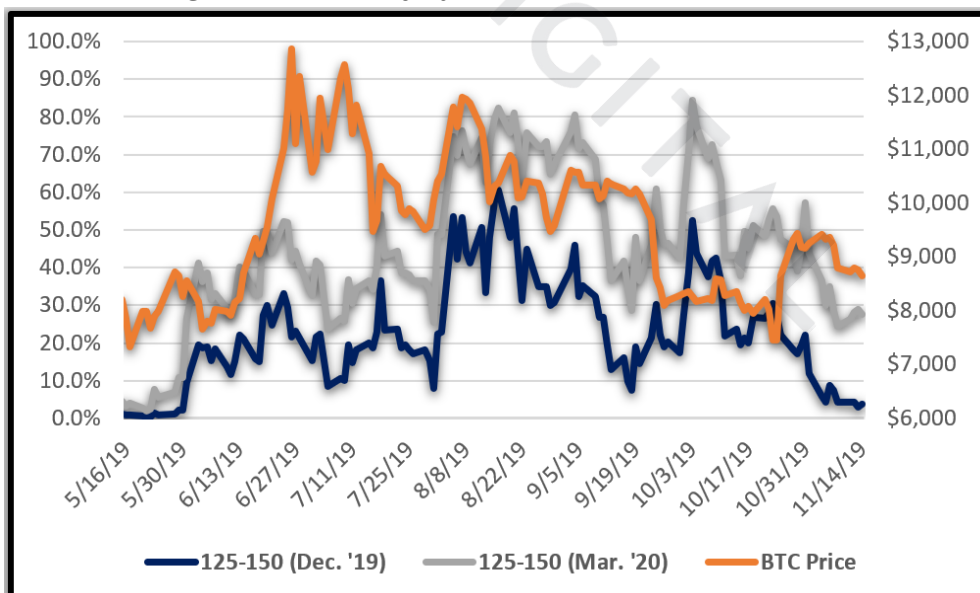
**Total Public Market Value (ex-BTC)****12-Month Performance (Normalized)****6-Month Performance (Normalized)****30-Day Performance (Normalized)****Lead Analyst**

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**Bitcoin Momentum Fades as Safe Haven Trade Reverts**

- Optimism following bitcoin's late October rally appears to be fading as investors and traders alike search for a short-term catalyst to push the crypto market higher. Bitcoin broke below its 200-day moving average earlier this month on its drop back below \$9,000, held steady for most of this week before dipping below its 50-day equivalent - a key support level for BTC in the near term - earlier today. Short-term sentiment gauges have also rolled over, though the longer-term uptrend still remains intact.
- Fed Chair Jerome Powell had a clear message for Congress in his testimony to the Joint Economic Committee this week: the Fed won't be able to combat the next downturn alone. Citing the low interest rate environment, Powell raised concerns over the limited effectiveness of monetary policy without complementary fiscal stimulus and urged policymakers to address the "unsustainable path" of federal deficits to support the economy during the next downturn.
- Investors are dumping safe haven assets in favor of riskier alternatives, a trend that pushed U.S. equities to new all-time highs. The S&P 500, for example, broke above 3100 for the first time this week.

Chart of the Week**BTC (Orange) vs. Probability of Another Fed Rate Cut (Dec. & March)**



Bitcoin Breaks Key Support

Optimism following bitcoin's late October rally is fading fast as crypto investors and traders alike struggle to identify a short-term catalyst to push the market higher. Bitcoin broke below its 200-day moving average earlier this month on its drop back below \$9,000, held steady for most of this week, **but just dipped below its 50-day MA - a key support level for BTC in the near term.** On top of this, short-term sentiment gauges have rolled over and the Crypto Fear & Greed Index still has more room to fall.

BTCUSD vs. Daily MACD



All hope is not lost, however. Zooming out, this year's uptrend is still intact (though a break below \$7,800 would likely cause us to reevaluate) and longer-term momentum trends appear favorable. For example, **BTC's 50-week MA looks poised to break above its 100-day equivalent in the next few weeks**, if not earlier. However, as we all know too well, anything can happen in the crypto market around the holidays.

