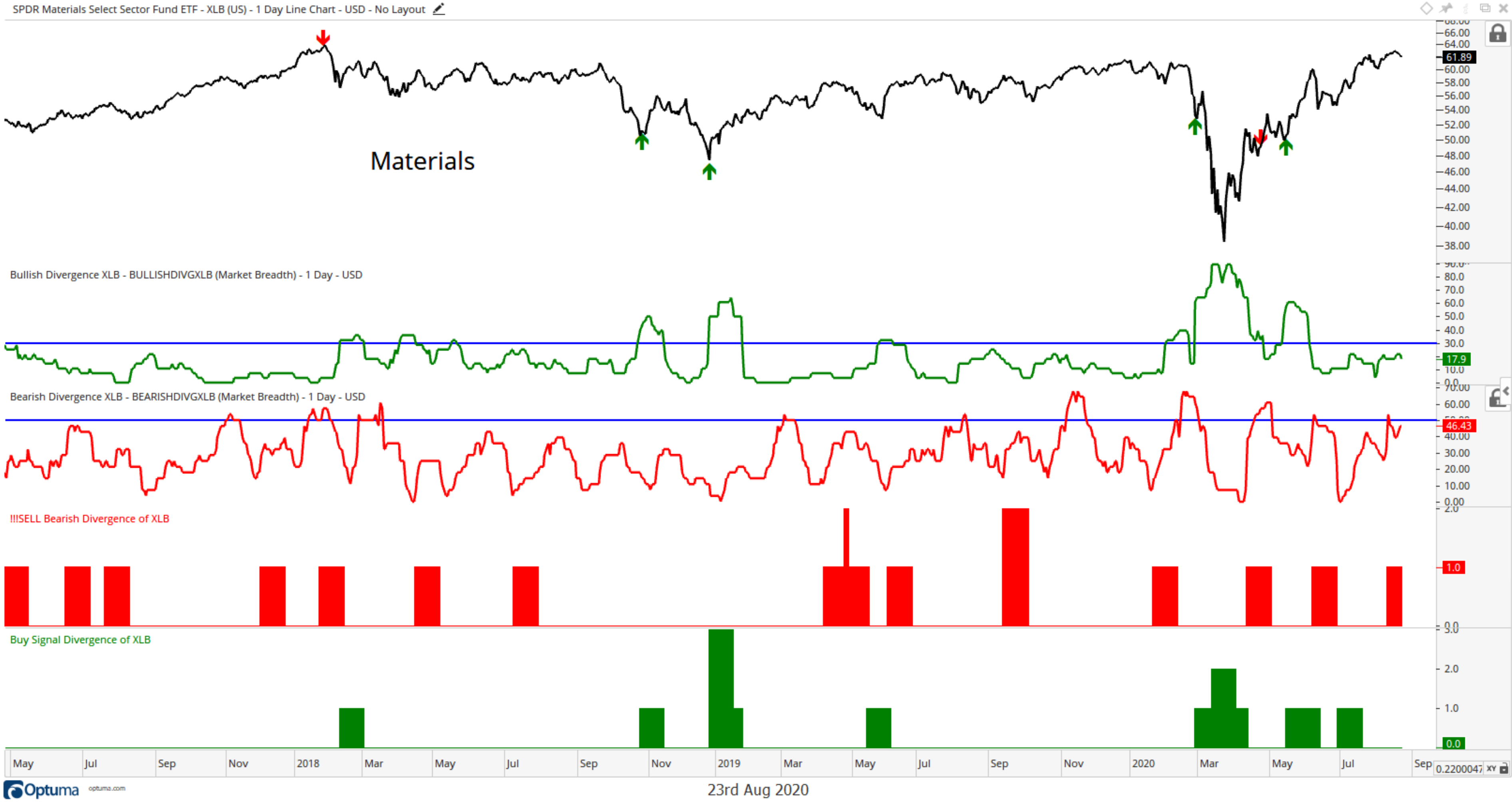
Watch List

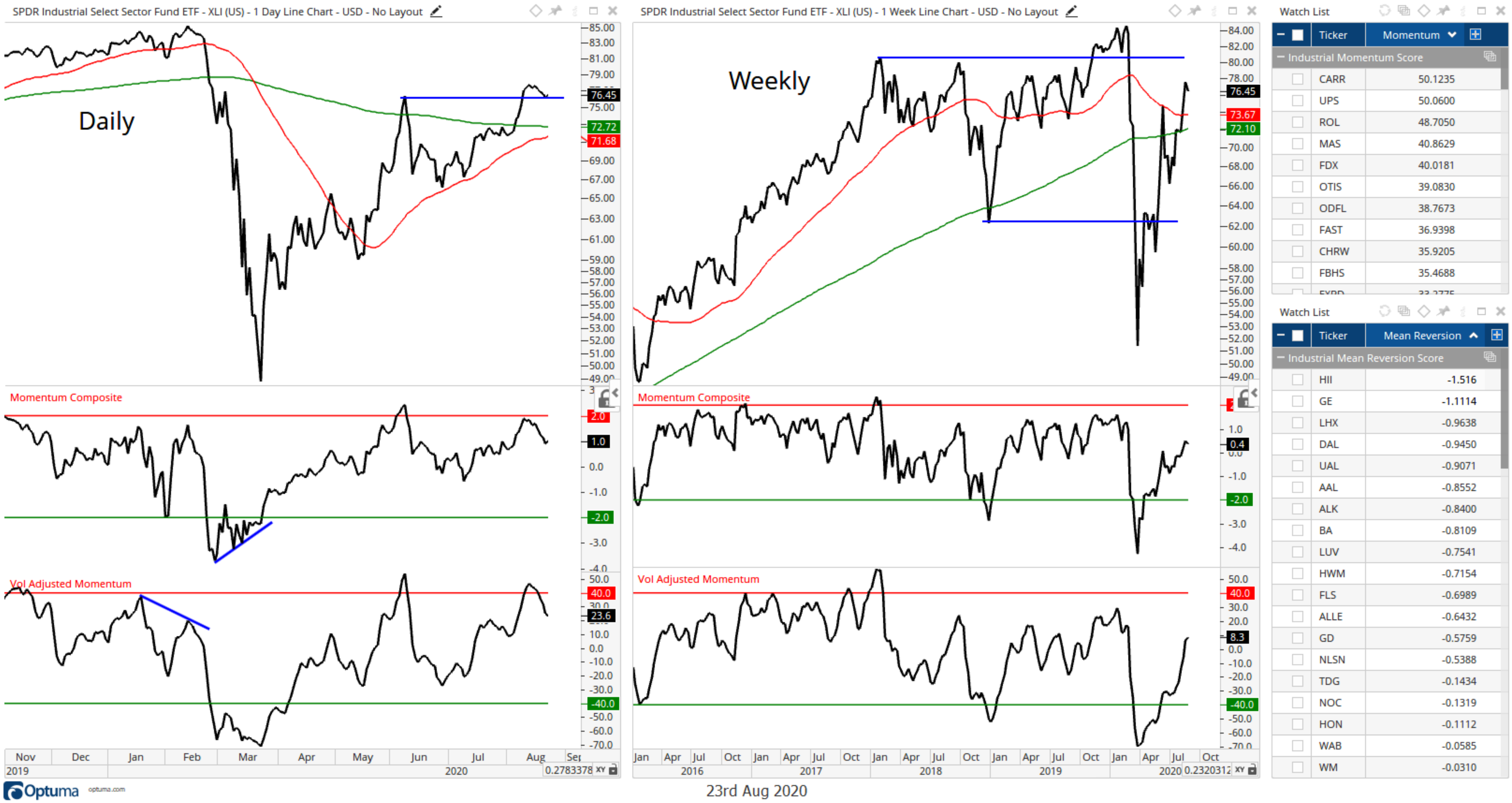
Ticker	Mean Reversion
Materials Mean Reversion Score	
WRK	-0.7944
MLM	-0.6776
IFF	-0.5793
IP	-0.5552
PKG	-0.5289
CF	-0.5098
LYB	-0.4632
AVY	-0.3492
VMC	-0.2302
NUE	-0.0820
ECL	-0.0698
CE	-0.0599
AMCR	0
DOW	0.0709
DD	0.1021
EMN	0.1966
PPG	0.4538
CTVA	0.5207

XLB broke out but nearing a test of the breakout point with divergences in daily momentum.

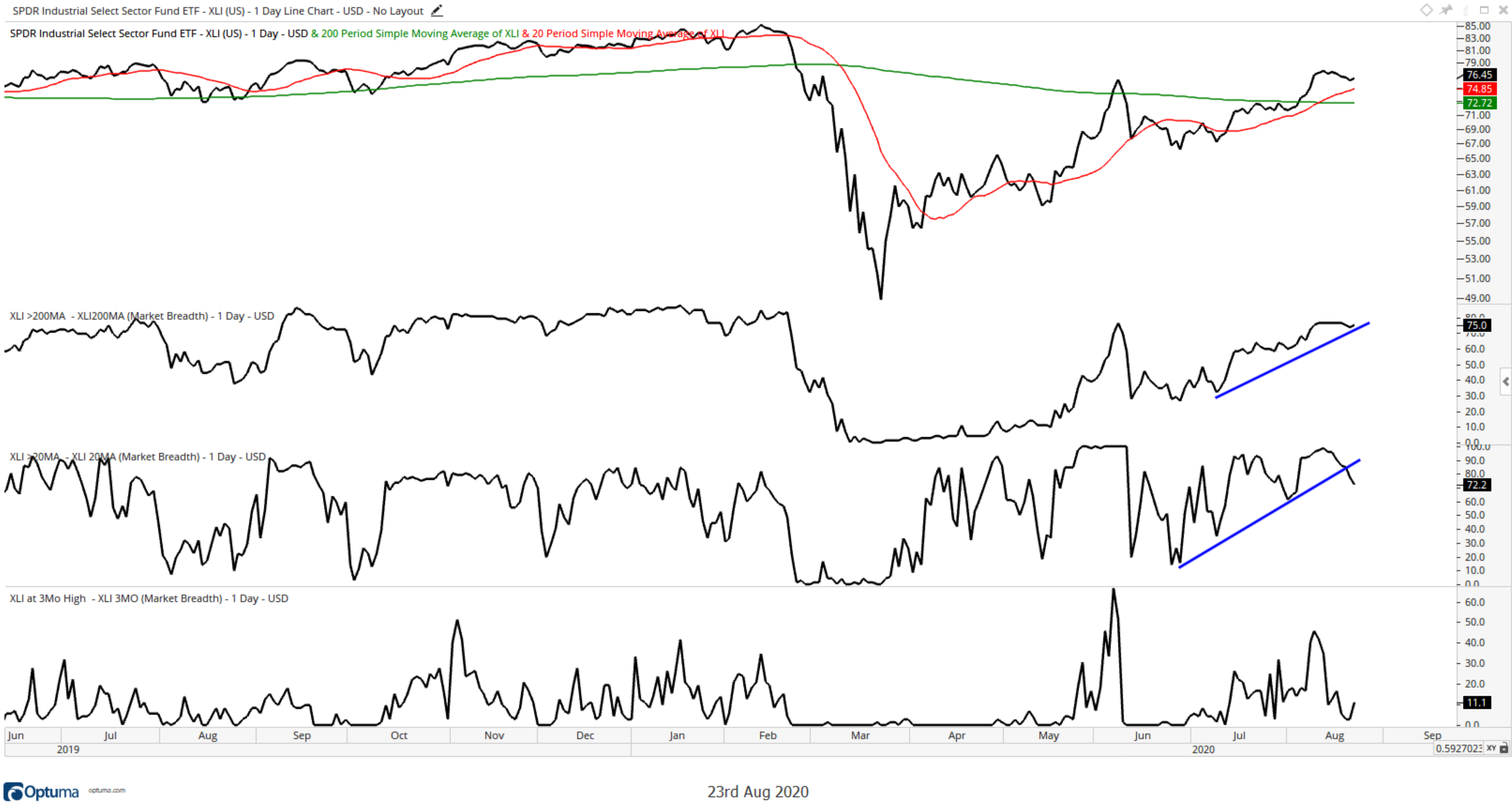


Breadth is positive for XLB.


