



## Bitcoin Misery Index below 66 = risk-off until late-August

Take the rest of the summer off... Wait BMI falls to 53-ish before FOMO

### CRYPTO FX STRATEGY

#### U.S. Portfolio Strategy

**Thomas J. Lee, CFA<sup>AC</sup>**

+1 212 293 7131

thomas@fundstrat.com | @fundstrat

**Ken Xuan, CFA**

+1 212 293 7134

ken.xuan@fundstrat.com | @fundstrat\_ken

**Sam Doctor**

+1 212 293 7132

sam.doctor@fundstrat.com | @fundstratQuant

Performance	1Q19	2Q19	3Q19	QTD	YTD
Bitcoin	10%	163%	(12%)	(12%)	154%
FS Crypto 10	9%	127%	(16%)	(16%)	109%
FS Crypto 40	43%	46%	(25%)	(25%)	57%
FS Crypto 50 Eq Wt	41%	46%	(23%)	(23%)	59%
FS Crypto 250	35%	14%	(21%)	(21%)	22%
FS Crypto 300	13%	114%	(17%)	(17%)	101%
FS Crypto Agg.	13%	112%	(16%)	(16%)	100%
FS Commodity	12%	157%	(13%)	(13%)	151%
FS Platform	15%	72%	(27%)	(27%)	45%
FS Privacy	21%	53%	(24%)	(24%)	40%
FS Exchange	129%	57%	(18%)	(18%)	196%
FS Stablecoin	(1%)	(1%)	0%	0%	(1%)

A few weeks ago, we noted that too much media attention was “too much of a good thing” for Bitcoin. And indeed, given the heightened scrutiny, we have seen heightened risk of regulatory action. Among the most recent was the CFTC probes around BitMex accounts and also some recent stories around NY residents using Bitfinex. In any case, the cumulative impact of these has been a deterioration of Fundstrat Bitcoin Misery Index (BMI). As a reminder, the BMI is designed to measure the investor sentiment of a holder of Bitcoin (>67 is euphoria and below <27 is misery).

- The BMI began a downtrend which was confirmed on 7/11/19 when this BMI fell below 67 ([Slide 3](#)). The most analogous downtrend and break below 66 was last seen in July 7, 2016 (3 years ago). BTC was ~\$620 then and saw a subsequent sell-off towards \$480 (-25%) within 6-8 weeks.
- FOR THOSE TACTICAL (NOT HODL'ERS), SHORT-TERM BITCOIN RISK/REWARD LESS FAVORABLE: Since 2011, whenever the BMI is in a downtrend and level is around 62 (decile 9, 62-66), the 6M forward return of Bitcoin is a mere 15%—this is not very good ([Slide 4](#)). And an investor is better off waiting for the BMI to fall into 50-53 (decile 6) where 6M returns average 231% or even ideally 44-47 (decile 4) where 6M returns are 405%.
- Based on past calendar rate of change, this implies the BMI likely falls within this range late-August/early-September. And a rangebound period of Bitcoin of \$8,500-\$10,500 is likely until then. In other words, the next 4-6 weeks are risk-off.
- WHAT COULD GO WRONG? KEEP AN EYE ON THE MACRO. Macro has been a strong support for Bitcoin this year (weaker USD, MMT, tail risks, etc.). Bitcoin volumes and volatility has been reduced, which suggests that markets could move sharply in either direction. Because the Federal Reserve is expected to cut US interest rates, this should weaken the USD, which is a support for Bitcoin. Hence, keep an eye on the macro.

Bottom line: We believe Crypto winter is over. But the fall in BMI below 66 says “take the next 4-6 weeks off” (as in risk off?). The bigger remains that Bitcoin has more tailwinds than headwinds and the halvening in 2020 is a favorable shift in supply/demand. Given the recent achievement of Level 10 FOMO (3% of price days), past analogs suggest Bitcoin could see new highs within the next 4-6 months.

## Key Charts in this report...

### BMI fell below 66 on 7/11/19...

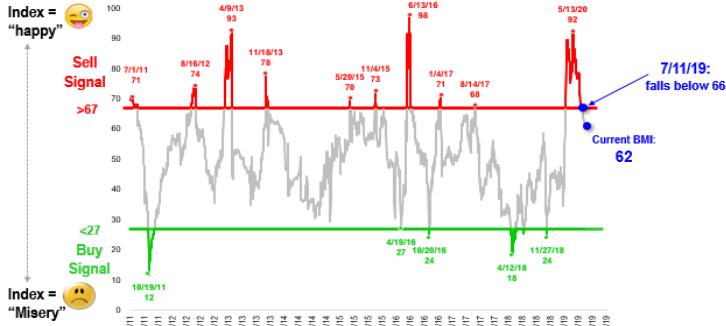
#### SENTIMENT: BMI (Bitcoin Misery Index) fell below 66 on 7/11...

The Bitcoin Misery Index, which measures the expected sentiment of a holder of bitcoin (50=Neutral).

- The BMI slipped below 66 on 7/11/19—the 66 level is critical, as we have written about in the past, as this is when Bitcoin forward price returns start to look negative from a risk/reward perspective.

Figure: The Bitcoin Misery Index (historical range is 0 to 100). 100=happy. 0=miserable

Since 2011. The formula = (z-score of win/loss + z-score of up/down volatility) \* 50 (intercept)



fundstrat

For exclusive use of Fundstrat clients only. July 30, 2019 Slide 3

### Downtrend in BMI means wait for BMI to fall to 53 or lower

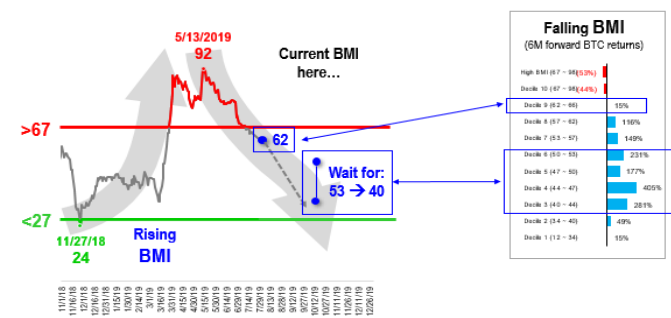
#### BMI FALLING: Once it breaks 66, better to wait for BMI to be 53-ish

Once BMI begins a downtrend (aka now) a reading of 62 is not associated with strong positive 6M returns for Bitcoin.

- Since 2011, when BMI is 62, the average 6M return for Bitcoin is 15%—while this is not terrible, it is not as strong as waiting for the BMI to fall towards 50-53 (decile 7) or even more ideally, 44-47 (decile 4).
- We estimate this level will be likely around late-August/ early-September. At this time, we expect Bitcoin to begin its rapid ascent again.

Figure: BMI and comparative Bitcoin returns when in a downtrend

Since 2011



fundstrat

For exclusive use of Fundstrat clients only. July 30, 2019 Slide 4

### Suggest Bitcoin bottoms in late-August, before FOMO

#### BITCOIN: If BMI roadmap holds, range-bound until late-August

We have a stylized price roadmap for Bitcoin, based on past BMI episodes.

- Based on this roadmap, Bitcoin is range-bound between \$8,500-\$10,500, reflecting the reset of market expectations and sentiment. Once the BMI falls towards 50-53, or ideally, 40-44, we should see a strong FOMO rebound in Bitcoin.
- This lines up well with potential clarity post-CFTC investigations around BitMex and other short-term headlines.

Figure: Bitcoin price

1-year



fundstrat

For exclusive use of Fundstrat clients only. July 30, 2019 Slide 5

### 2019 has more tailwinds than 2018

#### More positive than negative convergences in 2019

Figure: Convergence trends in 2019. More positive than negative

Factor	2017	2018	2019	Why 2019 chance?
Macro	USD trend	Positive	Negative	Expect USD weakening
	EM equities	Positive	Negative	EM outperforming equities
Technical	BTC vs 2000 moving average	Positive	Negative	BTC to cross above 2000 by YE
	Institutional investment	Positive	Positive	Endowments increasing investments
Fiat -> crypto inflows	"Fiat" -> crypto on-ramps	Positive	Negative	Binance adding credit cards, etc.
	"crypto" -> fiat exchange selling	Positive	Negative	BitMex share of overall volumes lower
Blockchain	Crypto fund formation	Positive	Positive	Funds having difficulty raising capital
	Bitcoin: Lightning scales up	Positive	Neutral	Lightning reaching critical mass, +privacy
SEC regulatory risk	SEC regulatory risk	Positive	Positive	Institutional grade custody coming
	Trend in ICOs	Positive	Negative	Industry doing more self-regulation
Equity	IPO Bitmain, Bitfury, etc.	Positive	Negative	Less dilution as new ICO slow
			Positive	Creates more relevant asset classes