BTCUSD vs. 100-Day (Green) & 200-Day (Blue) SMAs



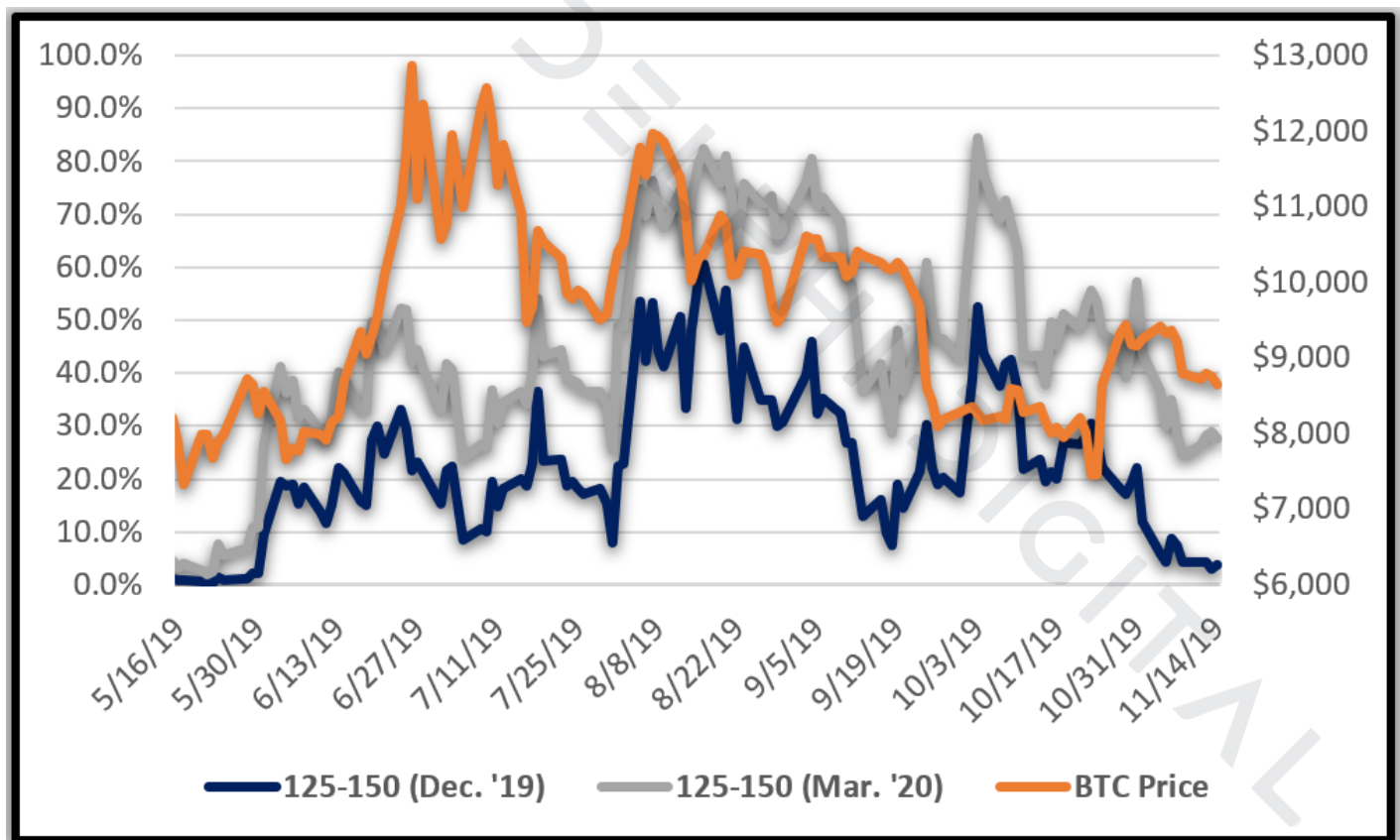


Fed Puts Congress in the Hot Seat

Fears of an incoming recession have abated the last few weeks as pockets of improving economic data gave policymakers a bit more breathing room when it comes to monetary and fiscal policy decisions. Cycles don't last forever, however, and eventually the economy will run out of steam, which will force central bankers to cut interest rates and re-institute large-scale asset purchases. **Unlike prior periods though, the Fed has little room to cut its benchmark interest rate in the face of the next recession;** the effective Fed funds rate is 1.5-1.6% today compared to 6% and 5% before the 2000 and 2008 downturns, respectively.

Revamping large-scale asset purchases – less formally known as Quantitative Easing – is all but guaranteed when the economy finally does take a turn for the worst, but the effectiveness of such measures is unlikely to be enough. Powell & Co. know this, which is why the Fed Chair sent a clear message to Congress during his testimony to the Joint Economic Committee this week: **The Fed won't be able to combat the next recession alone.** The Fed Chair put it more delicately, stating, **"the current low interest rate environment may limit the ability of monetary policy to support the economy."**

BTC (Orange) vs. At Least One Fed Rate Cut - Dec. '19 & Mar. '20



The "digital gold" narrative for bitcoin has been fueled by the notion that global central banks will slash interest rates and ramp up stimulus in an effort to combat slowing global growth currently threatening the longevity of this economic expansion. **However, pockets of improvement and more hawkish commentary from policymakers at the Federal Reserve have flattened expectations for additional rate cuts in the U.S. through year-end and much of 2020,** which has likely played a role in bitcoin's recent weakness following its summer surge.