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
May Jul Sep Nov 2018 Mar May Jul Sep Nov 2019 Mar May Jul Sep Nov 2020 Mar May Jul Sep
61.89
17.9
46.43
1.0
0.0
Optuma
23rd Aug 2020

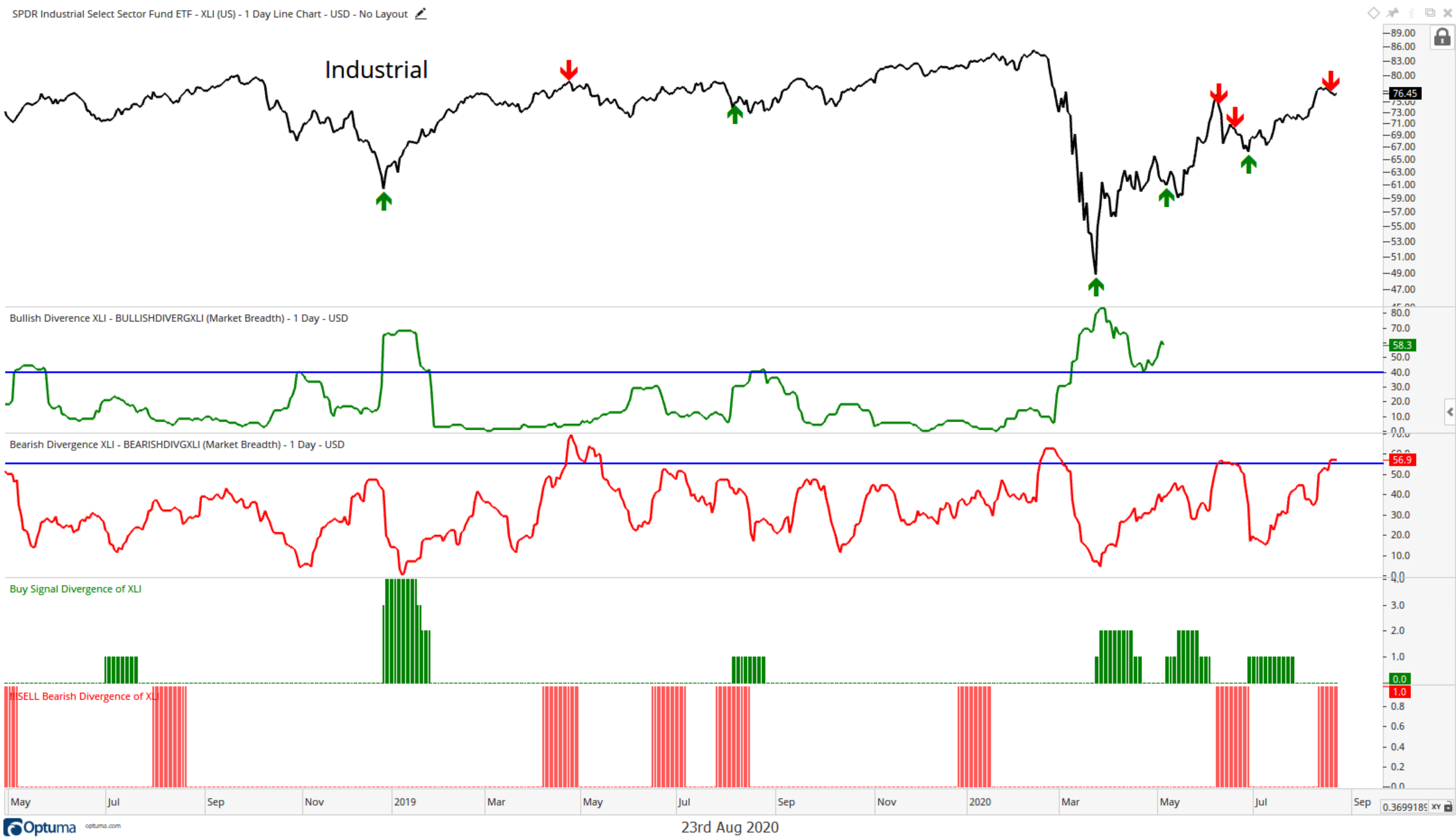


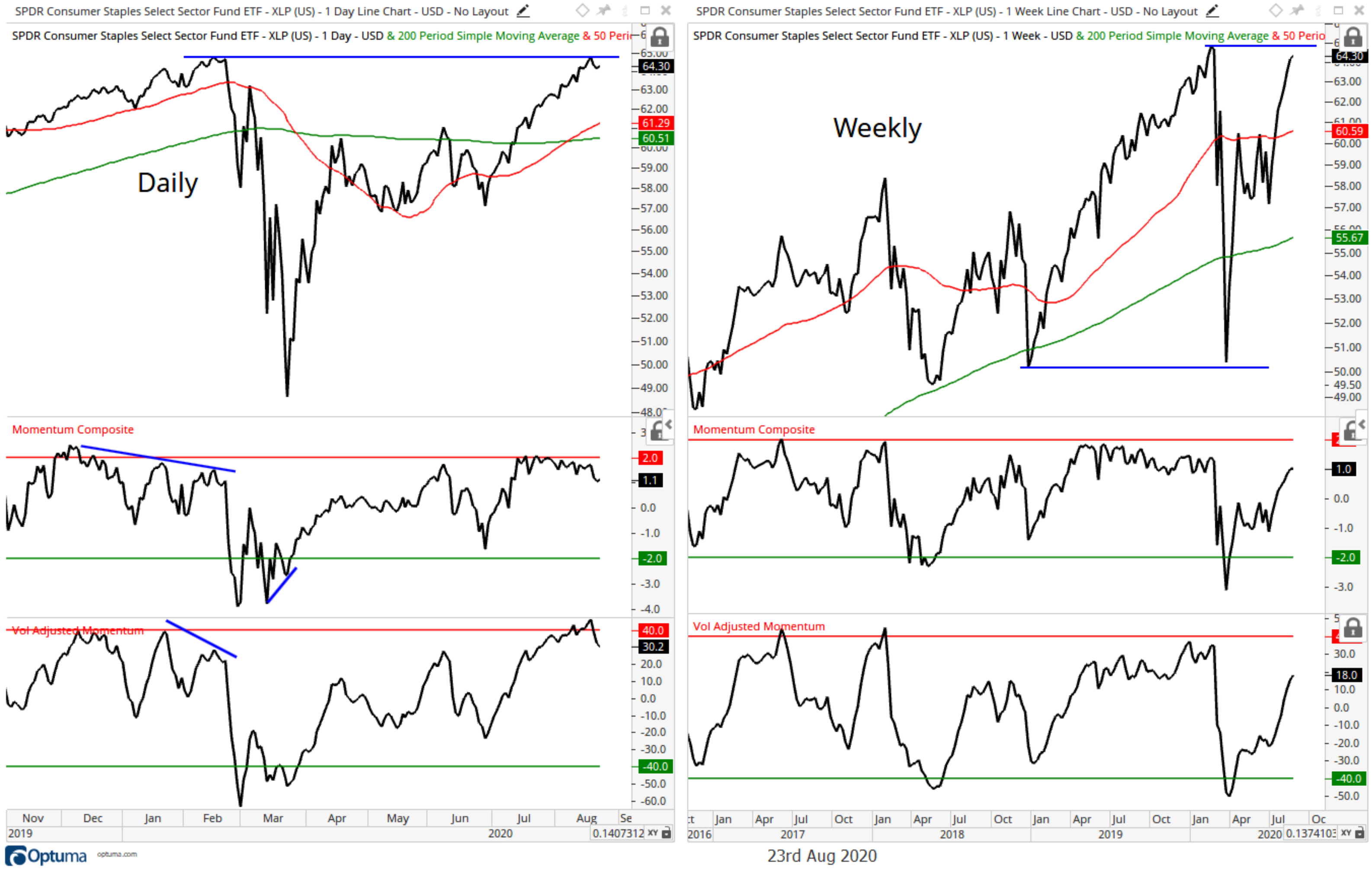
XLI testing its breakout point.



23rd Aug 2020

Breadth continues to track price trend.


SPDR Industrial Select Sector Fund ETF - XLI (US) - 1 Day Line Chart - USD - No Layout
Industrial
Bullish Diverence XLI - BULLISHDIVERGXLI (Market Breadth) - 1 Day - USD
Bearish Divergence XLI - BEARISHDIVGXLI (Market Breadth) - 1 Day - USD
Buy Signal Divergence of XLI
SELL Bearish Divergence of XLI
76.45
58.3
56.9
May
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
Sep
23rd Aug 2020
Optuma



Watch List

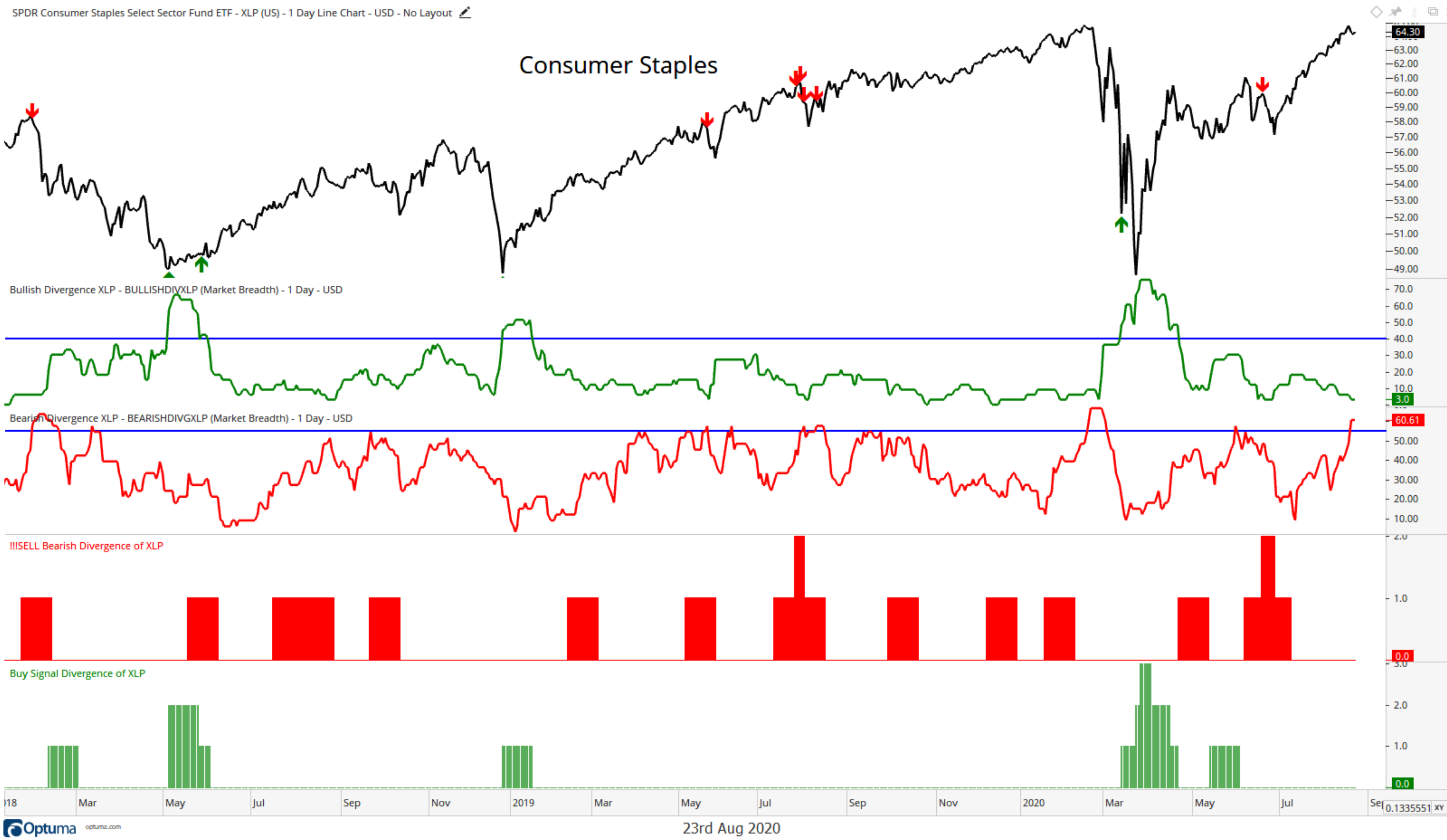
Ticker	Momentum
Consumer Staples Momentum Score	
MKC	38.9366
CHD	37.7736
MNST	35.1192
KR	34.1131
PG	30.4680
HRL	28.7190
CAG	25.6248
KMB	25.5560
COST	25.4240
CL	20.3367
CLX	19.8280
BF.B	18.4918