Source: Fundstrat, Bloomberg, CoinMarketCap, Bitfury

fundstrat

For exclusive use of Fundstrat clients only. July 30, 2019 Slide 8

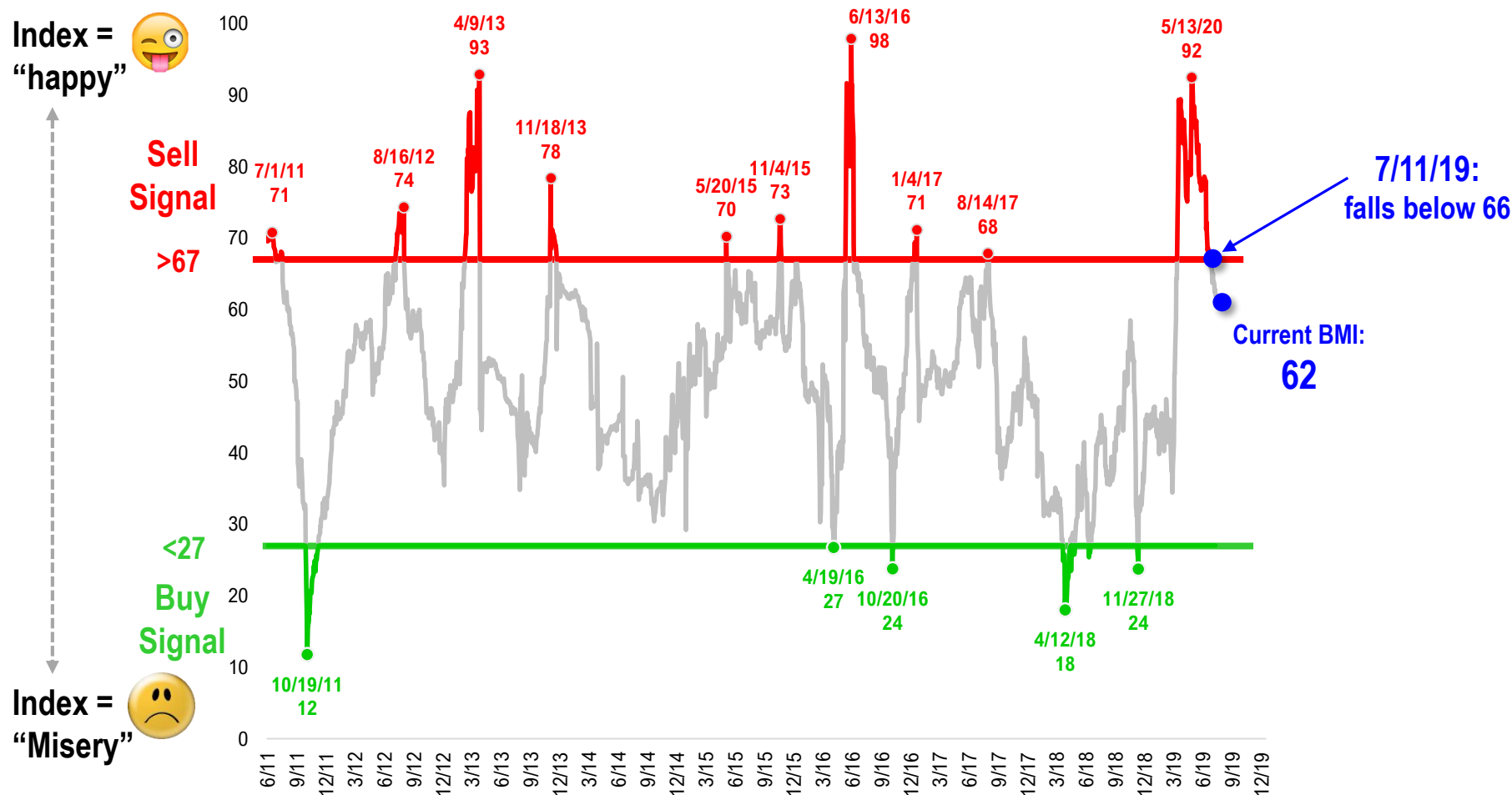
## SENTIMENT: BMI (Bitcoin Misery Index) fell below 66 on 7/11/19...

The Bitcoin Misery Index, which measures the expected sentiment of a holder of bitcoin (50=Neutral).

- The BMI slipped below 66 on 7/11/19—the 66 level is critical, as we have written about in the past, as this is when Bitcoin forward price returns start to look negative from a risk/reward perspective.

Figure: The Bitcoin Misery Index (historical range is 0 to 100). 100=happy. 0=miserable

Since 2011. The formula = (z-score of win-ratio + z-score of upside/downside volatility)\*7 + 50 (intercept)



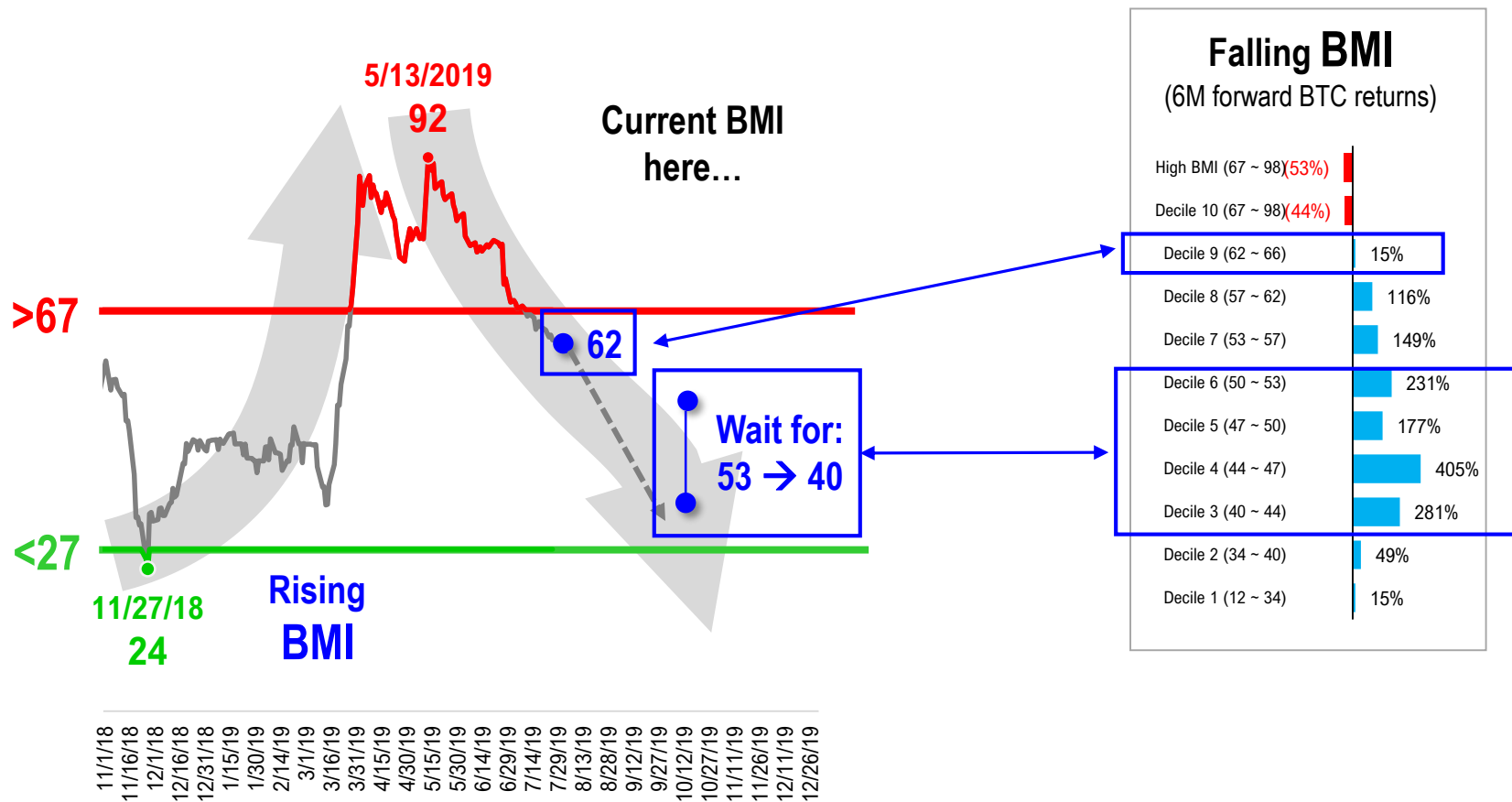
Source: Fundstrat, Bloomberg, Factset

## BMI FALLING: Once it breaks 66, better to wait for BMI to be 53-ish

Once BMI begins a downtrend (ala now) a reading of 62 is not associated with strong positive 6M returns for Bitcoin.

- Since 2011, when BMI is 62, the average 6M return for Bitcoin is 15%—while this is not terrible, it is not as strong as waiting for the BMI to fall towards 50-53 (decile 7) or even more ideally, 44-47 (decile 4).
- We estimate this level will be likely around late-August/ early-September. At this time, we expect Bitcoin to begin its rapid ascent again.

Figure: BMI and comparative Bitcoin returns when in a downtrend  
Since 2011



Source: Fundstrat, Bloomberg, Factset

## BITCOIN: If BMI roadmap holds, range-bound until late-August

We have a stylized price roadmap for Bitcoin, based on past BMI episodes.

- Based on this roadmap, Bitcoin is range-bound between \$8,500-\$10,500, reflecting the reset of market expectations and sentiment. Once the BMI falls towards 50-53, or ideally, 40-44, we should see a strong FOMO rebound in Bitcoin.
- This lines up well with potential clarity post-CFTC investigations around BitMex and other short-term headwinds.

Figure: Bitcoin price  
1-year





## SENTIMENT: Fear and Greed Index by Digital Assets Data

The Fear and Greed Index incorporates five elements to measure the current sentiment of Bitcoin: volatility, trading volume and momentum, direct polls, social media sentiment, and Bitcoin dominance.