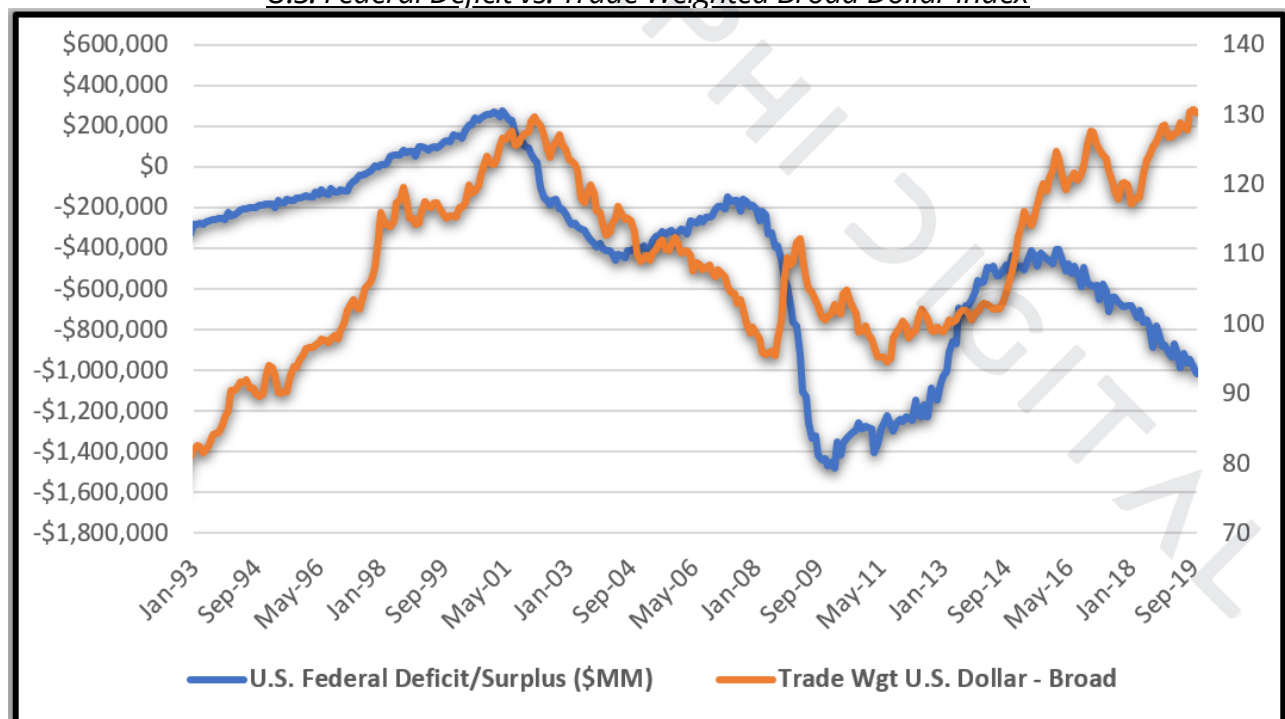
Powell Sends Warning to Congress

Further easing of monetary policy is unlikely to be the silver bullet that drags the economy out of its next inevitable downturn, so it's no surprise Powell is raising such concerns sooner rather than later. The question is, can the U.S. get away with increasing an already unsustainable federal deficit or will the market turn on the dollar and U.S. assets? Powell expressed his concerns to his Congressional colleagues:

"In a downturn, it would also be important for fiscal policy to support the economy. However, as noted in the Congressional Budget Office's recent long-term budget outlook, the federal budget is on an unsustainable path, with high and rising debt: Over time, this outlook could restrain fiscal policymakers' willingness or ability to support economic activity during a downturn."

At times, it seems as if the Fed and Congress are more rivals than companions, but the reality is the U.S. economy largely depends on their alliance. The world's largest economy has run up a \$22 trillion tab with little hope of reversing such deficits, at least in the foreseeable future. Fears over slowing economic activity have raised recession concerns, which would only exacerbate the federal deficit if the decline in tax revenues coincide with increased government spending on unemployment and welfare. The U.S. government is far from surplus territory too; October data revealed the budget deficit is on track to surpass \$1 trillion in fiscal 2020. Treasury issuance will likely ramp up to fund the government's growing list of social obligations.

U.S. Federal Deficit vs. Trade Weighted Broad Dollar Index



"In addition, I remain concerned that high and rising federal debt can, in the longer term, restrain private investment and, thereby, reduce productivity and overall economic growth. Putting the federal budget on a sustainable path would aid the long-term vigor of the U.S. economy and help ensure that policymakers have the space to use fiscal policy to assist in stabilizing the economy if it weakens."

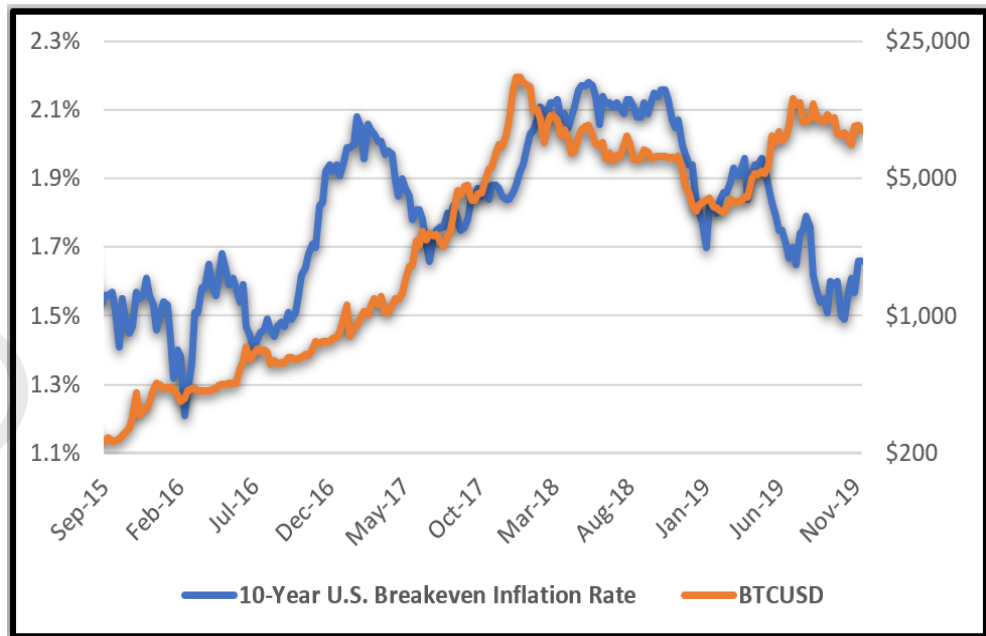
– Powell's Testimony to the Joint Economic Committee