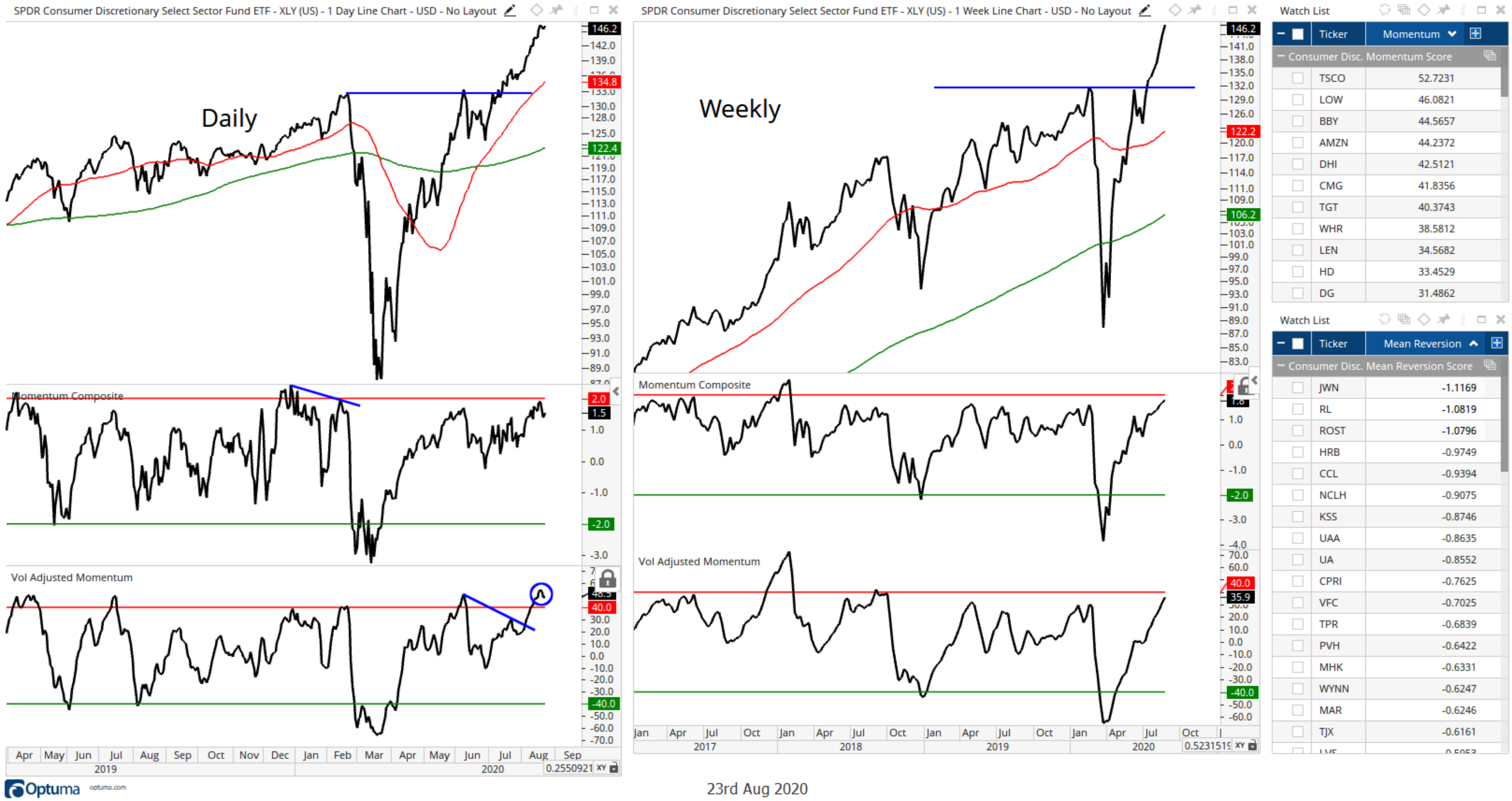
Watch List

Ticker	Mean Reversion
Consumer Staples Mean Reversion	
COTY	-1.3013
WBA	-1.2534
TAP	-1.0955
LW	-0.7644
KO	-0.7581
TSN	-0.7547
SYY	-0.6176
STZ	-0.0434
PM	0.0598
PEP	0.1959
HSY	0.2238
MO	0.2301
SJM	0.6388
ADM	0.8838
EL	0.8942
K	0.9926
MDLZ	1.2580

XLP back to its prior high, failing the first test but not far from making another. VaM on daily is coming off 'overbought'.

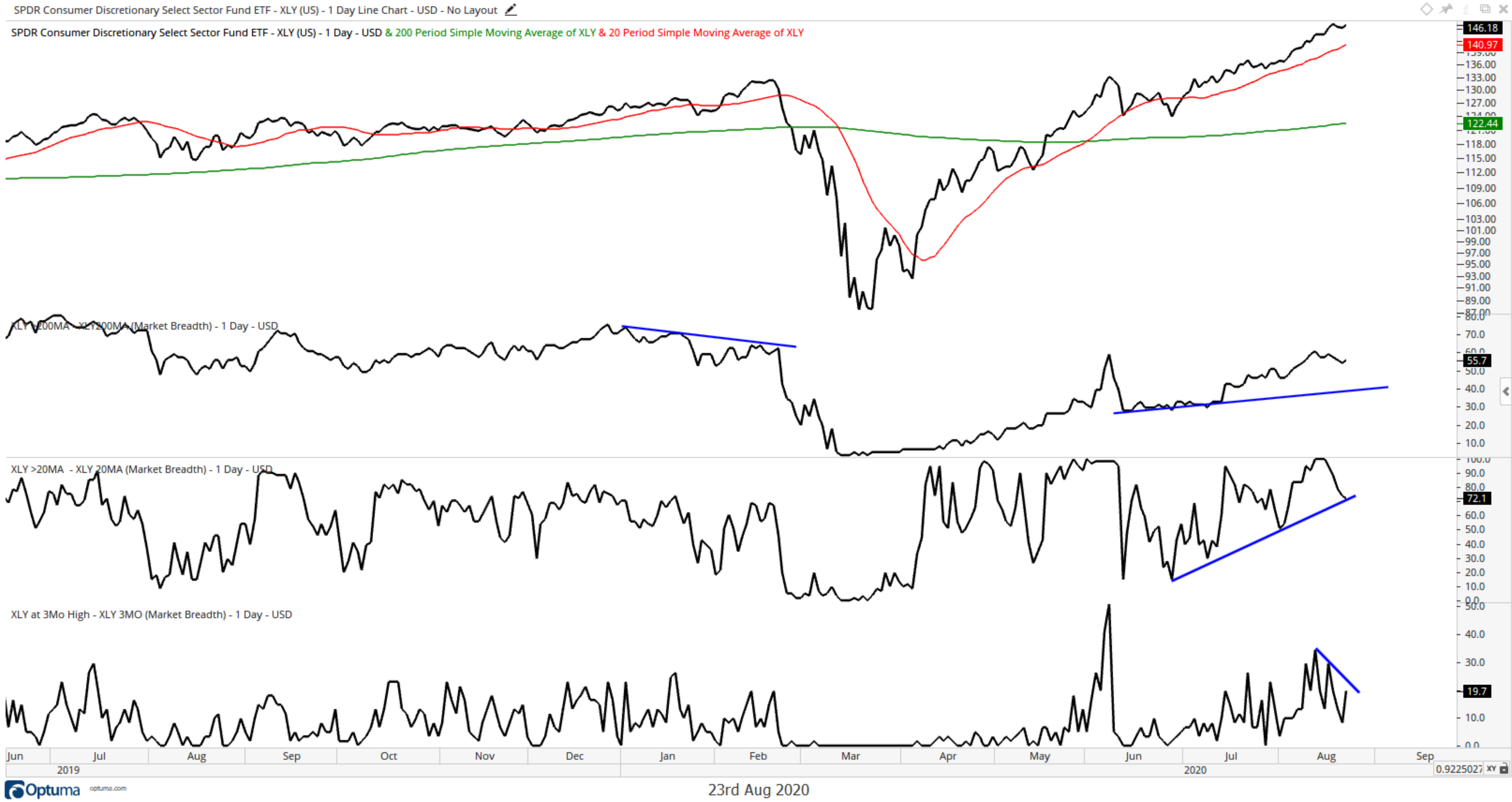
Breadth is supportive.


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
64.30
60.61
Optuma
23rd Aug 2020



23rd Aug 2020

XLY holds above the prior high with daily VaM extremely high, near levels that prior saw price pull back in 2019.



Breadth remains supportive with a downtick in % at 3mo high.


SPDR Consumer Discretionary Select Sector Fund ETF - XLY (US) - 1 Day Line Chart - USD - No Layout
Consumer Disc.
!!!SELL Bearish Divergence of XLY
Buy Signal Divergence of XLY
Mar
May
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
Sep
146.18
6.6
50.82
1.0
0.0
23rd Aug 2020

Real Estate Sector

THRASHER ANALYTICS

23rd Aug 2020

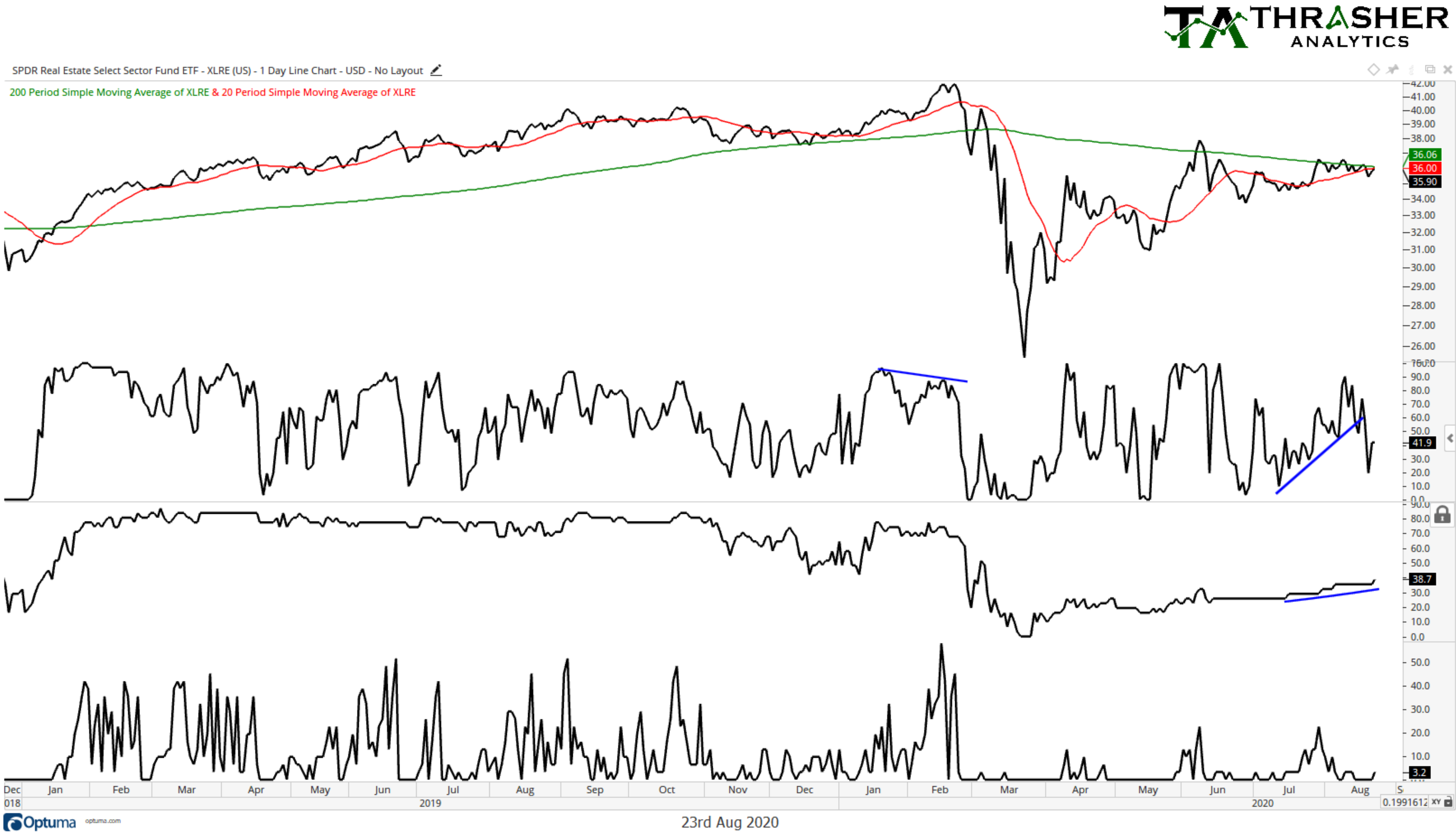
Watch List

Ticker	Momentum
Real Estate Momentum Score	
EQIX	22.4851
WY	18.0179
PLD	12.7550
DLR	7.4839
ARE	6.5176
DRE	3.3961
IRM	2.0167
SBAC	1.5240
EXR	-0.2856
CCI	-5.4101
AMT	-9.2049