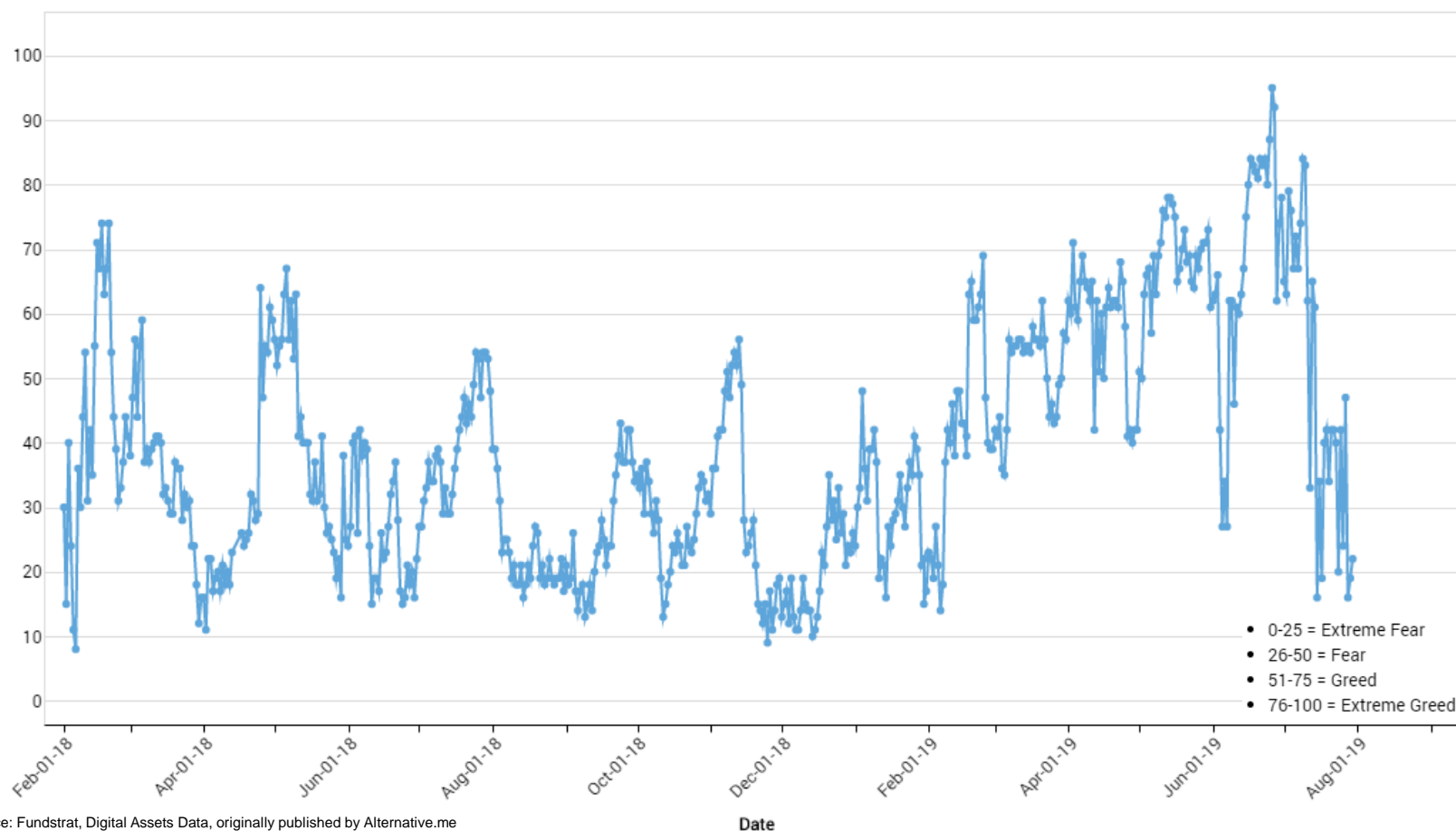
- The index above 50 means greed, and below 50 means fear — moreover, the index above 75 and below 25 means extreme greed and extreme fear, respectively. Currently, the Fear and Greed Index has fallen to 22, an “Extreme Fear” level.

Figure: Fear and Greed Index

Since 2018

Daily Sentiment Over Time (Sentiment on July-30-2019: Extreme Fear)

Index Value



Source: Fundstrat, Digital Assets Data, originally published by Alternative.me

Date

# 13 signs Crypto winter over...

1. **Nov 2018**  
LOOKBACK: Fork wars of Jihan (BCH) vs Craig Wright (BSV) exhausted “overhang” BTC supply held by their mining pools. And while BTC collapse to \$3,200 followed, massive supply gone.
2. **December 31, 2018**  
Grayscale’s Bitcoin Investment Trust (OTC: GBTC) sees NAV premium fall to 5%, the lowest since early 2017 and historically marks “capitulation.” The premium has since surged to 41%.
3. **January 23, 2019**  
On-chain transactions per day turn positive YoY, the first time since January 2018 (consistently).
4. **March 27, 2019**  
Fundstrat’s Bitcoin Misery Index (BMI) crossed above 67 for the first time since August 14, 2017. Since 2015, the BMI has never been >67 in a “Bear market.”
5. **April 1, 2019**  
200D cross: Bitcoin closed above 200D. First time since March 2018 (13 months).
6. **April 2, 2019**  
Noted crypto twitter personality @ParabolicTrav ([Re-emergence tweet](#)) reappears after a 7 month hiatus.
7. **April 18, 2019**  
Tuur Demeester publishes “Bitcoin in Heavy Accumulation” ([Tuur/ Adamant report here](#)) which makes the assertion that HODLER wallets have begun to accumulate Bitcoin.
8. **Mid-April**  
OTC volumes surging. Multiple OTC brokers report that new client activity has surged 60%-70% versus just 4 months ago, and many accounts are re-accumulating bitcoin.
9. **Mid-April**  
On-chain activity surging.
10. **April 22, 2019**  
Willy Woo posts survey of 20-ish Crypto OGs (slang “original gangsters”) and even noted bears see high probability Bitcoin has bottomed ([survey here](#))
11. **April 23, 2019**  
BTC golden cross. Bitcoin 50D moving average > 200D. Historically bullish.
12. **May 1, 2019**  
Stable market reaction to controversy around Bitfinex/Tether and NY Attorney General’s court order alleging undisclosed transfer from Tether’s reserves to Bitfinex in order to cover up mishandled funds by its third party payment processor, Crypto Capital.
13. **May 13-15, 2019**  
Consensus 2019 conference confirmed that crypto winter is over

Source: Fundstrat, Bloomberg, Coinmarketcap, BitMEX

# More positive than negative convergences in 2019

Figure: Convergence trends in 2019. More positive than negative

	Factor	2017	2018	2019	Why 2019 change?
<b>Macro</b>	USD trend	Positive	Negative	Positive	Expect USD weakening
	EM equities	Positive	Negative	Positive	EM outperforming equities
<b>Technical</b>	BTC vs 200D moving average	Positive	Negative	Positive	BTC to cross above 200D by YE
<b>Fiat → crypto inflows</b>	Institutional investment		Positive	Positive	Endowments increasing investments
	“fiat → crypto” on-ramps	Positive	Negative	Positive	Binance adding credit cards, etc.
	“crypto → fiat” exchange selling		Negative	Positive	BitMex share of overall volumes lower
	Crypto fund formation	Positive	Positive	Negative	Funds having difficulty raising capital
<b>Blockchain</b>	Bitcoin: Lightning scales up		Neutral	Positive	Lightning reaching critical mass, +privacy
	Security on infrastructure		Positive	Positive	Institutional grade custody coming
	SEC regulatory risk		Negative	Neutral	Industry doing more self-regulation
	Trend in ICOs	Positive	Negative	Positive	Less dilution as new ICO slow
<b>Equity</b>	IPO Bitmain, Bitfury, etc.			Positive	Creates more relevant asset classes

Source: Fundstrat, Bloomberg, Coinmarketcap, BitMEX



# Overview Performance Recap

TREND

All sectors  
and size  
indices down  
in past week

**Figure: The Fundstrat Crypto-currency Indices**  
Fundstrat reference indices.

Index	Ticker	Description	Index Price	Market Value		YTD	% Return			
				\$ millions	% share crypto		Week -3	Week -2	Week -1	Past Week
							7/1/19 to 7/8/19	7/8/19 to 7/15/19	7/15/19 to 7/22/19	7/22/19 to 7/29/19
<b>Sector Indices</b>										
FS Crypto Commodity	FSTOKCTB	Likely to be classified as commodities	\$123	\$210,281	69%	151%	15%	(12%)	(5%)	(8%)
FS Crypto Platform	FSTOKPLT	Enables decentralized applications	48	\$43,248	14%	45%	5%	(26%)	(4%)	(3%)
FS Crypto Privacy	FSTOKPVT	Tokens with anonymity features	34	\$3,763	1%	40%	8%	(18%)	(7%)	(7%)
FS Crypto Exchange	FSTOKDEX	Tokens associated with exchanges	136	\$5,106	2%	196%	1%	(15%)	8%	(13%)
FS Crypto Stablecoin	FSTOKSTB	Tracks the fiat currencies	100	\$4,422	1%	(1%)	0%	1%	(1%)	(0%)
<b>Market-Cap based Indices</b>										
FS Crypto 10	FSTOK10	Top 10 largest Crypto-currencies	\$149	\$272,625	90%	109%	12%	(15%)	(4%)	(7%)
FS Crypto 40	FSTOK40	Top 11-50 based on market value	79	\$18,608	6%	57%	3%	(21%)	(2%)	(6%)
FS Crypto 50 Eq Wt	FSTOKEQW	Equal weighted FS Crypto 10 and 40	80	\$291,233	96%	59%	3%	(20%)	(2%)	(6%)
FS Crypto 250	FSTOK250	Top 51-300 based on market cap	45	\$10,101	3%	22%	5%	(19%)	(2%)	(5%)
FS Crypto 300	FSTOK300	FS Crypto 10, 40 and 250	134	\$301,335	99%	101%	11%	(16%)	(4%)	(7%)
FS Crypto Aggregate	FSTOKAGG	Aggregate index	133	\$303,652	100%	100%	11%	(16%)	(4%)	(7%)

Source: Fundstrat, Bloomberg.