Inflation Expectations Remain Suppressed

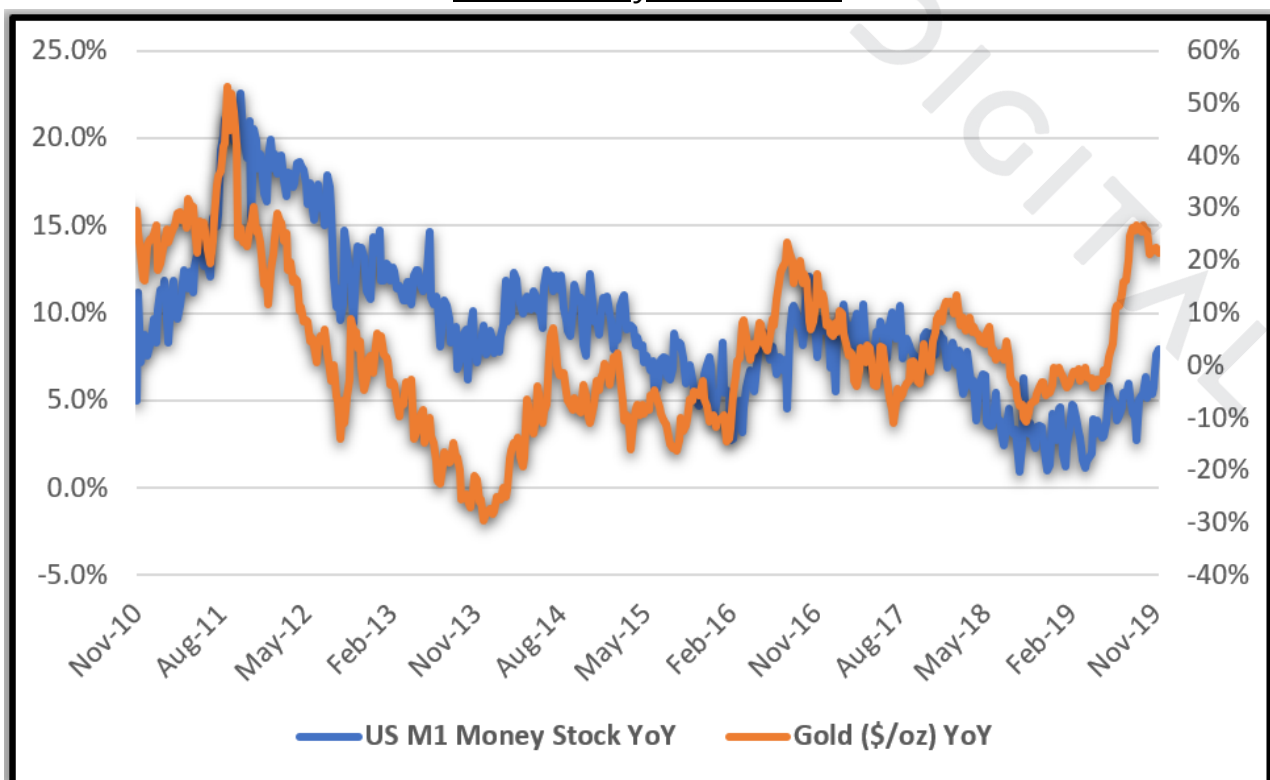
Concerns over the next slowdown are far from gone but Fed officials have indicated they're unlikely to alter current policies unless there's a material change to the economic outlook, most importantly its "symmetric" 2% inflation target. This is a critical and, in my view, **overlooked tweak to the U.S. central bank's stance as it gives financial markets room to run without worrying if the rug will be abruptly pulled out from under them**, similar to the Fed's preemptive rate hikes in 2015-2018.

Bitcoin vs. 10yr U.S. Breakeven Inflation Rate



The summer gold rush was fueled by expectations for rate cuts and monetary stimulus. Unsurprisingly, as the odds of additional cuts fell, so too did gold prices; the precious metal has pulled back since its September peak as investors dumped safe havens in favor of riskier assets. Interestingly, **inflation expectations – measured by 10-year breakevens – have ticked up**, presenting a favorable backdrop for assets perceived to be inflation hedges, notably gold and bitcoin. This reversal is still in its infant stages, however, and may simply be a short-term rebound following this year's collapse in inflation forecasts.