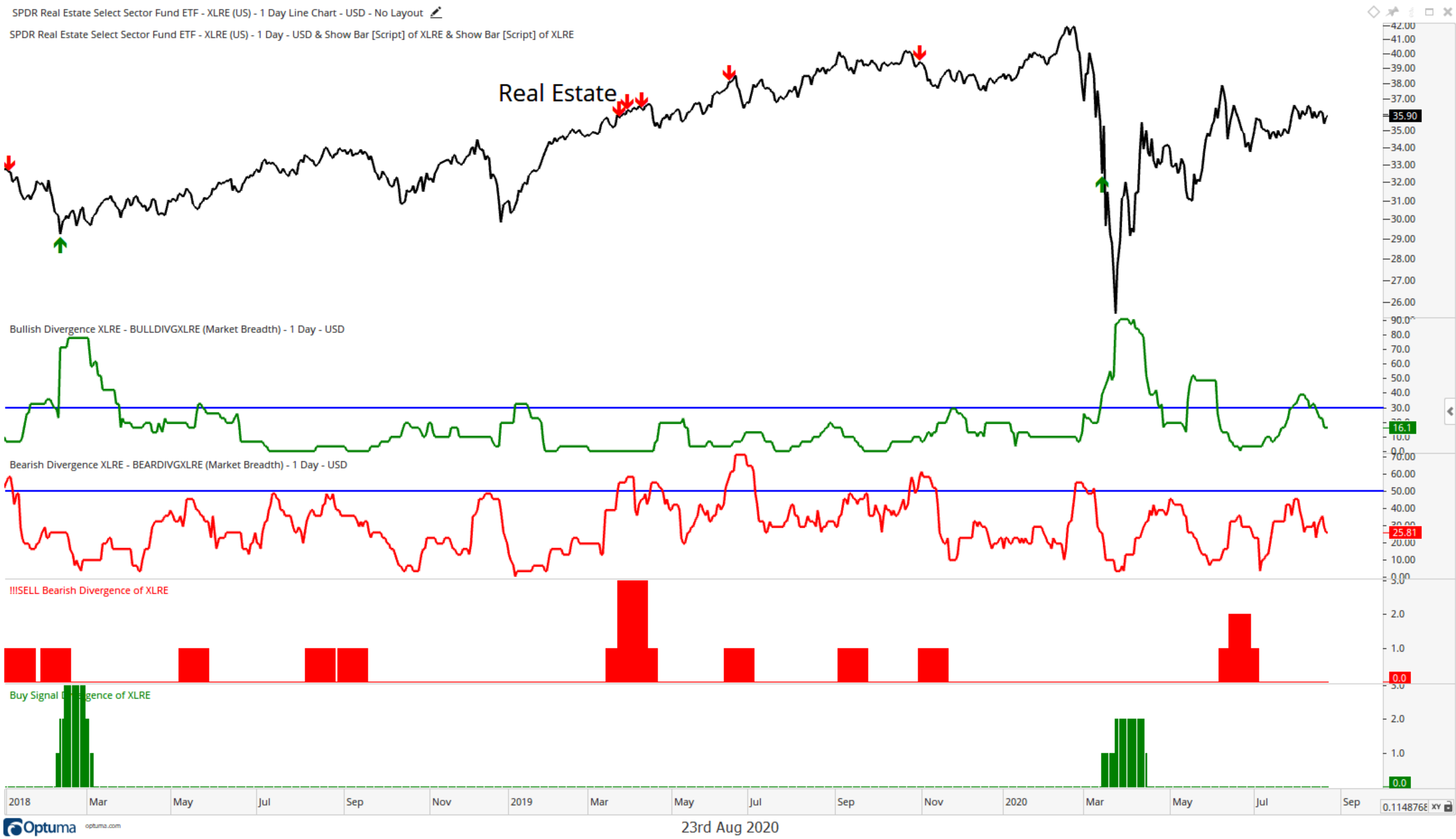
Watch List

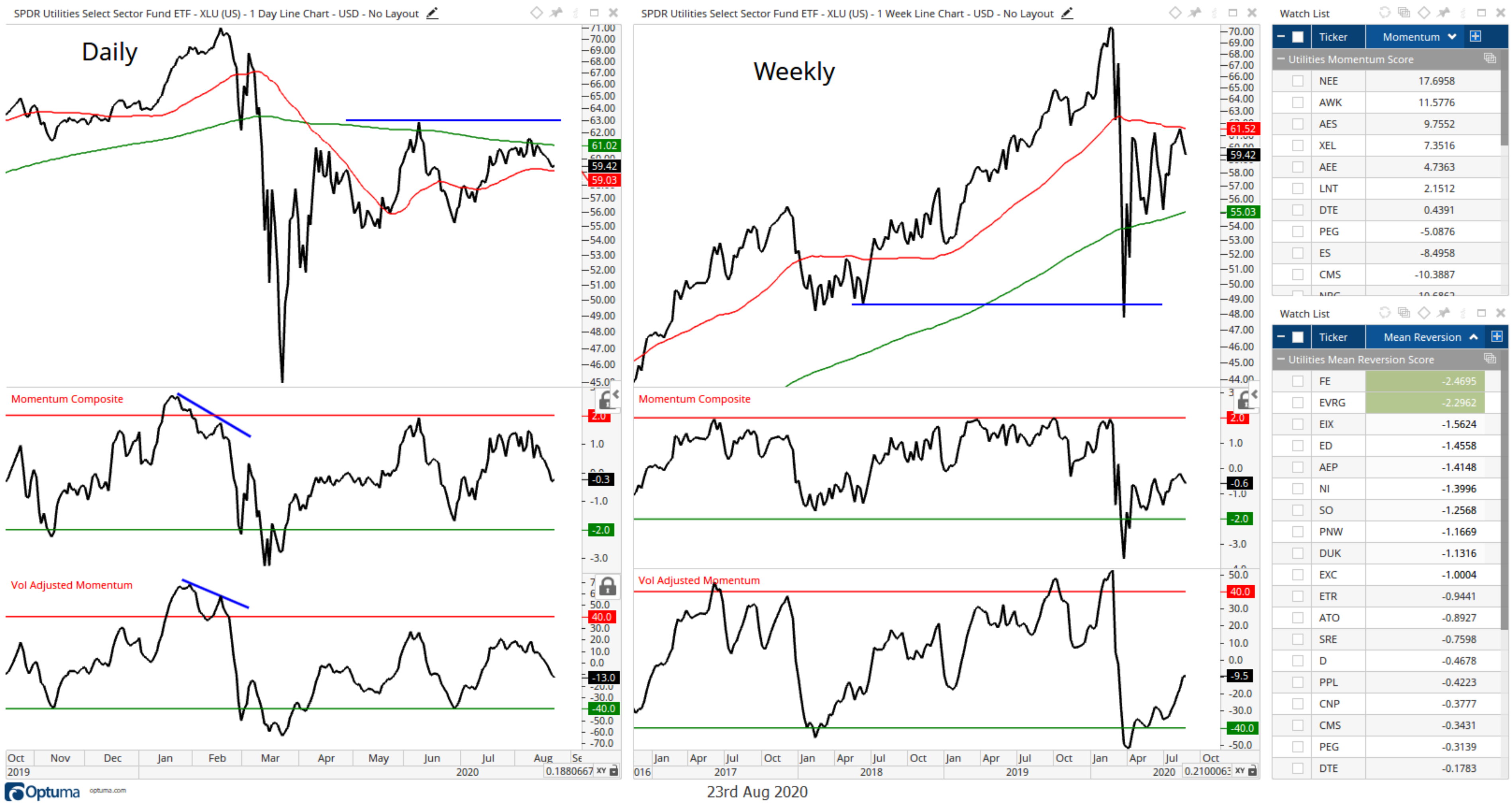
Ticker	Mean Reversion
Real Estate Mean Reversion	
UDR	-1.5558
ESS	-1.4713
EQR	-1.4588
BXP	-1.3018
AIV	-1.2727
AVB	-1.2172
VNO	-1.1093
REG	-1.076
HST	-1.0501
SLG	-0.9945
KIM	-0.9791
FRT	-0.9247
MAA	-0.7871
MAC	-0.7276
HCP	-0.7199
CBRE	-0.7171
WELL	-0.7016
SPG	-0.6828

XLRE trying to break above the declining 200-day MA.



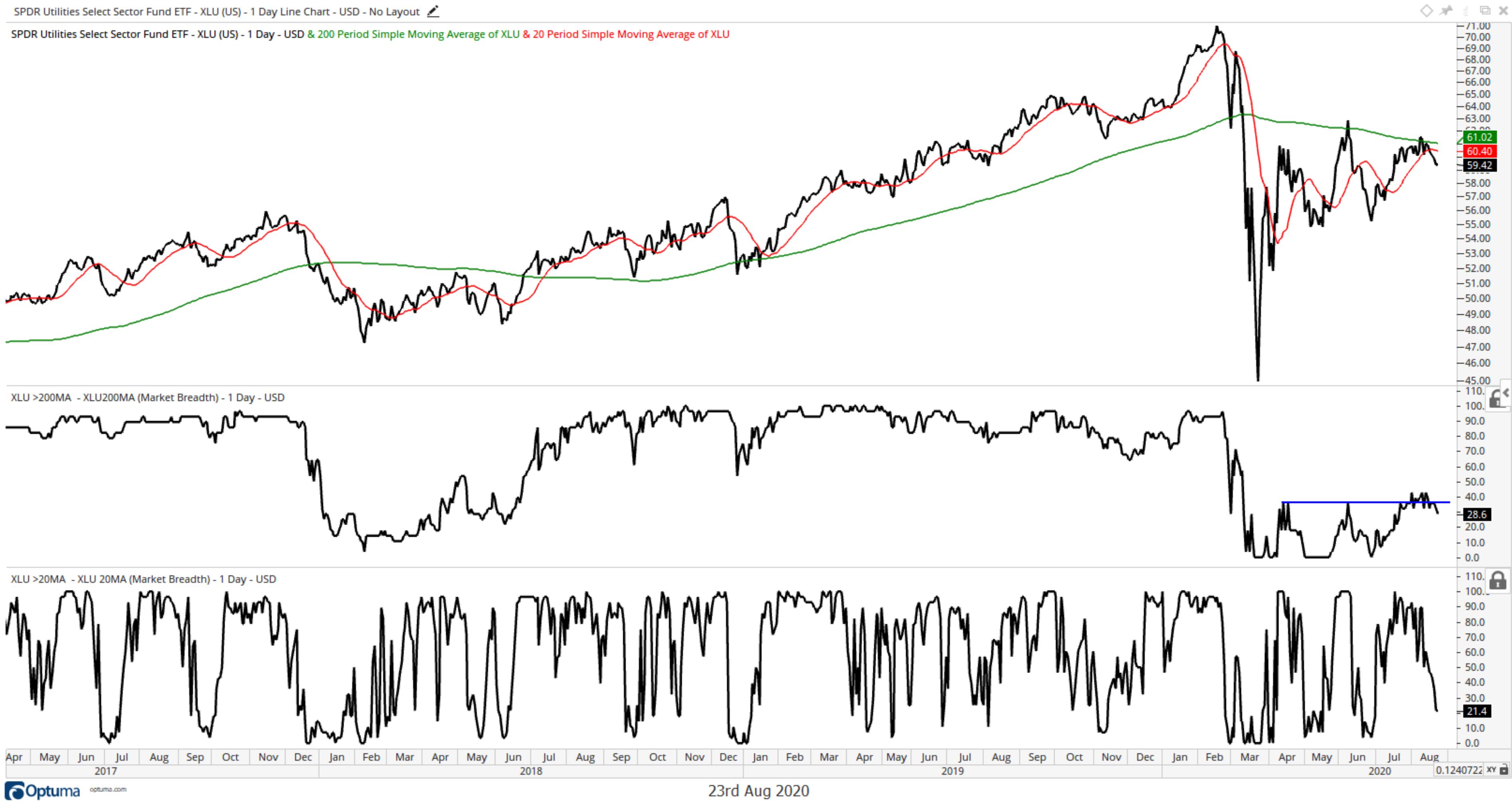
Breadth is supportive.


SPDR Real Estate Select Sector Fund ETF - XLRE (US) - 1 Day Line Chart - USD - No Layout
SPDR Real Estate Select Sector Fund ETF - XLRE (US) - 1 Day - USD & Show Bar [Script] of XLRE & Show Bar [Script] of XLRE
Real Estate
35.90
Bullish Divergence XLRE - BULLDIVGXLRE (Market Breadth) - 1 Day - USD
16.1
Bearish Divergence XLRE - BEARDIVGXLRE (Market Breadth) - 1 Day - USD
25.81
!!!SELL Bearish Divergence of XLRE
Buy Signal Divergence of XLRE
2018
Mar
May
Jul
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
Sep
Optuma
23rd Aug 2020



23rd Aug 2020

XLU failed at breaking its 200-day MA, coming back to rest above the 50-day MA.