\* Base date of Cap based Indices is 9/30/17 and Sector Indices is 3/31/18

## SECTORS: FS Crypto Commodity & Exchange Quantitatively ranked

Figure: Comparative Quantitative Score for tokens in OW-rated Platforms and Commodity Sectors

Per Fundstrat

						Technical Metrics									
Name	Symbol	Price (USD)	Price (BTC)	Market Cap (\$B)	Current Coin Supply	Composite Technical Score	90D Win Ratio	90D UV - DV	Relative Price to 21 DMA	Relative Price to 50 DMA	Weekly RSI	5D Return	10D Return	30D Return	21 vs 50 DMA
<b>Commodity Index Constituents</b>															
Bitcoin Cash	BCH	\$307.92	0.032347	5.5	17,918,728	1	53	6	95.8%	80.6%	47	1.7	(0.0)	(30.4)	15.2%
Dogecoin	DOGE	\$0.00	0.000000	0.3	120,562,065,141	2	53	24	92.8%	88.9%	48	(2.6)	(7.2)	(16.6)	3.8%
Litecoin	LTC	\$90.43	0.009500	5.7	62,878,057	3	50	20	93.8%	78.2%	51	(4.1)	(8.1)	(32.3)	15.6%
Monero	XMR	\$77.96	0.008190	1.3	17,125,683	4	52	6	92.1%	84.5%	49	(3.1)	(5.3)	(22.0)	7.6%
Bitcoin	BTC	\$9,519.15	1.000000	169.9	17,846,167	5	57	0	90.6%	91.4%	59	(3.0)	(9.6)	(20.4)	(0.7%)
Bytecoin	BCN	\$0.00	0.000000	0.1	184,135,625,943	6	50	4	91.5%	77.0%	37	(2.9)	(11.7)	(34.1)	14.5%
Decred	DCR	\$25.58	0.002687	0.3	10,155,258	7	51	6	89.0%	86.1%	47	(6.7)	(11.4)	(27.1)	2.8%
Zcash	ZEC	\$67.62	0.007104	0.5	7,078,306	8	47	16	86.4%	73.2%	43	(4.9)	(10.7)	(40.8)	13.1%
<b>Exchange Index Constituents</b>															
Huobi Token	HT	\$4.73	0.000497	0.2	50,029,141	1	57	17	110.1%	118.9%	79	2.8	12.9	11.0	(8.8%)
Binance Coin	BNB	\$27.20	0.002857	4.2	155,555,418	2	49	19	92.6%	84.4%	55	(6.7)	(6.5)	(23.1)	8.2%
Ox	ZRX	\$0.22	0.000023	0.1	599,920,987	3	51	9	92.7%	77.4%	36	(1.5)	(5.3)	(30.0)	15.3%
AirSwap	AST	\$0.00	0.000000	0.0	#DIV/0!	4	52	(150)	0.0%	0.0%	45	(100.0)	(100.0)	(100.0)	0.0%
QASH	QASH	\$0.00	0.000000	0.0	#DIV/0!	5	51	(206)	0.0%	0.0%	42	(100.0)	(100.0)	(100.0)	0.0%
Bancor	BNT	\$0.00	0.000000	0.0	#DIV/0!	6	54	(242)	0.0%	0.0%	35	(100.0)	(100.0)	(100.0)	0.0%
Kyber Network	KNC	\$0.00	0.000000	0.0	#DIV/0!	7	48	(217)	0.0%	0.0%	40	(100.0)	(100.0)	(100.0)	0.0%

Source: Fundstrat, Bloomberg, Onchainfx.com

## SECTORS: FS Crypto Platform & Privacy Quantitatively ranked

Figure: Comparative Quantitative Score for tokens in OW-rated Privacy and Exchange Sectors

Per Fundstrat

						Technical Metrics									
Name	Symbol	Price	Price (BTC)	Market	Current	Composite	90D	Relative	Relative	Weekly	5D	10D	30D	21 vs 50	
		(USD)		Cap											
				(\$B)	Coin Supply	Technical Score	Win Ratio	90D UV - DV	Price to DMA	Price to DMA	RSI	Return	Return	Return	DMA
<b>Platform Index Constituents</b>															
Cardano	ADA	\$0.06	0.000006	1.6	25,927,060,338	1	54	15	97.8%	78.4%	43	2.3	1.0	(33.2)	19.4%
Lisk	LSK	\$1.40	0.000147	0.2	118,998,317	2	46	6	97.7%	81.0%	40	(13.6)	6.1	(26.7)	16.8%
Ethereum Classic	ETC	\$5.94	0.000624	0.7	112,307,444	3	51	(12)	95.5%	79.5%	44	(2.9)	1.2	(28.2)	15.9%
Ontology	ONT	\$0.98	0.000103	0.5	533,255,242	4	48	(2)	96.3%	76.5%	44	(5.2)	3.5	(37.4)	19.8%
EOS	EOS	\$4.22	0.000443	3.9	924,874,217	5	49	(3)	95.2%	75.0%	44	(8.3)	4.2	(34.1)	20.2%
Stellar	XLM	\$0.08	0.000009	1.6	19,616,816,627	6	48	24	94.2%	79.3%	37	(2.9)	(10.9)	(27.1)	14.9%
VeChain	VET	\$0.01	0.000001	0.3	55,449,979,107	7	50	35	93.2%	80.8%	42	(5.5)	(3.8)	(38.8)	12.4%
Ethereum	ETH	\$211.27	0.022194	22.6	107,104,506	8	58	(9)	90.5%	79.7%	48	(2.7)	(4.5)	(34.0)	10.8%
Waves	WAVES	\$1.38	0.000145	0.1	100,075,083	9	44	41	93.2%	73.1%	30	0.0	(5.5)	(29.9)	20.1%
NEM	XEM	\$0.06	0.000007	0.6	8,999,963,614	10	52	35	91.6%	78.2%	43	(4.7)	(5.7)	(35.9)	13.4%
Bytom	BTM	\$0.11	0.000012	0.1	1,002,501,551	11	49	18	91.2%	73.6%	44	(1.8)	(8.0)	(34.2)	17.5%
Qtum	QTUM	\$2.89	0.000304	0.3	95,972,780	12	52	13	88.8%	75.3%	45	(2.4)	(8.8)	(48.5)	13.5%
NEO	NEO	\$11.27	0.001184	0.8	70,563,522	13	58	20	88.1%	77.2%	45	(4.6)	(13.4)	(39.1)	10.9%
Stratis	STRAT	\$0.54	0.000057	0.1	99,425,304	14	47	3	90.2%	69.4%	34	(2.3)	(4.9)	(40.8)	20.9%
IOTA	MIOTA	\$0.28	0.000030	0.8	2,779,532,458	15	47	12	90.4%	75.3%	40	(8.7)	(6.6)	(33.3)	15.2%
<b>Privacy Index Constituents</b>															
Monero	XMR	\$77.96	0.008190	1.3	17,125,683	1	52	6	92.1%	84.5%	49	(3.1)	(5.3)	(22.0)	7.6%
Bytecoin	BCN	\$0.00	0.000000	0.1	184,135,625,943	2	50	4	91.5%	77.0%	37	(2.9)	(11.7)	(34.1)	14.5%
Dash	DASH	\$105.98	0.011133	0.9	8,948,066	3	50	5	87.7%	73.6%	42	(3.7)	(6.0)	(37.7)	14.1%
Zcash	ZEC	\$67.62	0.007104	0.5	7,078,306	4	47	16	86.4%	73.2%	43	(4.9)	(10.7)	(40.8)	13.1%
Bitcoin Private	BTCP	\$0.00	0.000000	0.0	#DIV/0!	5	51	873	0.0%	0.0%	37	(100.0)	(100.0)	(100.0)	0.0%

Source: Fundstrat, Bloomberg, Onchainfx.com

## Big Money Coinshares S/O trend

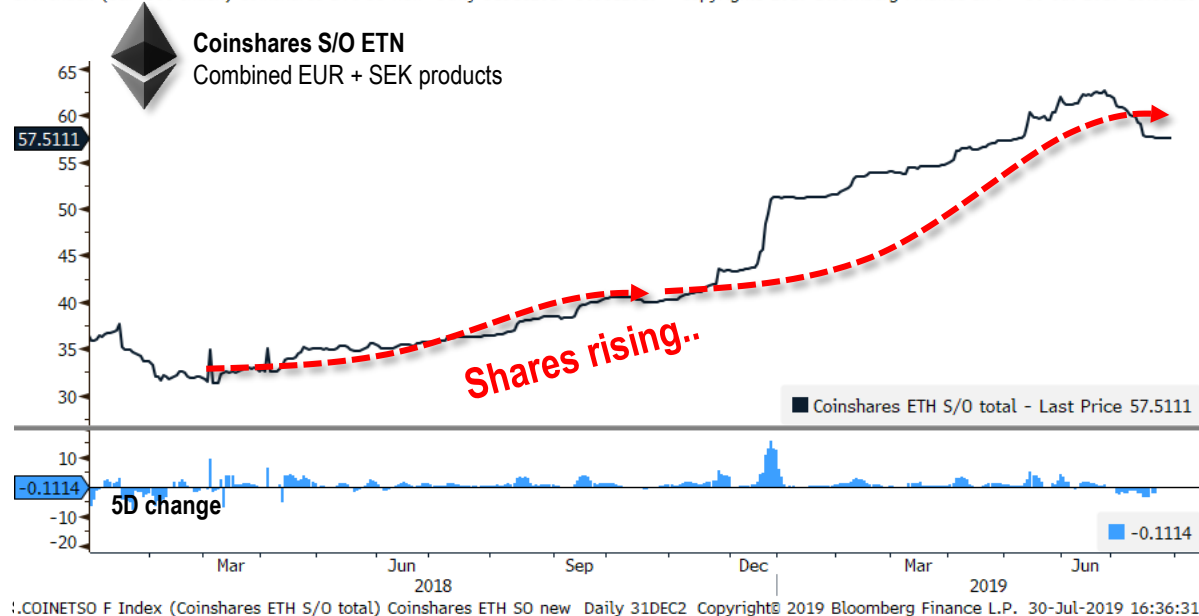
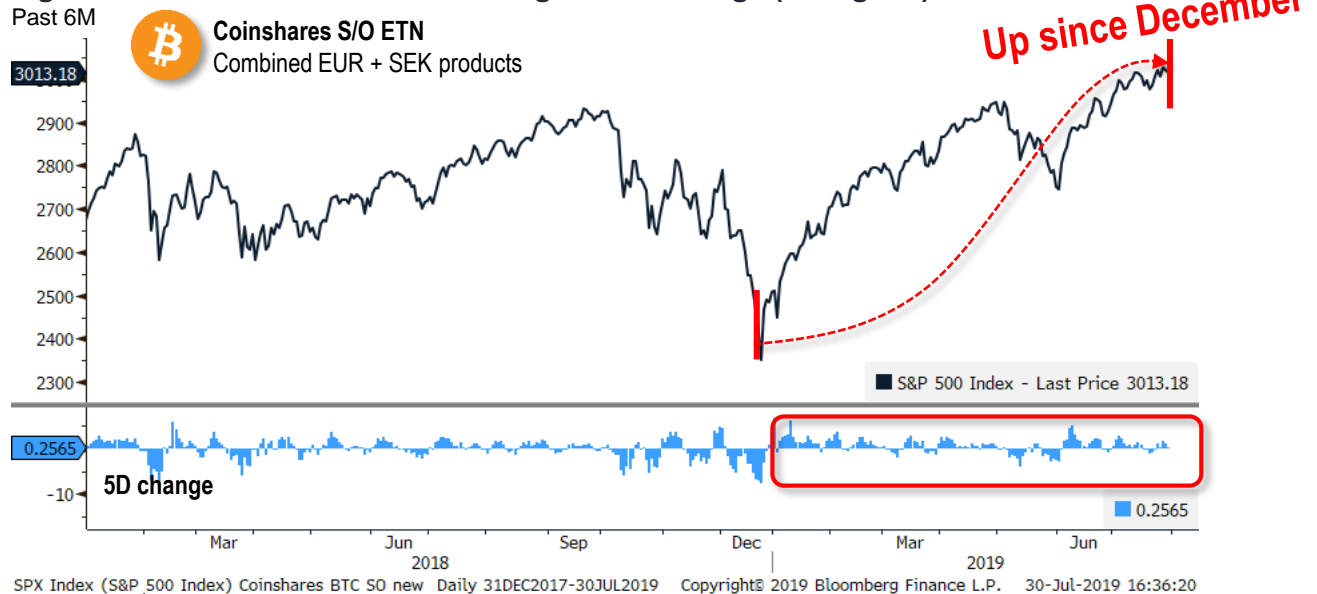
TREND