U.S. M1 Money Stock vs. Gold





Search for Yield & Growth

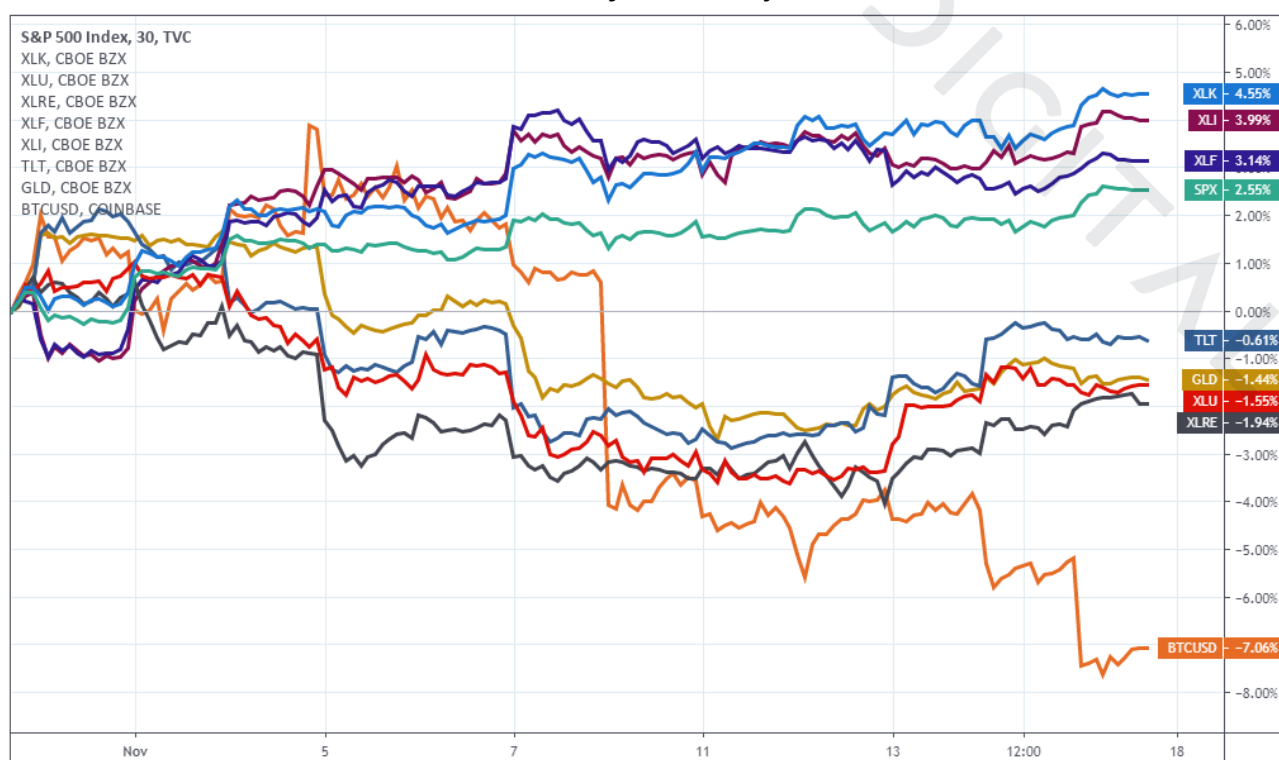
The S&P 500 has gained over 25% in 2019, on pace for its best year since 2013. Technology stocks, which make up over 20% of the U.S benchmark, deserve some of the credit; **the largest sector in the index is up more than 40% year-to-date.** As we've noted previously, rising uncertainty over trade wars and a global recession coupled with record-low sovereign bond yields sparked increased demand for U.S. assets, notably Treasuries.

S&P 500 Tech (Green) & 7-10YR U.S. Treasuries vs. 12M Correlation



Stocks also caught a bid despite potential headwinds as investors sought out higher growth opportunities with lower risk, at least relative to other equity markets. **The desire for both income and growth in this environment helped propel defensive names and bond proxies**, most notably real estate and utilities, to the top ranks of the S&P 500 this year until just the last few weeks. Intriguingly, **the correlation between U.S. tech and long-dated Treasuries reached one of its highest levels on record the end of October**, adding further support to the notion that investors are starving for both yield and growth.

BTC, Treasuries, Gold, and S&P 500 Key Sector Performance Since Oct. Fed Rate Cut





Crypto Asset Movers & Shakers

The crypto market has traded in a relatively tight range this month following the jump to round out October, but intra-week we're seeing some dispersion among large caps. NEO and BNB – two names often associated with developments in China – were among the top performers this week, the former of which posted double digit gains yet again, boosting its 30-day price return to over 70%. BNB, however, is still one of the best performing crypto assets this year by a long shot.

Bitcoin found itself towards the bottom of the pack this week as short-term momentum and sentiment gauges fade. **It's highly unlikely the rest of the crypto market moves higher without the world's most valuable crypto asset, so no surprise BTC will be the name to watch for an indication of how strong the market finishes the rest of the year.**