Breadth still waiting to expand with price.

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
Buy Signal Divergence of XLU
Sep
Nov
2019
Mar
May
Jul
Sep
Nov
2020
Mar
May
Jul
59.42
14.3
14.29
23rd Aug 2020

THRASHER ANALYTICS

Market	% Bullish	5MA	History
VIX DSI	17	12.6	
US Dollar DSI	21	14.8	
Corn DSI	31.00	31.40	
Natural Gas DSI	44.00	42.00	
Lean Hog DSI	45.00	41.60	
Orange Juice DSI	50.00	55.20	
Coffee DSI	51.00	45.60	
5YR DSI	62.00	61.20	
Crude Oil DSI	63.00	68.20	
10Y DSI	63.00	59.00	
Heating Oil DSI	64.00	71.40	
Wheat DSI	65.00	55.60	
Sugar DSI	65.00	66.40	
Platinum DSI	67.00	72.20	
New Zealand Dollar DSI	68.00	69.00	
CRB Index DSI	70.00	76.60	
Cotton DSI	70.00	69.00	

Code	% Bullish	5MA	History
Nikkei DSI	71.00	78.40	
EuroDollar DSI	71.00	73.00	
Cocoa DSI	71.00	67.00	
British Pound DSI	71.00	73.40	
Silver DSI	72.00	77.20	
Gold DSI	72.00	76.00	
Palladium DSI	73.00	72.80	
Copper DSI	74.00	78.80	
Swiss Franc DSI	75.00	81	
Euro DSI	75.00	83.6	
Cattle DSI	75.00	81.4	
Gasoline DSI	77.00	75.60	
Australian Dollar DSI	77.00	82	
Mexican Peso DSI	78.00	74.80	
SPX DSI	81	80.2	
Nasdaq DSI	87	85	
Lumber DSI	93	91.2	

Source: trade-futures.com

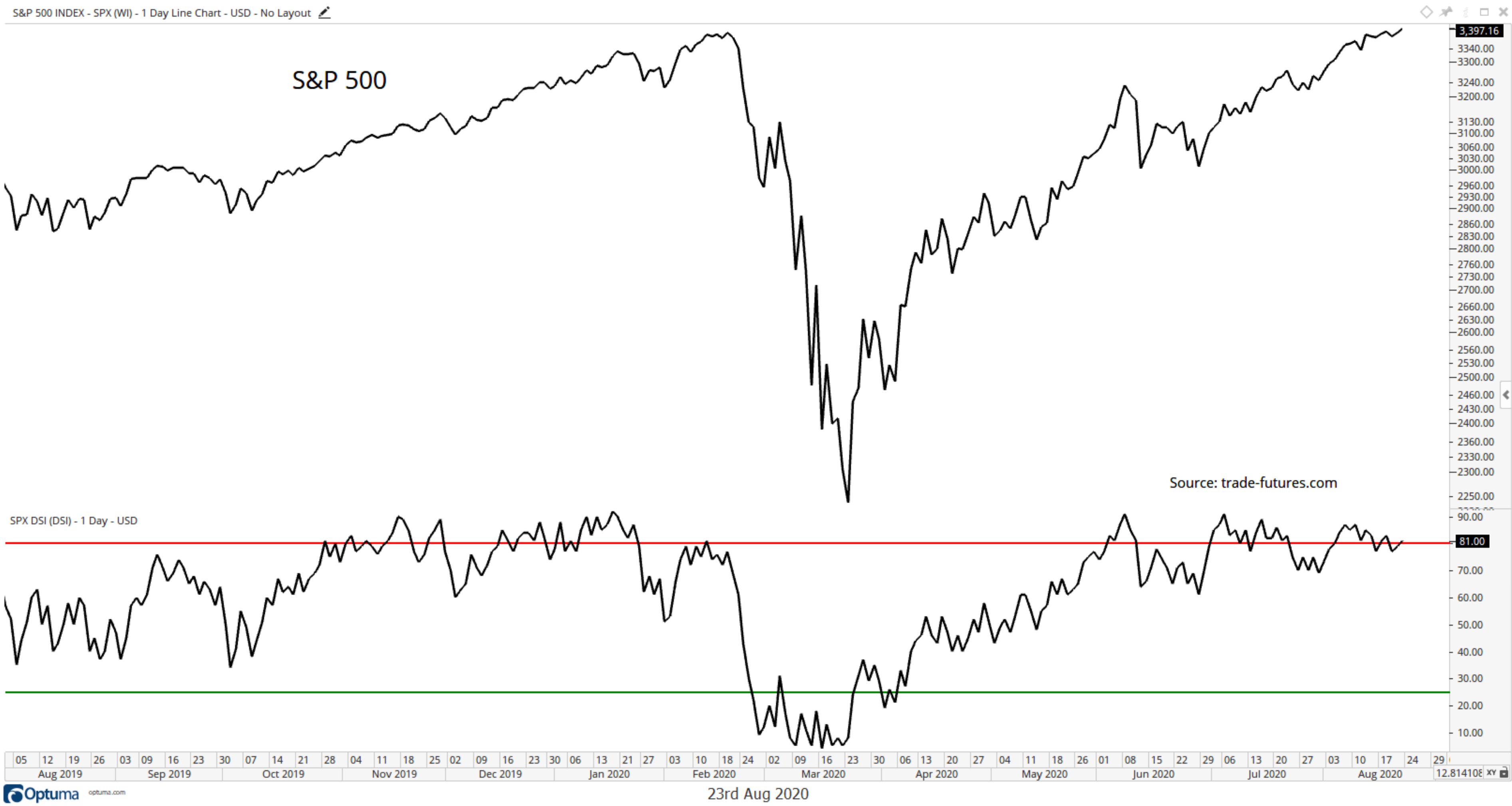
Above is the DSI score for each of the futures markets.