Big money  
buying BTC

One proxy for Big  
money is the S/O  
of Coinshares  
ETF S/O... both  
for BTC and Eth.

Big money buying  
BTC has  
recovered since  
the December low

Figure: Coinshares Shares outstanding and 5D change (histogram)



# Big Money Futures open interest

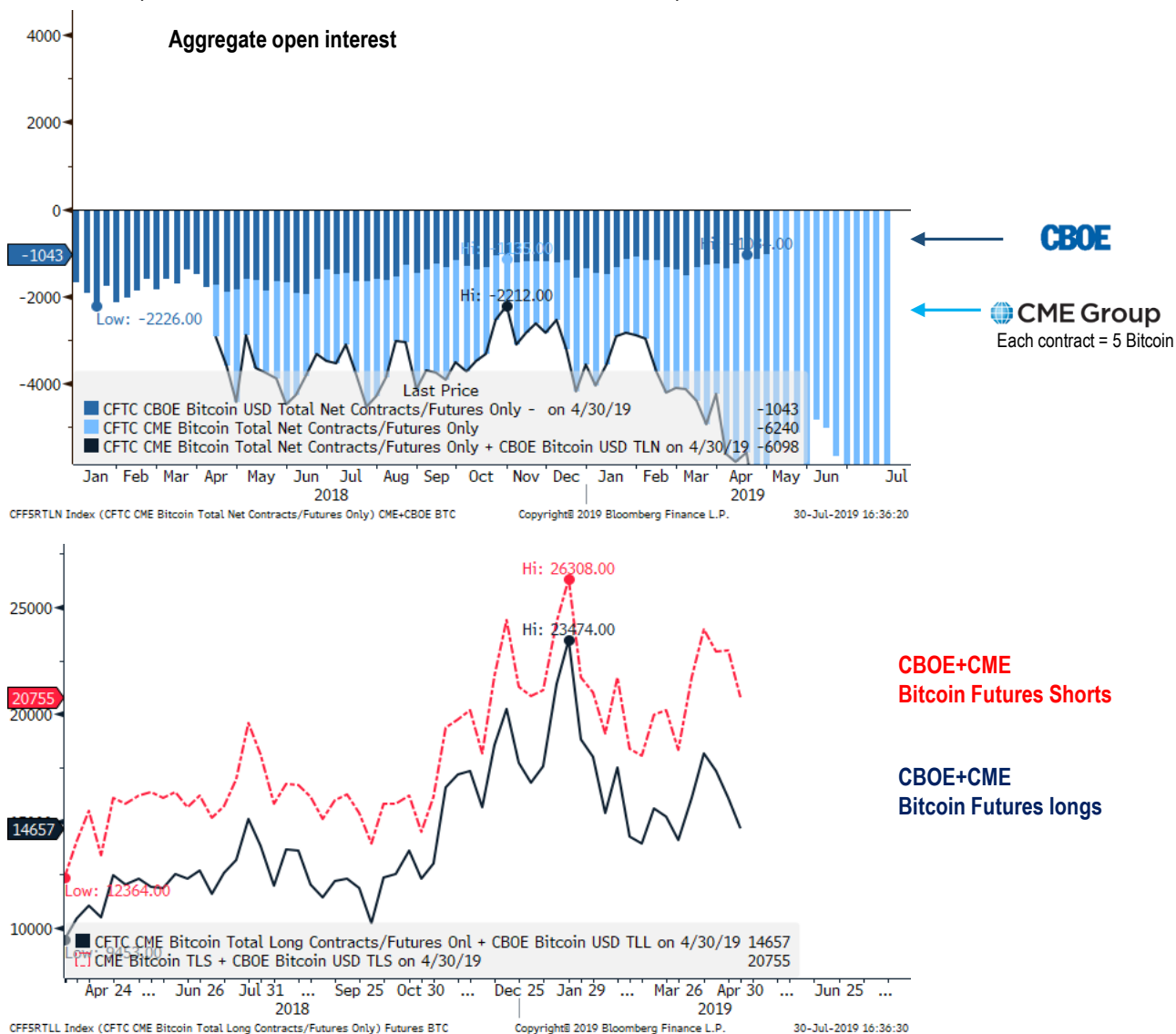
TREND

Net Shorts  
flattening in  
past 3 mos...

While futures  
positioning has  
been net short  
since since  
inception, the  
recent contraction  
of the net short  
position has been  
flattening...

**Figure: CME/CBOE Futures: Aggregate Long and Short Interest**

Since 2018. Open interest is measured in Bitcoin. Each CME contract represents 5 BTC.



Source: Fundstrat, Bloomberg.

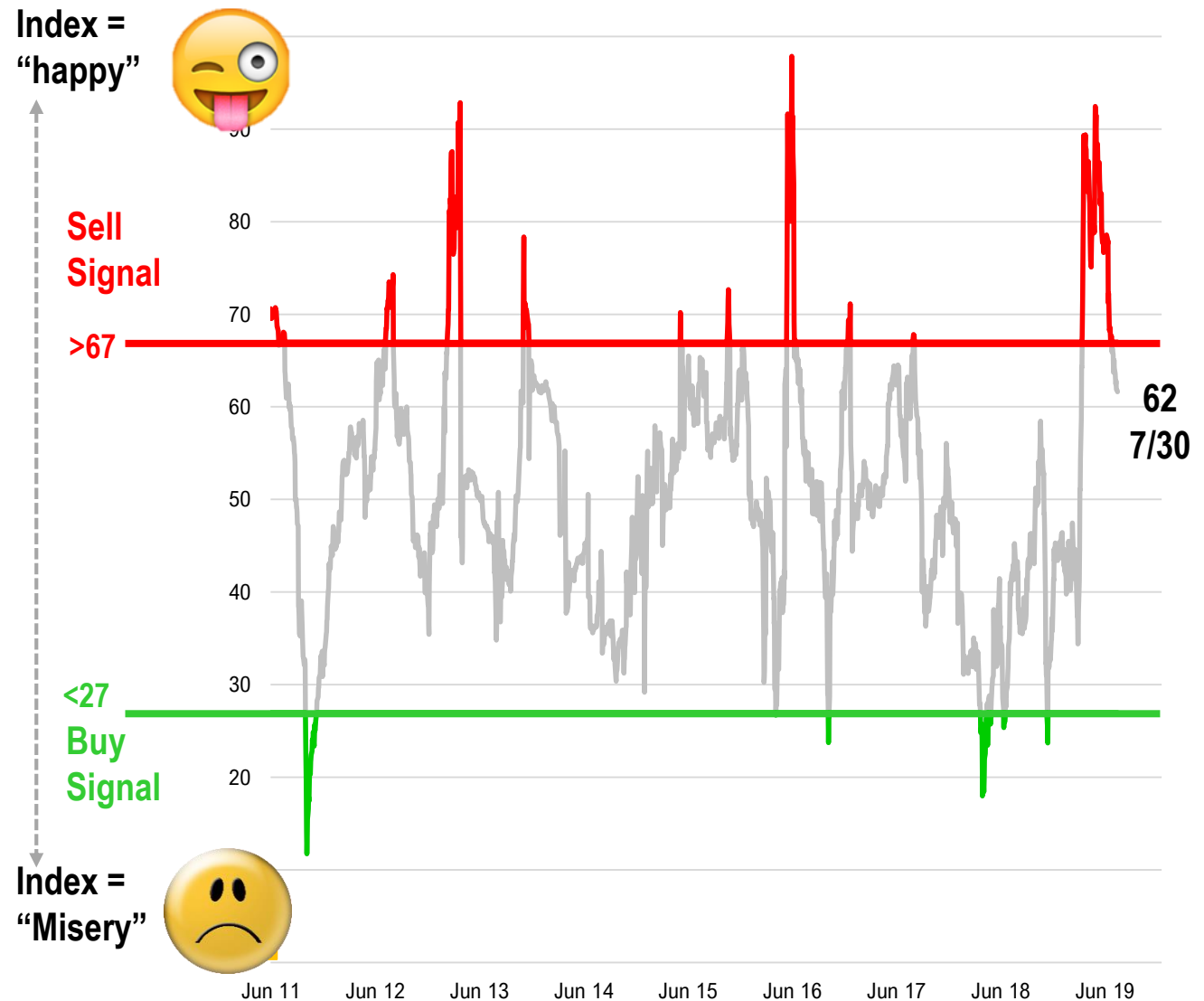
## Sentiment Bitcoin Misery Index

TREND

Bitcoin  
Misery  
Index @ 62

The bitcoin misery index, which measures the expected sentiment of a holder of bitcoin (50=Neutral) has recently declined to 62.