Top Crypto Asset Returns

	7D	30D	90D	YTD
NEO	13.84%	71.92%	29.67%	59.40%
BNB	4.33%	14.74%	-21.99%	261.95%
XMR	3.07%	24.36%	-19.97%	37.04%
XLM	-0.15%	15.87%	8.72%	-35.74%
TRX	-0.51%	24.23%	15.31%	-0.86%
ETH	-0.98%	2.42%	0.26%	33.86%
ADA	-1.60%	7.87%	-7.81%	0.47%
EOS	-2.11%	14.58%	-4.80%	28.86%
MIOTA	-2.53%	-5.98%	9.94%	-24.48%
LTC	-3.97%	7.96%	-20.80%	87.34%
DASH	-4.77%	-3.93%	-25.53%	-14.17%
XEM	-4.92%	3.63%	-25.05%	-41.09%
BCH	-5.04%	24.59%	-10.24%	72.37%
ZEC	-5.74%	-1.37%	-25.00%	-37.99%
BTC	-6.22%	6.14%	-16.62%	126.48%
XRP	-7.83%	-7.23%	3.28%	-26.55%
MKR	-8.65%	21.37%	17.30%	32.65%
ETC	-9.41%	4.58%	-13.80%	-8.79%

Data as of 11/14/19

The above table is powered by Digital Assets Data, a fintech company building a knowledge platform to manage data and deploy investment models.