Daily Sentiment Index 10-year Treasury

23rd Aug 2020

Daily Sentiment Index S&P 500

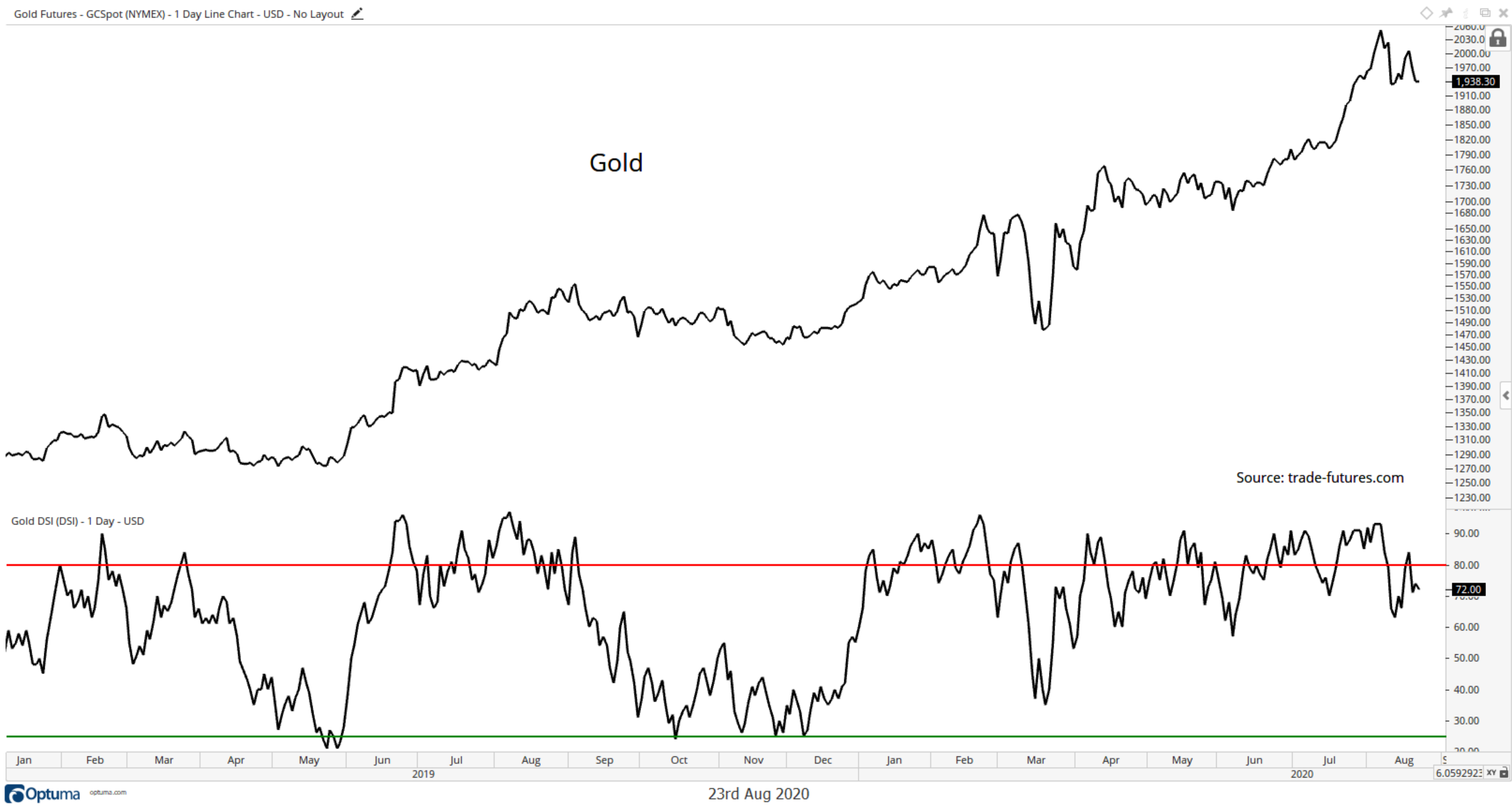
THRASHER ANALYTICS



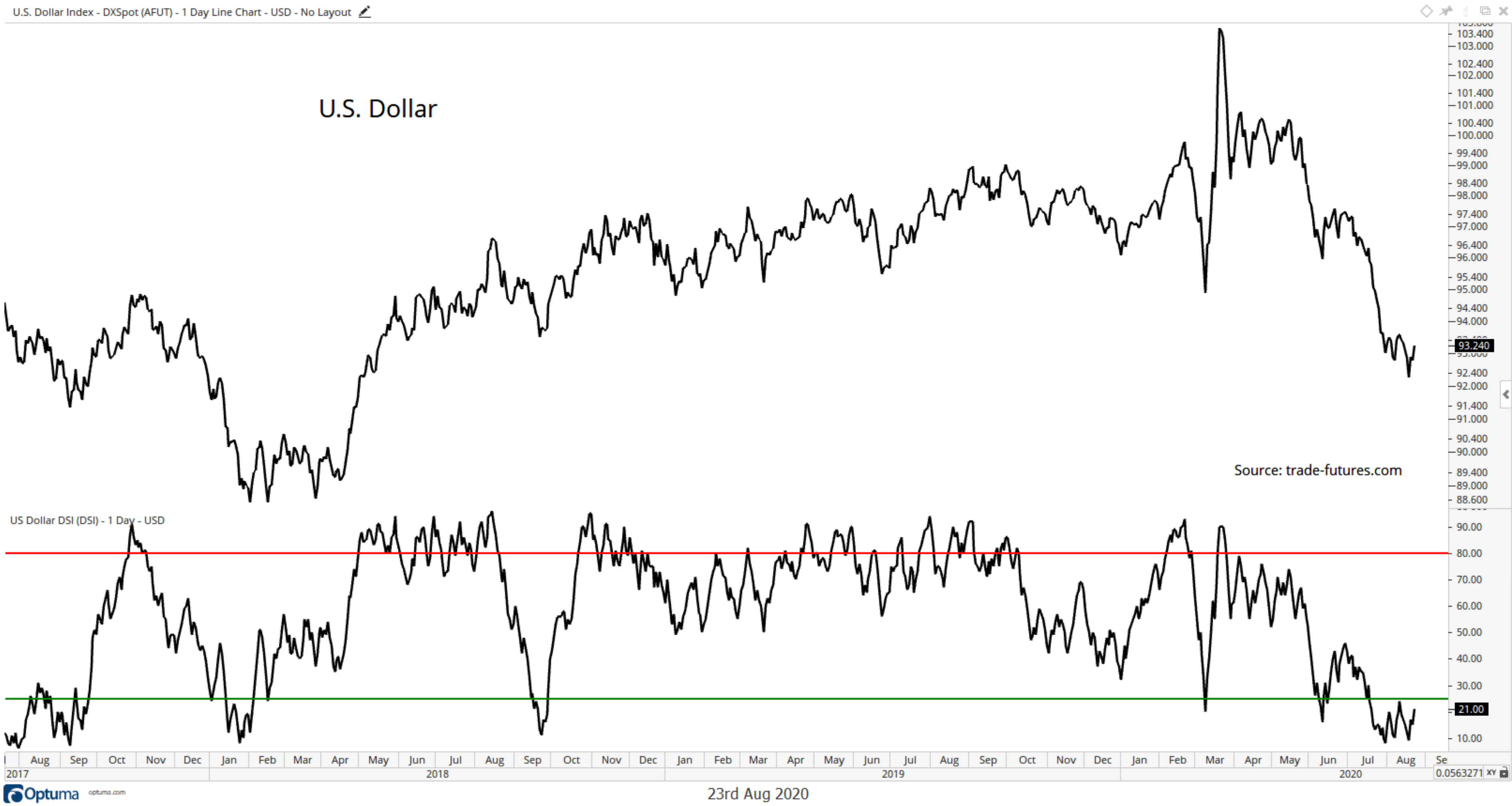
23rd Aug 2020

Daily Sentiment Index Nasdaq 100

23rd Aug 2020

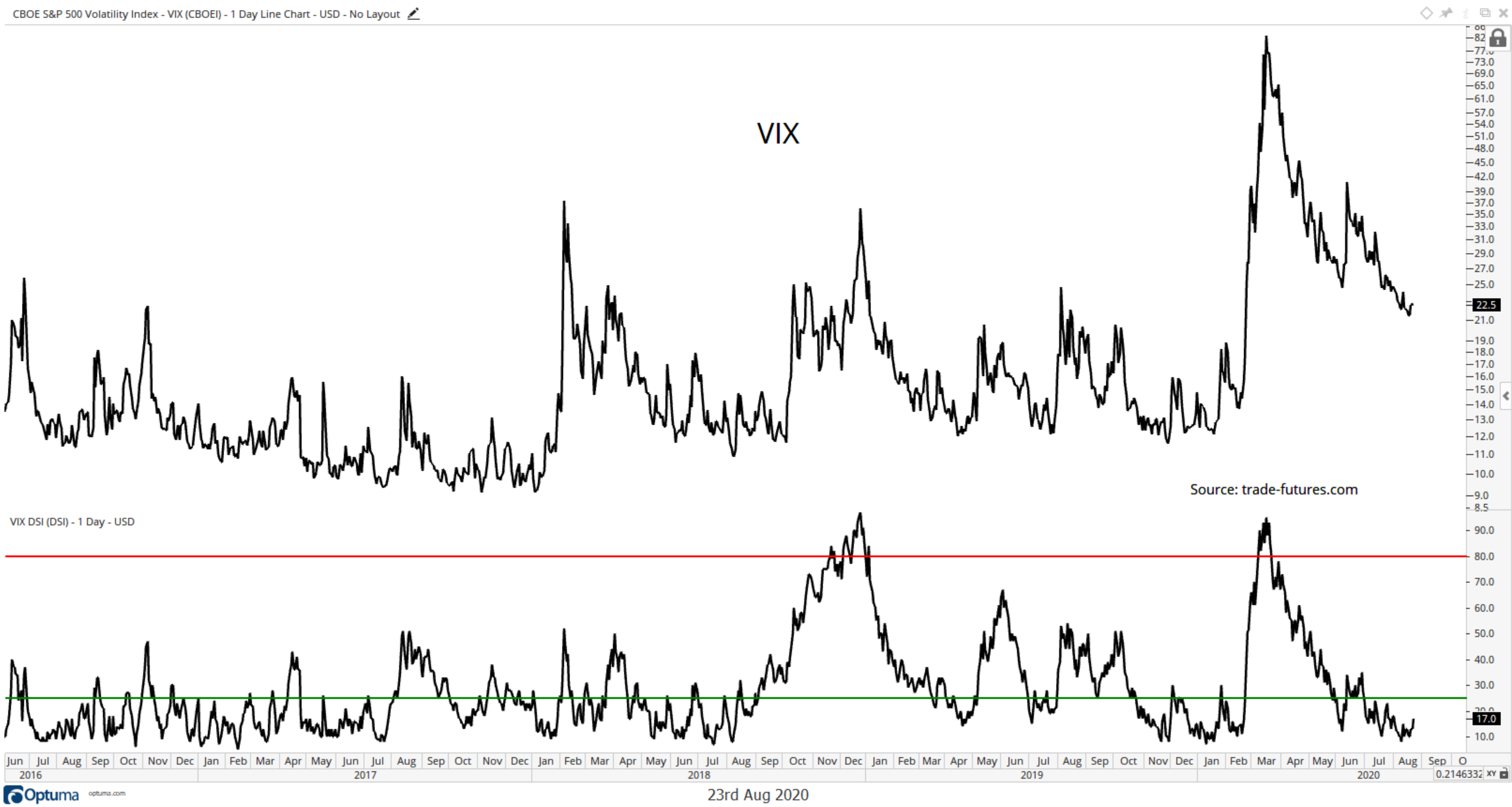


23rd Aug 2020

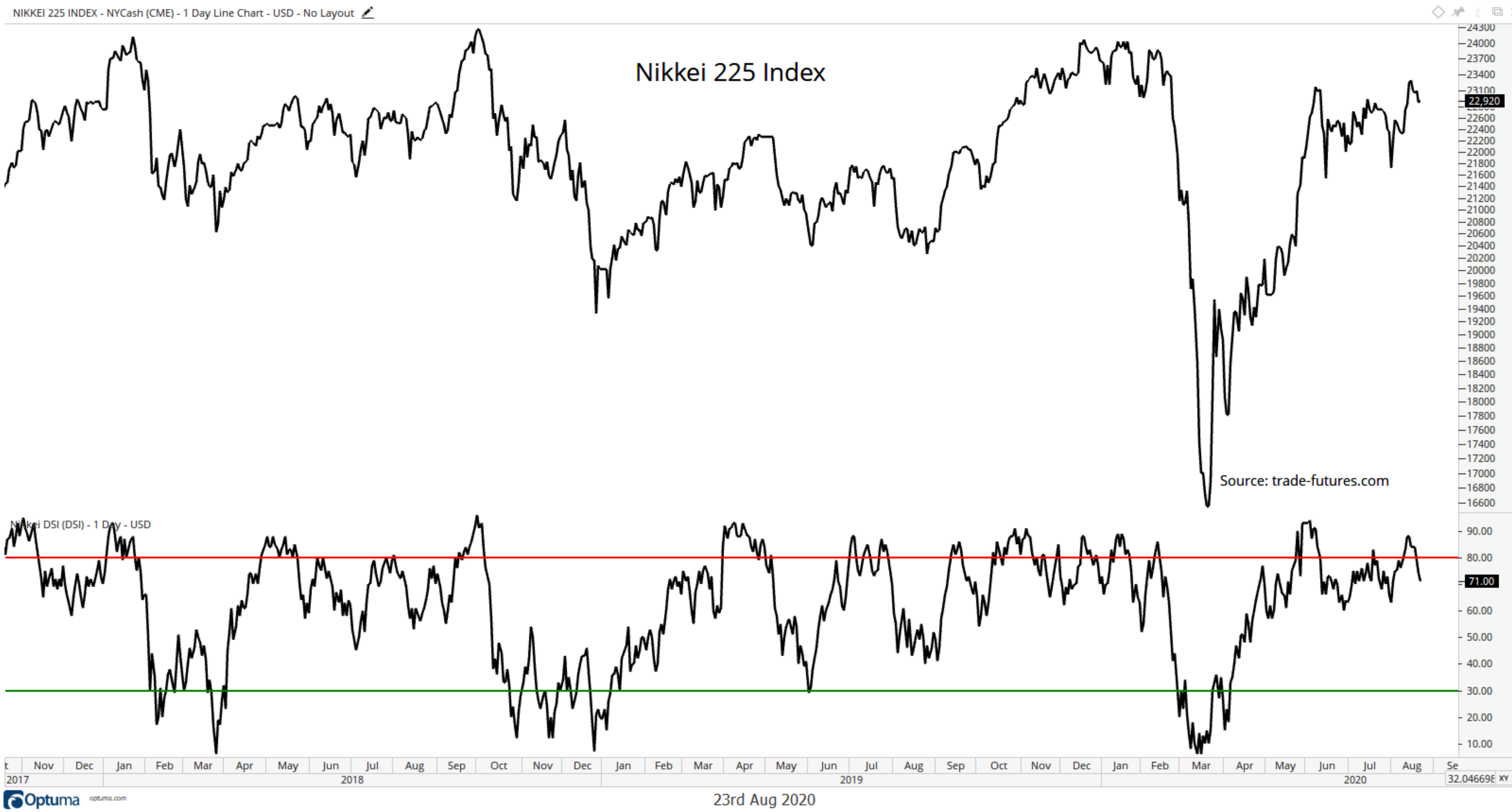


23rd Aug 2020

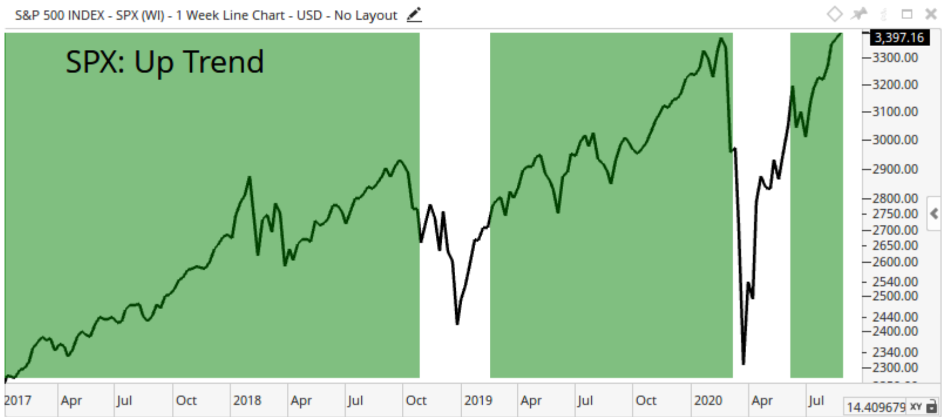
THRASHER ANALYTICS

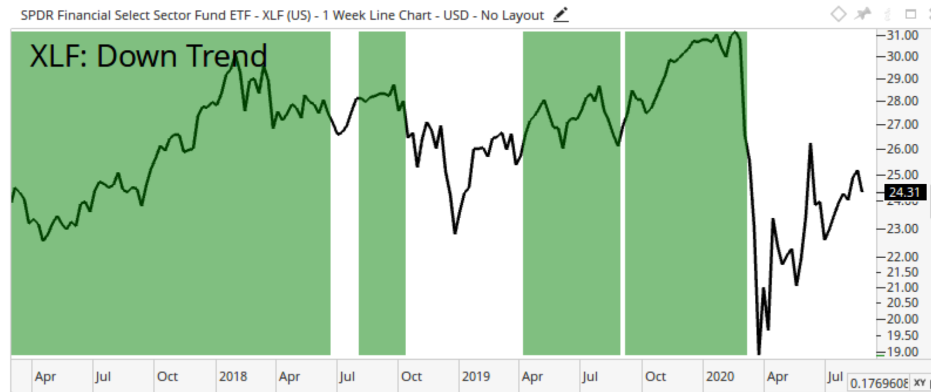


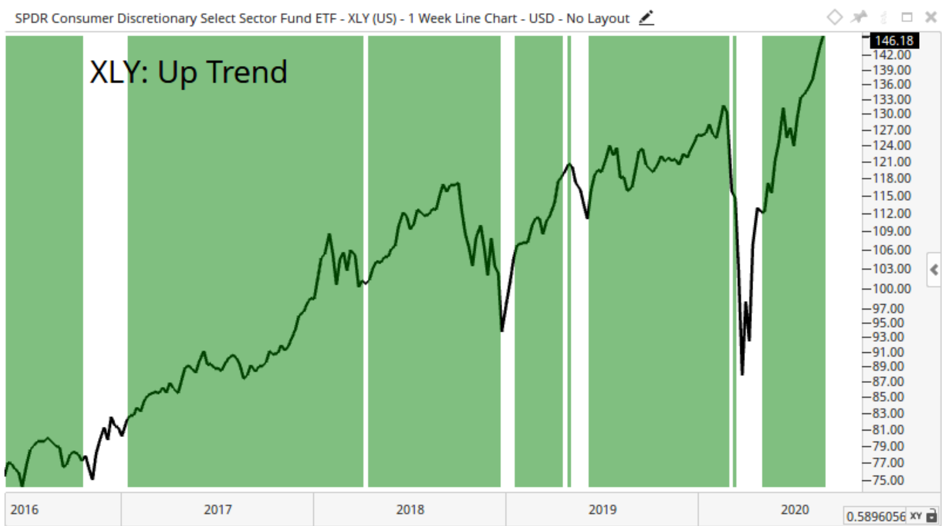
23rd Aug 2020

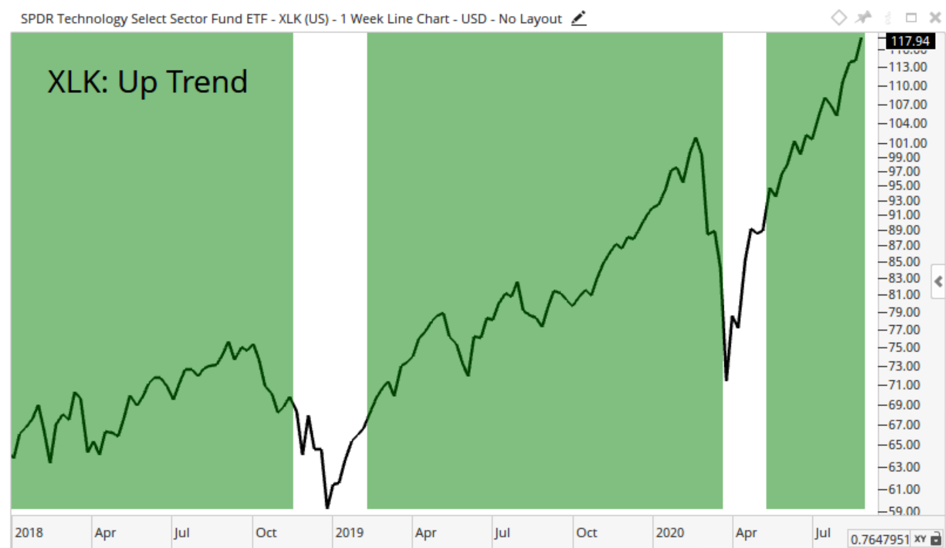


NIKKEI 225 INDEX - NYCash (CME) - 1 Day Line Chart - USD - No Layout
Nikkei 225 Index
Source: trade-futures.com
Nikkei DSI (DSI) - 1 Day - USD
22,920
71.00
2017
2018
2019
2020
23rd Aug 2020