Figure: The Bitcoin Misery Index (historical range is 0 to 100). 100=happy. 0=miserable. Since 2011. The formula = (z-score of win-ratio + z-score of upside/downside volatility)\*7 + 50 (intercept)



Source: Fundstrat, Bloomberg.



# Sentiment

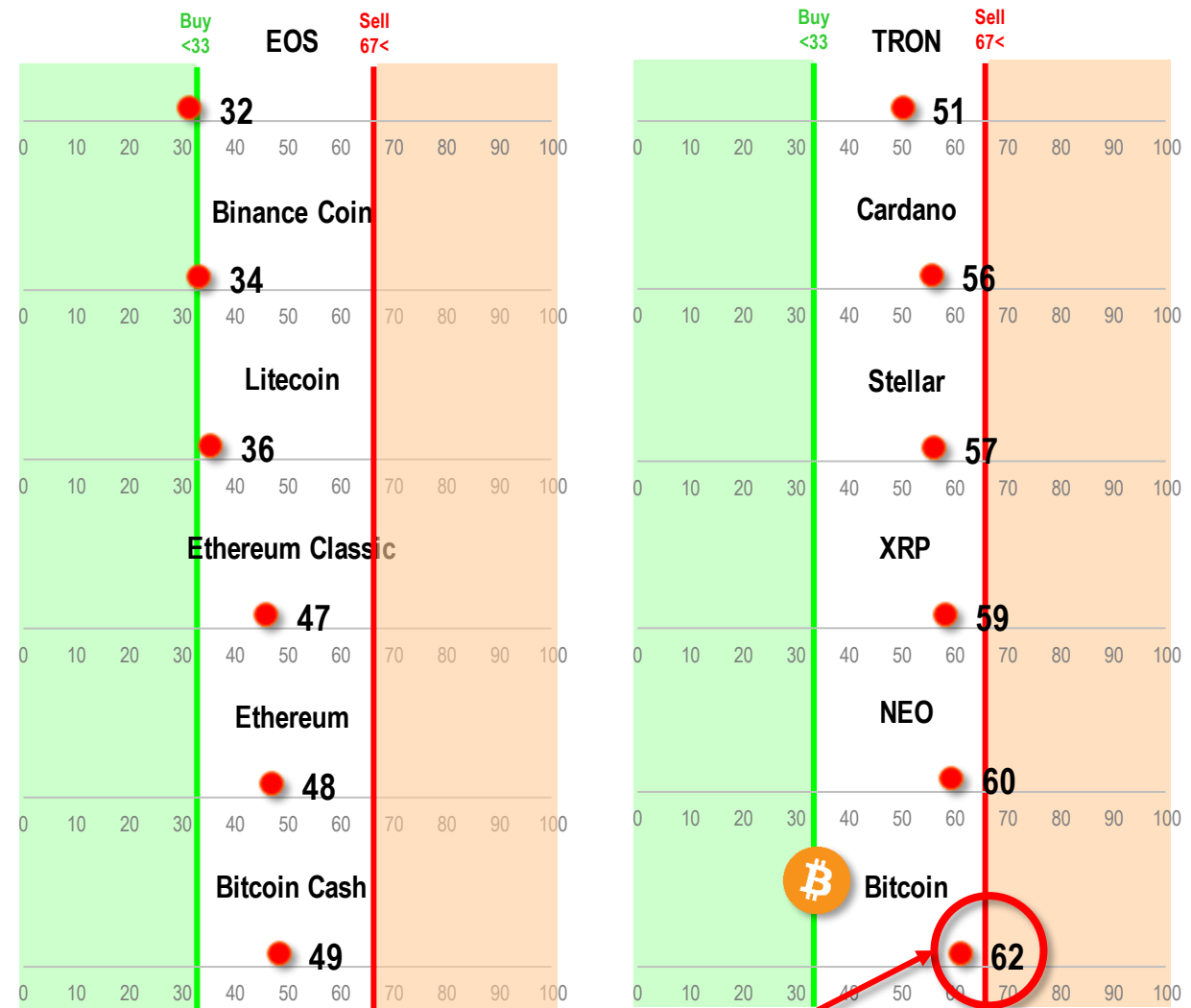
## BMI for Top 12 Tokens

TREND

**EOS lowest...**  
**...BTC highest**

We calculated the BMI for the top 12 most liquid tokens (based on daily trading volume) and ranked their BMIs.

Figure: The BMI (historical range is 0 to 100). 100=happy. 0=miserable.  
For Top 12 Tokens



Source: Fundstrat, Bloomberg.

**BTC = strongest**



## Sectors

### Sectors vs BTC

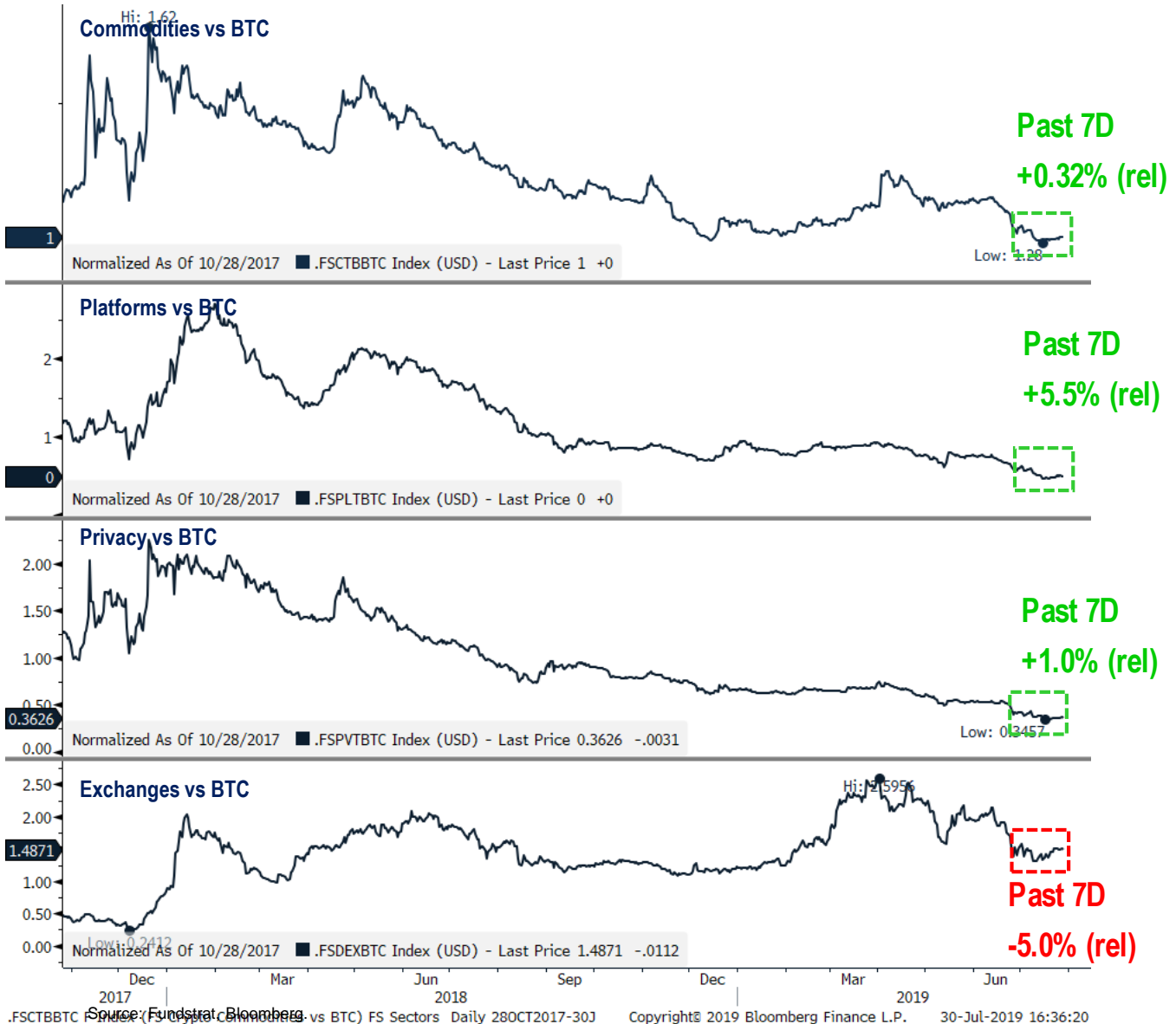
TREND

Exchange  
underperformed  
BTC

Except Exchanges,  
all other sectors  
have outperformed  
BTC in the past  
week...