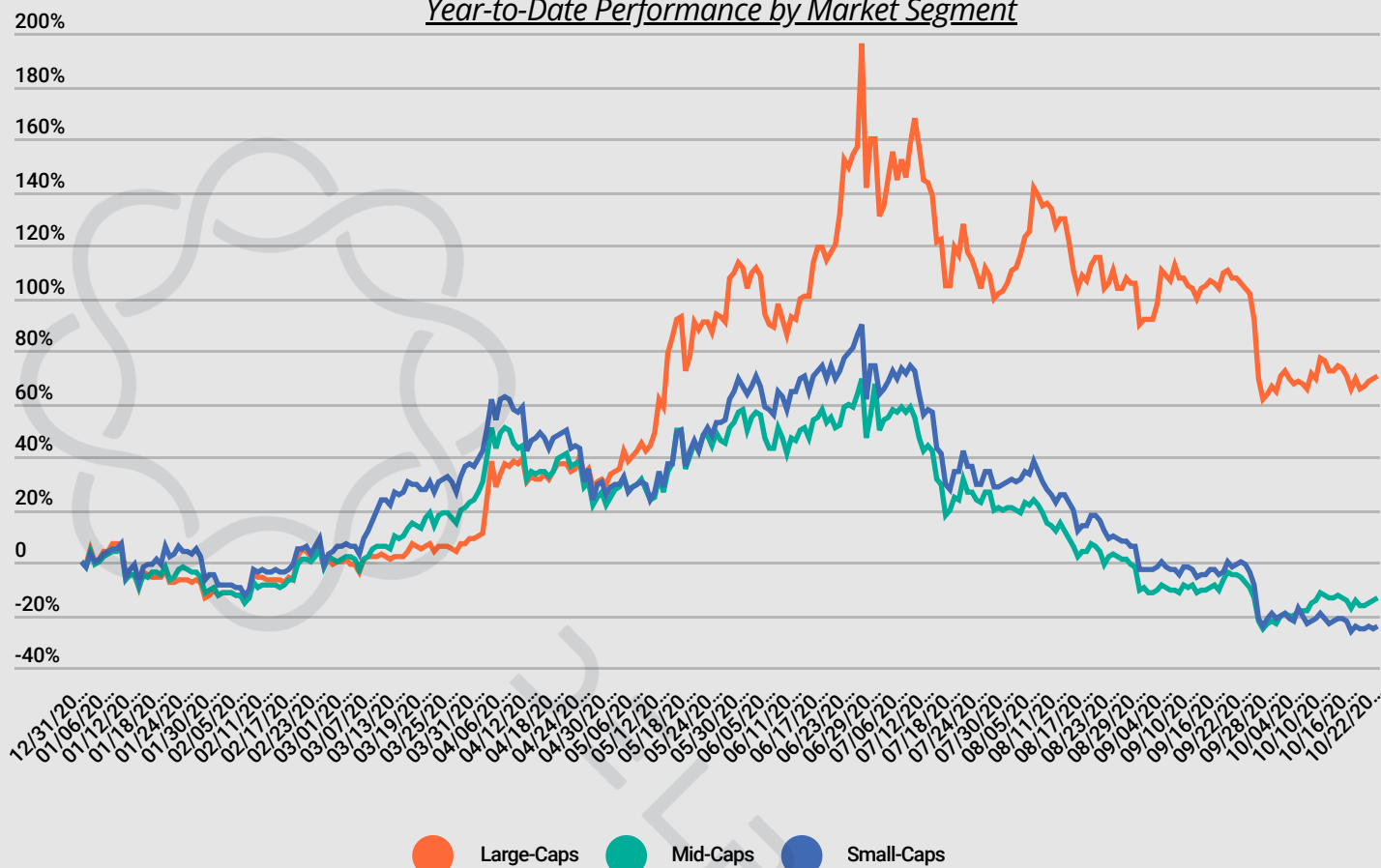


Digital Assets Data

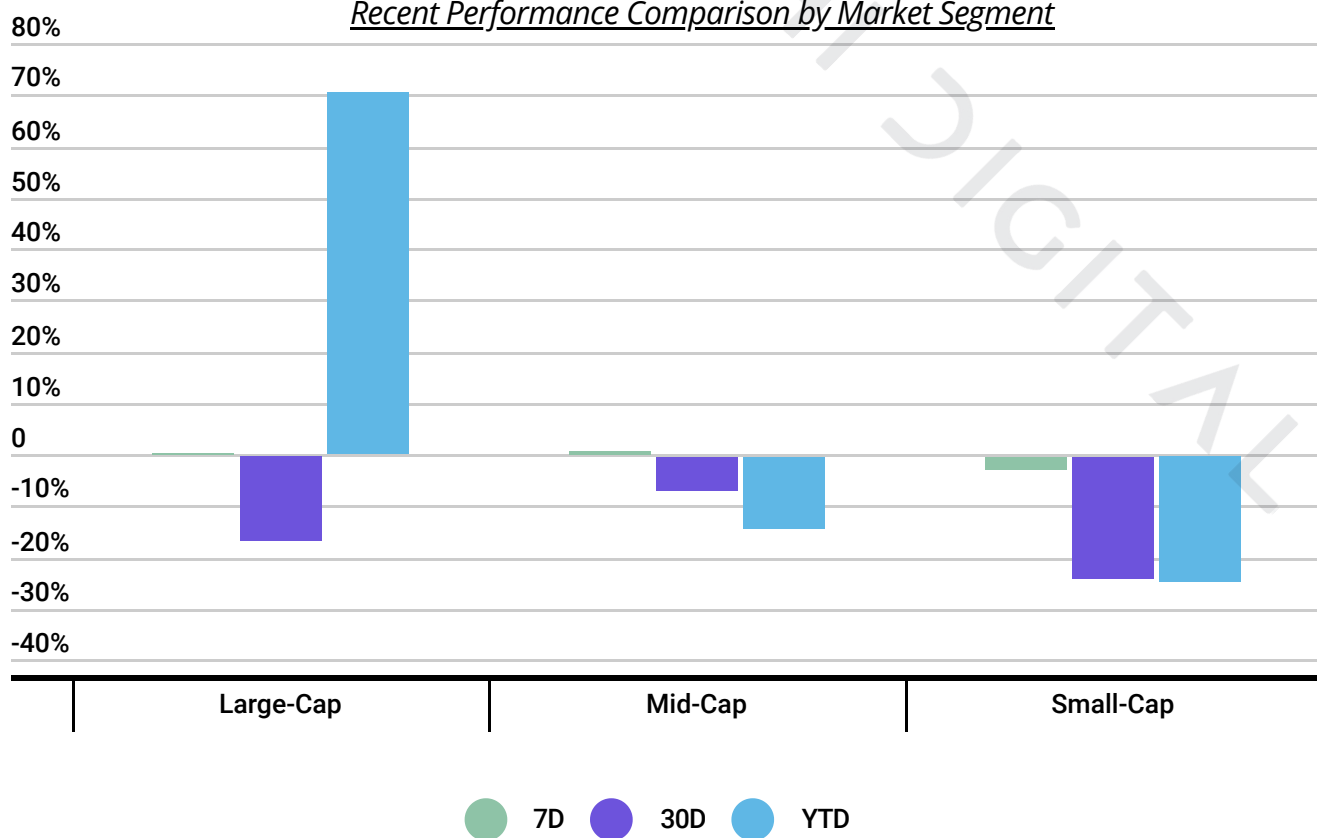


Large Caps Begin to Fade

Year-to-Date Performance by Market Segment



Recent Performance Comparison by Market Segment



*See Source link below for detail on large, mid, and small-cap index constituents.