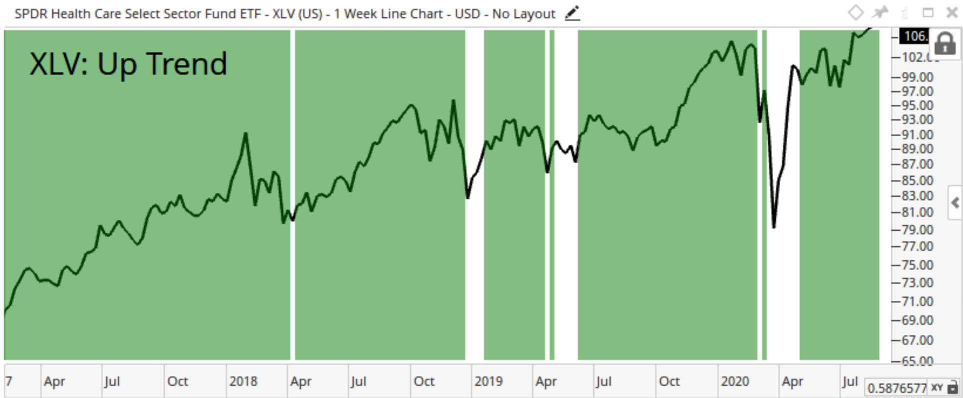


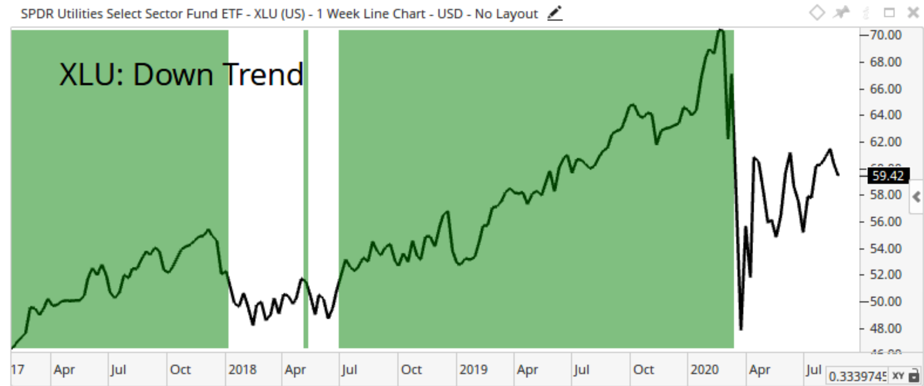


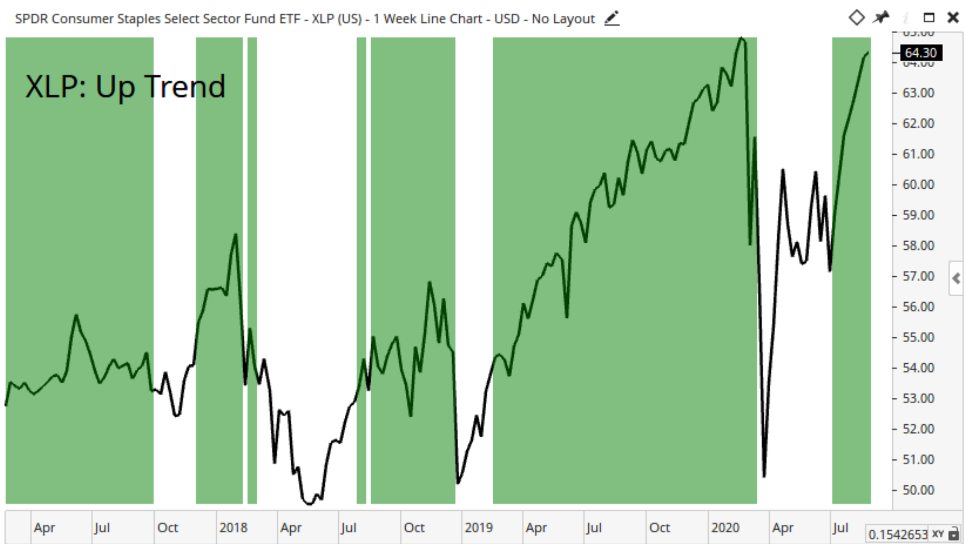


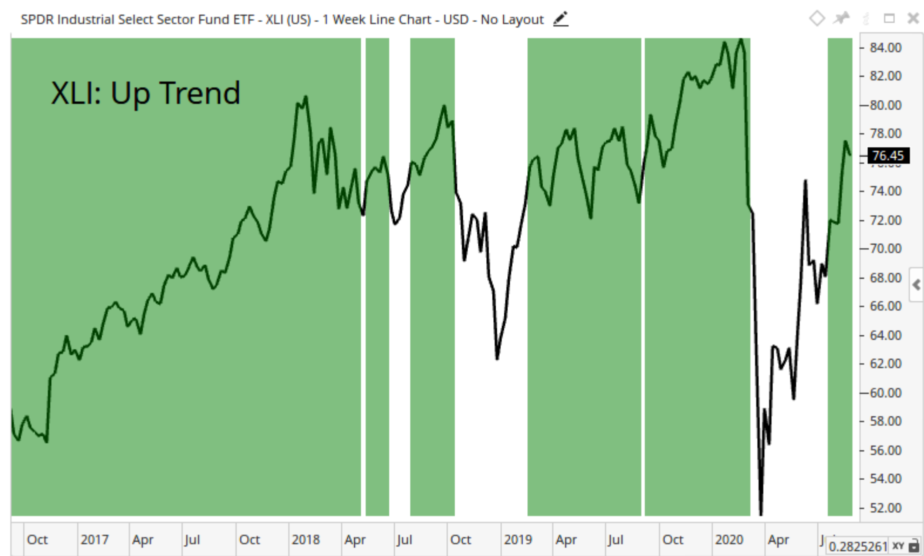
Optuma

23rd Aug 2020



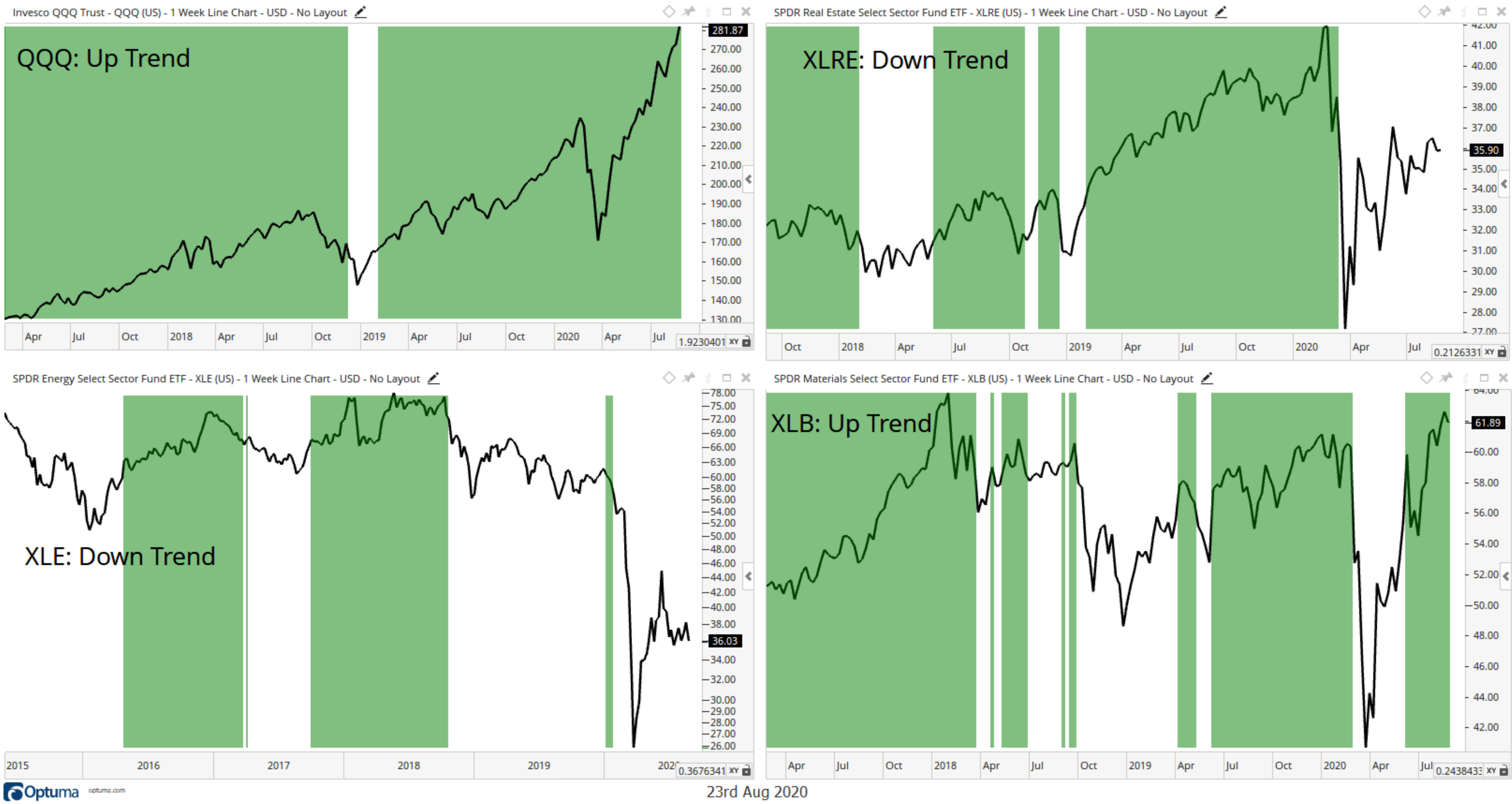






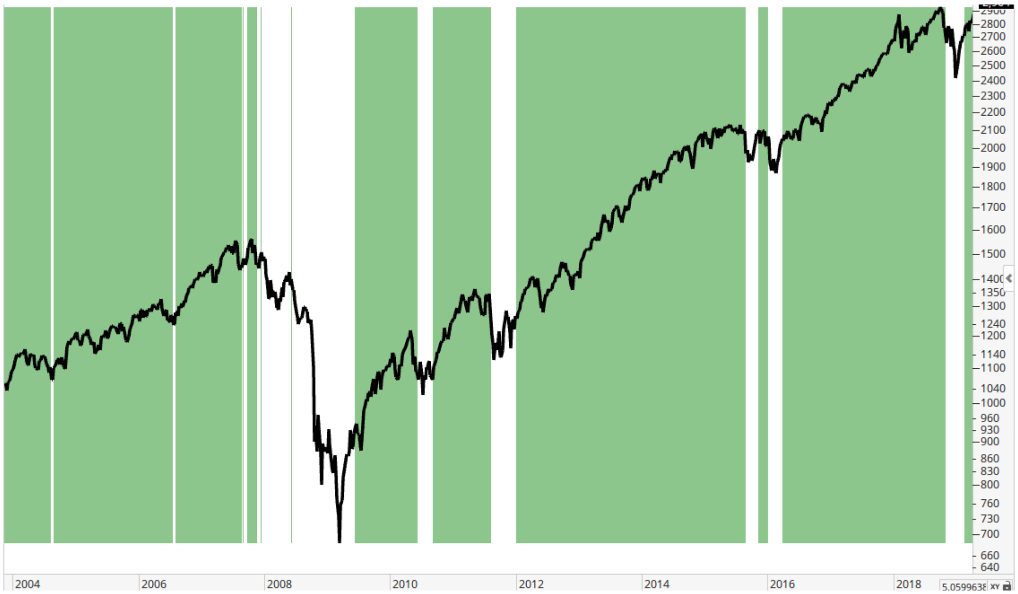
Optuma

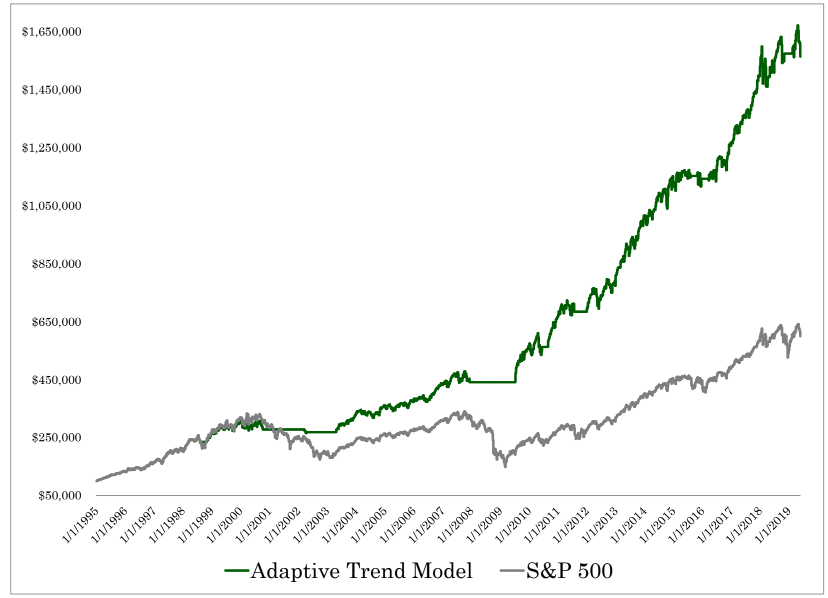
23rd Aug 2020


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
23rd Aug 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.



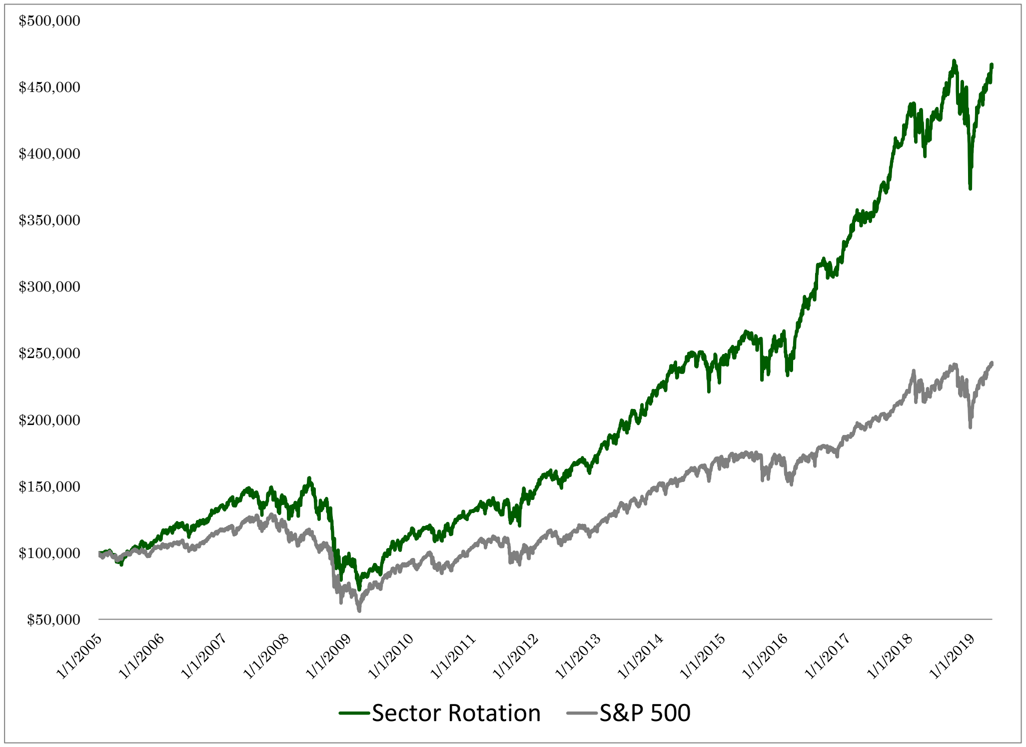


	Annualized Return	Annualized Volatility	Beta	Sharpe	Maximum Drawdown
Adaptive	12.5%	10.3%	0.47	0.97	14.1%
S&P 500	8.9%	15.3%	1	0.42	56.6%

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.

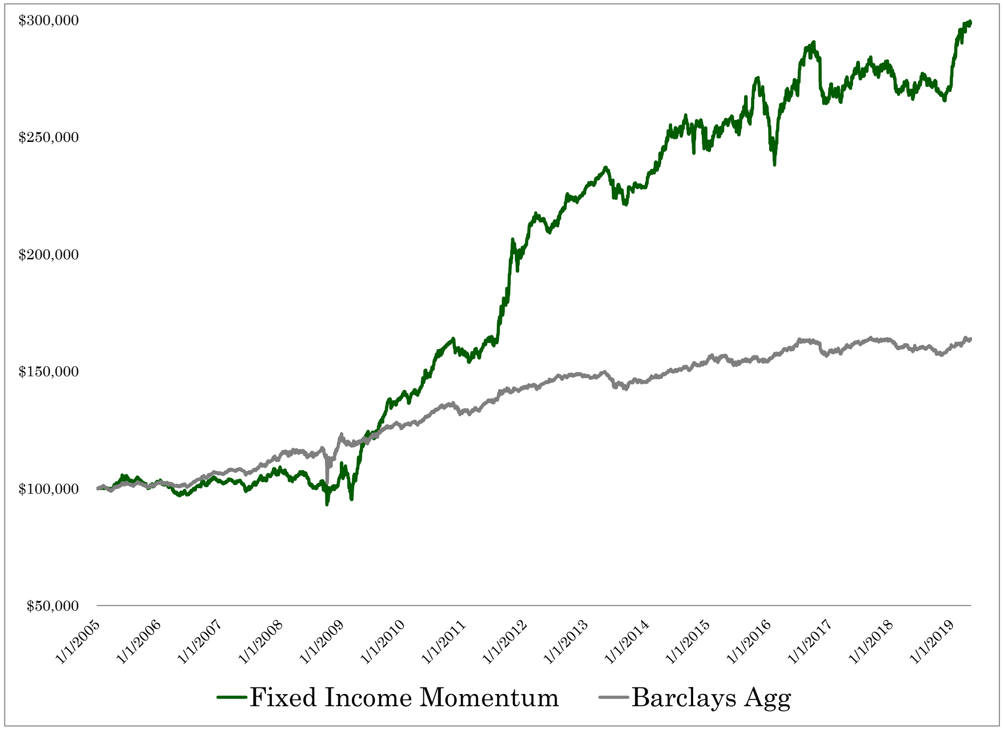


	Annualized Return	Annualized Volatility	Beta	Sharpe	Maximum Drawdown
Sector	12.7%	15.9%	0.96	0.64	53.9%
S&P 500	7.5%	14.8%	1	0.34	56.6%