Figure: Sector Price Ratio to BTC

Since Nov. 2017



## Sector Rotation Sector Pairs

TREND

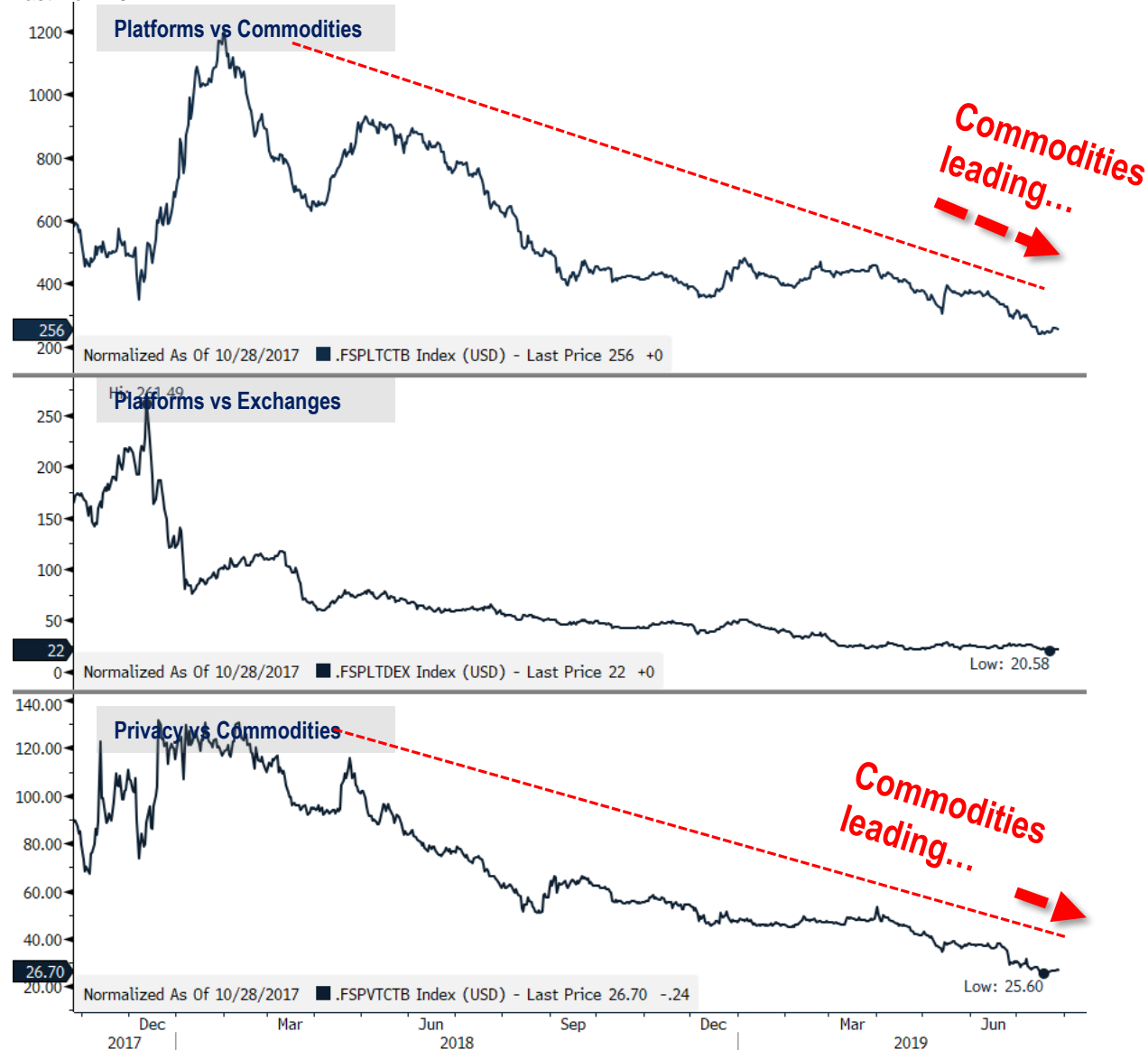
Still stick  
with  
Commodities

We continue to favor  
Commodities, generally,  
as we see this as the  
least likely to face  
regulatory risks.

And also, commodity  
tokens like BTC, ZEC,  
LTC, BCH are thus  
easier to implement to  
payment systems, etc.

Figure: Sector Pairs Price Ratio

Past Nov. 2017



.FSPLTCB F Index (FS Crypto Platform vs Commodit) FS Sectors Rotate Daily 280C Copyright© 2019 Bloomberg Finance L.P. 30-Jul-2019 16:36:30

# Sectors Commodities

TREND

All commodity  
tokens were  
down last  
week...

Figure: Sector Price Ratio to BTC

Past 6M



Rank	Best ← 1 2 3 4 5 6 7 8 Worst							
	1	2	3	4	5	6	7	8
<b>Past 1 week...</b>								
Token	Bitcoin Cash	Litecoin	Dogecoin	Monero	Zcash	Bitcoin	Bytecoin	Decred
7D chg	(1%)	(5%)	(5%)	(6%)	(7%)	(8%)	(9%)	(11%)
% weight	3%	3%	0%	1%	0%	93%	0%	0%
<b>Past 2 weeks...</b>								
Token	Litecoin	Bitcoin Cash	Dogecoin	Bitcoin	Bytecoin	Monero	Decred	Zcash
14D chg	(1%)	(2%)	(8%)	(13%)	(13%)	(13%)	(15%)	(16%)
% weight	3%	3%	0%	93%	0%	1%	0%	0%

Source: Fundstrat, Bloomberg.

# Sectors Platforms

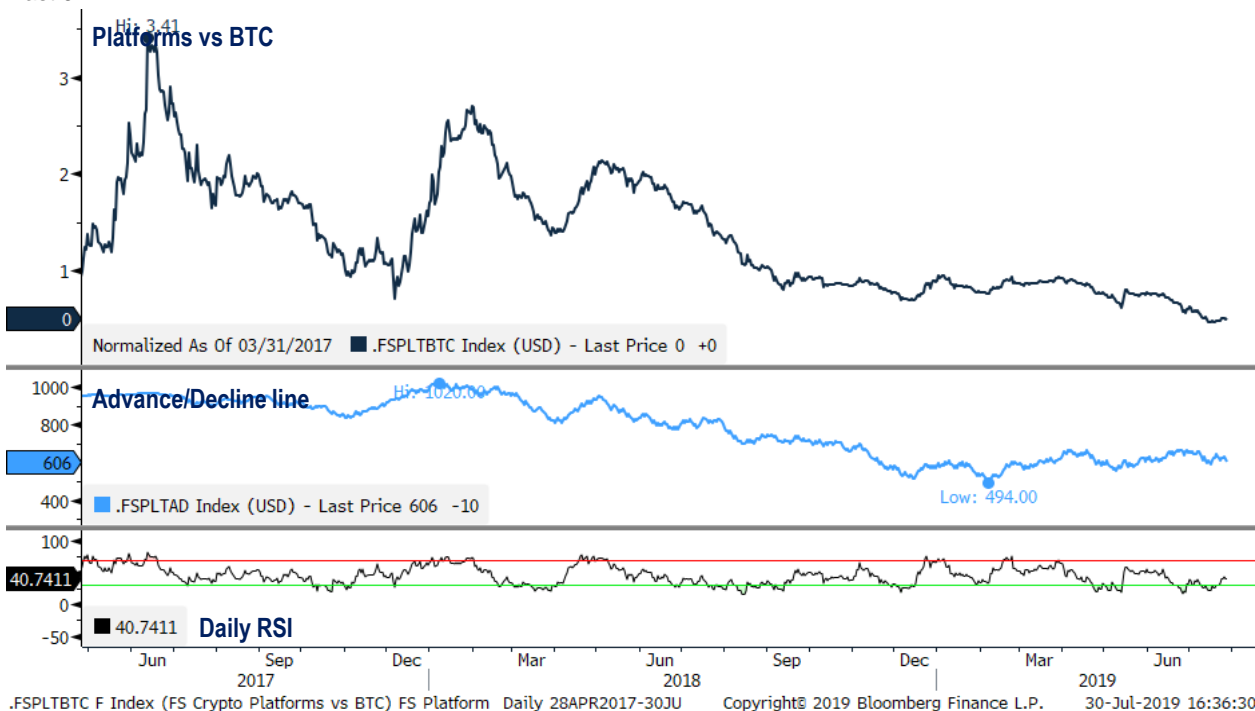
TREND

Platform tokens  
broadly down....

Only EOS and  
Cardano up in past  
7D

Figure: Sector Price Ratio to BTC

Past 6M



Best ← Rank 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Worst →															
Past 1 week...															
Token	EOS	Cardano	Ontology	Ethereum	Waves	Qtum	Bytom	IOTA	Stellar	NEM	Stratis	Classic	NEO	Lisk	VeChain
7D chg	2%	2%	(2%)	(3%)	(3%)	(5%)	(6%)	(6%)	(6%)	(6%)	(7%)	(7%)	(7%)	(7%)	(10%)
% weight	11%	5%	2%	66%	0%	1%	0%	2%	5%	2%	0%	2%	2%	0%	1%
Past 2 weeks...															
Token	Lisk	Ontology	Classic	Cardano	VeChain	EOS	Bytom	Stellar	Ethereum	IOTA	Waves	NEO	Qtum	Stratis	NEM
14D chg	9%	6%	3%	1%	(2%)	(2%)	(3%)	(3%)	(8%)	(9%)	(9%)	(9%)	(9%)	(10%)	(12%)
% weight	0%	2%	2%	5%	1%	11%	0%	5%	66%	2%	0%	2%	1%	0%	2%

Source: Fundstrat, Bloomberg.



# Sectors Privacy

TREND

Daily RSI of  
Privacy sector  
started to pick  
up...

Despite broadly  
down, Privacy sector  
outperformed  
Bitcoin last week  
([Slide 16](#)) ...

Figure: Sector Price Ratio to BTC

Past 6M



	Best ← 1 2 3 4 5 Worst				
Rank	1	2	3	4	5
Past 1 week...					
Token	Bitcoin Private	Monero	Zcash	Dash	Bytecoin
7D chg	4%	(6%)	(7%)	(8%)	(9%)
% weight	0%	46%	17%	33%	4%
Past 2 weeks...					
Token	Bitcoin Private	Bytecoin	Monero	Dash	Zcash
14D chg	(7%)	(13%)	(13%)	(14%)	(16%)
% weight	0%	4%	46%	33%	17%

Source: Fundstrat, Bloomberg.