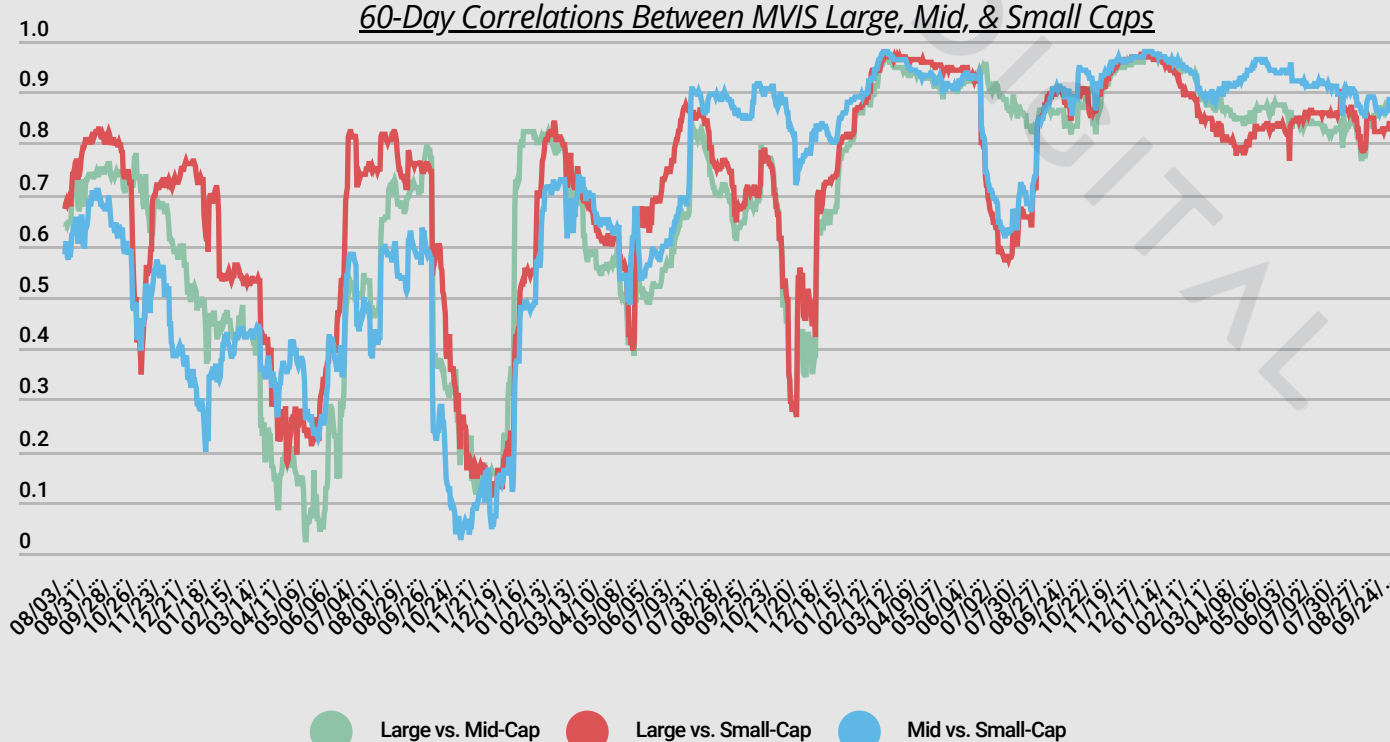


Intra-Market Correlations

30-Day Correlations Between Top Crypto Assets

	ADA	BCH	BNB	BTC	DASH	EOS	ETC	ETH	LTC	MIOTA	MKR	NEO	TRX	XEM	XLM	XMR	XRP	ZEC
ADA	1.00	0.70	0.58	0.70	0.70	0.79	0.67	0.83	0.80	0.76	0.59	0.77	0.77	0.66	0.79	0.71	0.76	0.72
BCH	0.70	1.00	0.45	0.71	0.63	0.69	0.58	0.73	0.72	0.60	0.50	0.62	0.56	0.50	0.57	0.60	0.60	0.55
BNB	0.58	0.45	1.00	0.52	0.55	0.55	0.50	0.61	0.59	0.54	0.47	0.56	0.53	0.43	0.51	0.56	0.48	0.55
BTC	0.70	0.71	0.52	1.00	0.61	0.71	0.62	0.81	0.76	0.62	0.62	0.70	0.59	0.48	0.60	0.66	0.59	0.62
DASH	0.70	0.63	0.55	0.61	1.00	0.65	0.58	0.70	0.65	0.68	0.48	0.67	0.60	0.58	0.62	0.73	0.60	0.70
EOS	0.79	0.69	0.55	0.71	0.65	1.00	0.65	0.81	0.80	0.72	0.57	0.74	0.68	0.58	0.67	0.66	0.71	0.62
ETC	0.67	0.58	0.50	0.62	0.58	0.65	1.00	0.72	0.65	0.63	0.52	0.60	0.58	0.54	0.59	0.60	0.59	0.59
ETH	0.83	0.73	0.61	0.81	0.70	0.81	0.72	1.00	0.83	0.75	0.68	0.77	0.72	0.61	0.70	0.71	0.75	0.70
LTC	0.80	0.72	0.59	0.76	0.65	0.80	0.65	0.83	1.00	0.68	0.59	0.72	0.64	0.55	0.67	0.68	0.67	0.65
MIOTA	0.76	0.60	0.54	0.62	0.68	0.72	0.63	0.75	0.68	1.00	0.54	0.73	0.65	0.59	0.67	0.64	0.70	0.64
MKR	0.59	0.50	0.47	0.62	0.48	0.57	0.52	0.68	0.59	0.54	1.00	0.58	0.50	0.41	0.48	0.51	0.50	0.48
NEO	0.77	0.62	0.56	0.70	0.67	0.74	0.60	0.77	0.72	0.73	0.58	1.00	0.72	0.59	0.66	0.66	0.68	0.63
TRX	0.77	0.56	0.53	0.59	0.60	0.68	0.58	0.72	0.64	0.65	0.50	0.72	1.00	0.55	0.64	0.61	0.65	0.62
XEM	0.66	0.50	0.43	0.48	0.58	0.58	0.54	0.61	0.55	0.59	0.41	0.59	0.55	1.00	0.63	0.59	0.59	0.58
XLM	0.79	0.57	0.51	0.60	0.62	0.67	0.59	0.70	0.67	0.67	0.48	0.66	0.64	0.63	1.00	0.66	0.72	0.65
XMR	0.71	0.60	0.56	0.66	0.73	0.66	0.60	0.71	0.68	0.64	0.51	0.66	0.61	0.59	0.66	1.00	0.63	0.68
XRP	0.76	0.60	0.48	0.59	0.60	0.71	0.59	0.75	0.67	0.70	0.50	0.68	0.65	0.59	0.72	0.63	1.00	0.59
ZEC	0.72	0.55	0.55	0.62	0.70	0.62	0.59	0.70	0.65	0.64	0.48	0.63	0.62	0.58	0.65	0.68	0.59	1.00

60-Day Correlations Between MVIS Large, Mid, & Small Caps



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