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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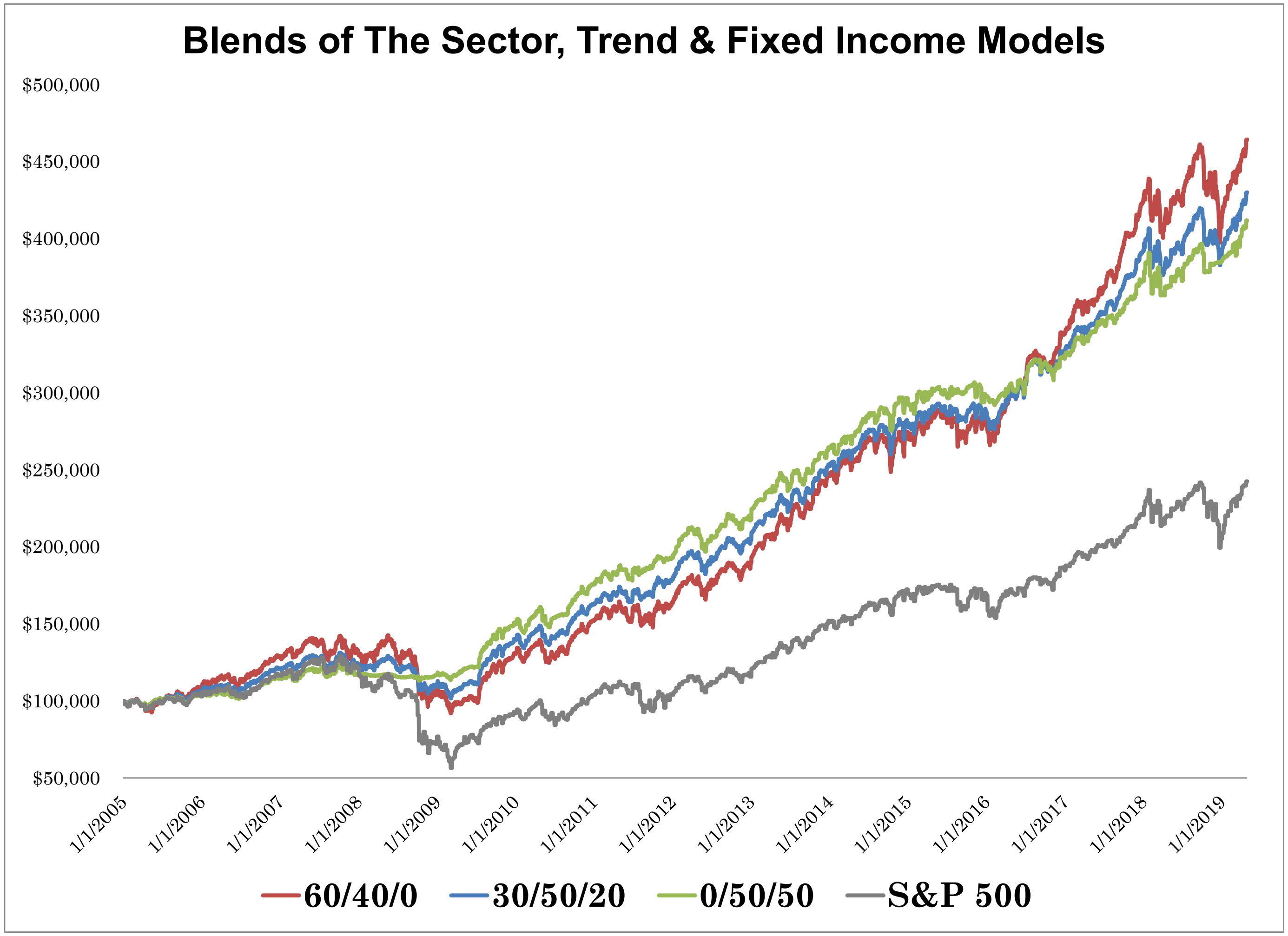
Please see complete disclosure for additional information.

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.

Please see complete disclosure for additional information.

THRASHER ANALYTICS

Trend (weekly)	Sector Rotation (monthly)	Fixed Income Momentum (quarterly)
Positive	XLK	MUB
	XLY	HYG
	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.

Please see complete disclosure for additional information.

Back Test Disclaimer:

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

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

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

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

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