# TOKENS: The 15 most Quantitatively Attractive of Top 50 largest

**Figure: Comparative Quantitative Score for tokens in OW-rated Platforms and Commodity Sectors**

Per Fundstrat

Name	Symbol	Price (USD)	Price (BTC)	Market Cap (\$B)	Current Coin Supply	Technical Metrics									
						Composite Technical Score	90D Win Ratio	90D UV - DV	Relative Price to 21 DMA	Relative Price to 50 DMA	Weekly RSI	5D Return	10D Return	30D Return	21 vs 50 DMA
IOST	IOST	\$0.01	0.000001	0.2	21,000,000,000	<b>1</b>	54	(7)	110.7%	90.0%	47	16.8	33.2	(28.2)	20.7%
Lambda	LAMB	\$0.25	0.000026	1.5	6,000,000,000	<b>2</b>	48	127	115.0%	135.9%	71	33.0	11.3	42.0	(20.9%)
Huobi Token	HT	\$4.73	0.000497	2.4	500,000,000	<b>3</b>	57	17	110.1%	118.9%	79	2.8	12.9	11.0	(8.8%)
Nano	NANO	\$1.34	0.000141	0.2	133,248,297	<b>4</b>	42	27	112.0%	100.5%	47	10.7	21.8	(1.5)	11.5%
KuCoin Shares	KCS	\$1.58	0.000166	0.3	179,659,415	<b>5</b>	47	27	110.5%	104.3%	57	16.2	12.1	(7.1)	6.1%
Basic Attenti	BAT	\$0.25	0.000027	0.4	1,500,000,000	<b>6</b>	42	38	99.7%	87.2%	45	9.2	3.2	(21.1)	12.5%
Cardano	ADA	\$0.06	0.000006	1.9	31,112,483,745	<b>7</b>	54	15	97.8%	78.4%	43	2.3	1.0	(33.2)	19.4%
Bitcoin Cash	BCH	\$307.92	0.032347	5.5	17,875,275	<b>8</b>	53	6	95.8%	80.6%	47	1.7	(0.0)	(30.4)	15.2%
Ravencoin	RVN	\$0.05	0.000005	0.2	3,909,445,000	<b>9</b>	46	43	99.1%	85.0%	50	(6.9)	3.4	(23.8)	14.0%
Tezos	XTZ	\$1.01	0.000106	0.8	799,751,785	<b>10</b>	42	36	98.4%	90.9%	48	0.0	2.8	(1.9)	7.4%
XRP	XRP	\$0.31	0.000033	31.1	99,991,588,101	<b>11</b>	50	26	95.6%	81.6%	42	(1.7)	(3.1)	(27.6)	14.0%
Bitcoin SV	BSV	\$146.35	0.015374	2.6	17,854,986	<b>12</b>	51	176	93.8%	78.0%	54	(13.0)	0.3	(31.7)	15.9%
Ethereum Classic	ETC	\$5.94	0.000624	0.7	111,724,084	<b>13</b>	51	(12)	95.5%	79.5%	44	(2.9)	1.2	(28.2)	15.9%
MonaCoin	MONA	\$1.90	0.000200	0.1	65,729,675	<b>14</b>	38	289	94.9%	85.6%	56	(5.9)	1.6	(23.1)	9.4%
Pundi X	NPXS	\$0.00	0.000000	0.2	266,962,422,907	<b>15</b>	51	13	94.8%	78.9%	43	(3.3)	1.0	(30.6)	15.9%

Source: Fundstrat, Bloomberg, Onchainfx.com

## Research team



**Thomas J. Lee, CFA**  
**Co-Founder, Head of Research**  
*In research: 26 years*

Prior to founding Fundstrat, Mr. Lee was at J.P. Morgan from 1999 to 2014 and served as Chief Equity Strategist from 2007 to 2014. He was top-ranked by Institutional Investor every year since 1998. Previously served as Managing Director at Salomon Smith Barney. Mr. Lee graduated from the undergraduate program at the Wharton School, University of Pennsylvania.



**L. Thomas Block**  
**Washington and Policy Strategist**  
*Head of JPM policy: 22 years*

Tom had a 21-year career at J.P. Morgan, serving as Global Head of Government Relations. Prior to joining JP Morgan Chase in 1987, he previously worked in Washington and held several positions with members of the House and Senate, serving as Legislative Assistant and Chief of Staff in the House, and Legislative Staff Director in the Senate



**Rob Sluymer, CFA**  
**Head of Technical Analysis Strategy**  
*In research: 27 years*

Head of Technical Research with over 26 years experience writing technical research at RBC Capital Markets.



**Vito J. Racanelli**  
**Senior Editor & Market Intelligence Analyst**  
*Senior Editor: 20 years*

Previously a reporter with Dow Jones Professional Investor Report in 1990, moved to AP-Dow Jones in Italy and later Barron's in NY, where he was a senior editor for 20 years.



**Ken Xuan, CFA, FRM**  
**Head of Data Science Research**  
*In research: 5 years*

Data scientist with expertise in applied mathematics and statistical analysis. Ken was an operations strategy consultant at West Monroe Partners. Ken received a B.S. in Management, Economics from Purdue University in 2013 and an M.S. in Operations Research from Columbia University in 2017.



**Sam Doctor**  
**Senior Portfolio Strategist**  
*In research: 19 years*

Former US Small and Mid Cap Technology Analyst and India Small / Mid Cap Strategist at J.P. Morgan Chase.



**Alex Kern**  
**Research Analyst**  
*In research: 4 years*

Previously a Research Analyst with Digital Currency Group. Prior to that, Alex was a Fintech and Payments Equity Research Associate with Cowen & Co. Alex received his B.A. in History from the University of Pennsylvania in 2014.



**Kelsey Burhans**  
**Research Analyst**  
*In research: 3 years*

Previously an Equity Research Associate in Specialty Finance at Stephens Inc. Kelsey received her B.A. in Chinese Language & Culture, with concentrations in Economics and Management (MIT Sloan), from Wellesley College in 2017.

# Disclosures

This research is for the clients of Fundstrat Global Advisors only. For important disclosures and rating histories regarding sectors or companies that are the subject of this report, please contact your sales representative or Fundstrat Global Advisors at 150 East 52nd Street, New York, NY, 10022 USA.

## **Analyst Certification (Reg AC)**

Thomas J. Lee, the research analyst denoted by an “AC” on the cover of this report, hereby certifies that all of the views expressed in this report accurately reflect his personal views, which have not been influenced by considerations of the firm’s business or client relationships.

Neither I, nor a member of my household is an officer, director, or advisory board member of the issuer(s) or has another significant affiliation with the issuer(s) that is/are the subject of this research report. There is a possibility that we will from time to time have long or short positions in, and buy or sell, the securities or derivatives, if any, referred to in this research

## **Conflicts of Interest**

This research contains the views, opinions and recommendations of Fundstrat. As of the time of writing and publication of this presentation, Fundstrat does not know of, or have reason to know of any material conflicts of interest at the time of the publication of this presentation. The Company has no contractual relationship, nor have we received any compensation from any of the companies listed in this research report.

## **Analyst Industry/Sector Views**

Positive (+): The analyst expects the performance of his industry/sector coverage universe over the next 6-18 months to be attractive vs. the relevant broad market benchmark, being the S&P 500 for North America.

Neutral (N): The analyst expects the performance of his or her industry/sector coverage universe over the next 6-18 months to be in line with the relevant broad market benchmark, being the S&P 500 for North America.

Negative (-): The analyst expects his or her industry coverage universe over the next 6-18 months to underperform vs. the relevant broad market benchmark, being the S&P 500 for North America.

## **General Disclosures**

Fundstrat Global Advisors is an independent research company and is not a registered investment advisor and is not acting as a broker dealer under any federal or state securities laws. Fundstrat Global Advisors is a member of IRC Securities’ Research Prime Services Platform. IRC Securities is a FINRA registered broker-dealer that is focused on supporting the independent research industry. Certain personnel of Fundstrat (i.e. Research Analysts) are registered representatives of IRC Securities, a FINRA member firm registered as a broker-dealer with the Securities and Exchange Commission and certain state securities regulators. As registered representatives and independent contractors of IRC Securities, such personnel may receive commissions paid to or shared with IRC Securities for transactions placed by Fundstrat clients directly with IRC Securities or with securities firms that may share commissions with IRC Securities in accordance with applicable SEC and FINRA requirements. IRC Securities does not distribute the research of Fundstrat, which is available to select institutional clients that have engaged Fundstrat.

As registered representatives of IRC Securities our analysts must follow IRC Securities’ Written Supervisory Procedures. Notable compliance policies include (1) prohibition of insider trading or the facilitation thereof, (2) maintaining client confidentiality, (3) archival of electronic communications, and (4) appropriate use of electronic communications, amongst other compliance related policies.

Fundstrat does not have the same conflicts that traditional sell-side research organizations have because Fundstrat (1) does not conduct any investment banking activities, (2) does not manage any investment funds, and (3) our clients are only institutional investors.

This research is for the clients of Fundstrat Global Advisors only. Additional information is available upon request. Information has been obtained from sources believed to be reliable but Fundstrat Global Advisors does not warrant its completeness or accuracy except with respect to any disclosures relative to Fundstrat and the analyst's involvement (if any) with any of the subject companies of the research. All pricing is as of the market close for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, risk tolerance, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies. The recipient of this report must make its own independent decision regarding any securities or financial instruments mentioned herein. Except in circumstances where Fundstrat expressly agrees otherwise in writing, Fundstrat is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice, including within the meaning of Section 15B of the Securities Exchange Act of 1934. All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client website, fundstrat.com. Not all research content is redistributed to our clients or made available to third-party aggregators or the media. Please contact your sales representative if you would like to receive any of our research publications.

**Copyright 2019 Fundstrat Global Advisors LLC. All rights reserved. No part of this material may be reprinted, sold or redistributed without the prior written consent of Fundstrat Global Advisors LLC.**