DELPHI DIGITAL

Monthly Bitcoin Outlook
August 2019

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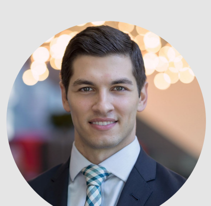

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Key Updates

Short-Term Outlook

Trend is Our Friend

Since both the original write up (data as of the end of November) and the update (data as of the end of January), UTXO holder dynamics have continued to trend mostly as expected. *This summer has been marked by an extended period of price consolidation following bitcoin's parabolic run up through the end June. The relatively tight trading range for the world's largest crypto asset recently implies a significant move is likely on the horizon.*

Long-Term Holders Stay Strong

Minimal selling coming from long-term holders throughout the consolidation period over the past few months. The portion of the network that is 1 year+ holders continues to hold steady, and we're also seeing individual move into older bands, particularly the 2 year + group. This implies significant resilience from that group considering how much of a roller coaster the past 2 years have been.

Exchange Flows Can Provide Great Signals

We illustrate the value-add potential of tracking exchange flows and the clues they can provide about market sentiment and short term buying/selling pressures. This is accomplished by tracking both Bitcoin and Stable coin flows on different time frames a**nd understanding the dynamic between those flows and price moves.**

Macro Backdrop

Yields Collapsing, Market Risks Rising

Debate has sparked in recent weeks about the "failing" macro narrative for bitcoin, in part stemming from the decoupling of BTC and gold. There are several explanations for this inconsistency, but one of the simpler justifications is the drastic difference between the incremental buyers of each. Demand for gold-backed investment vehicles, for example, has grown substantially the last few months, especially in the U.K. where uncertainty surrounding Brexit has put investors on edge. Central bank purchases have also been a key driver behind gold's recent surge, most notably those in emerging market countries.

Likewise, yields on government debt have collapsed around the world as the demand for safe haven assets increases. The bottom line is government debt simply doesn't pay out what it used to and the opportunity cost of holding non-income producing assets like gold or bitcoin continues to fall. More than $17 trillion of negative yielding debt and rising concerns of an economic slowdown should continue to drive demand for assets more isolated from such exogenous factors, including BTC and gold.

We will delve into each section individually while providing the necessary data analysis to support our opinions. It is important to note that investing in Bitcoin is risky and any decision made should be evaluated in the context of an individual investor's capability and appetite to take risk.

Prelude to UTXO Analysis

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This section of the report serves as the most recent update of the UTXO Analysis from the short term outlook we provided within "The State of Bitcoin". We utilize this analysis to identify when selling pressures will likely wane to forecast the timing of upcoming market cycles. Below you can find the key takeaways we provide rationale and support for throughout this packet.

Function of UTXOs In Our Analysis

UTXO stands for the unspent transaction output from bitcoin transactions. Every transaction creates a new UTXO, and the age of the UTXO indicates the block that it was first included in. In other words, the UTXO age indicates the last time bitcoin was moved. Analyzing Bitcoin's aggregate UTXO age distribution over time provides insight into the buying and selling patterns of previous market cycles. This allows us to forecast where we are in relation to prior cycles and what we can likely expect going forward.

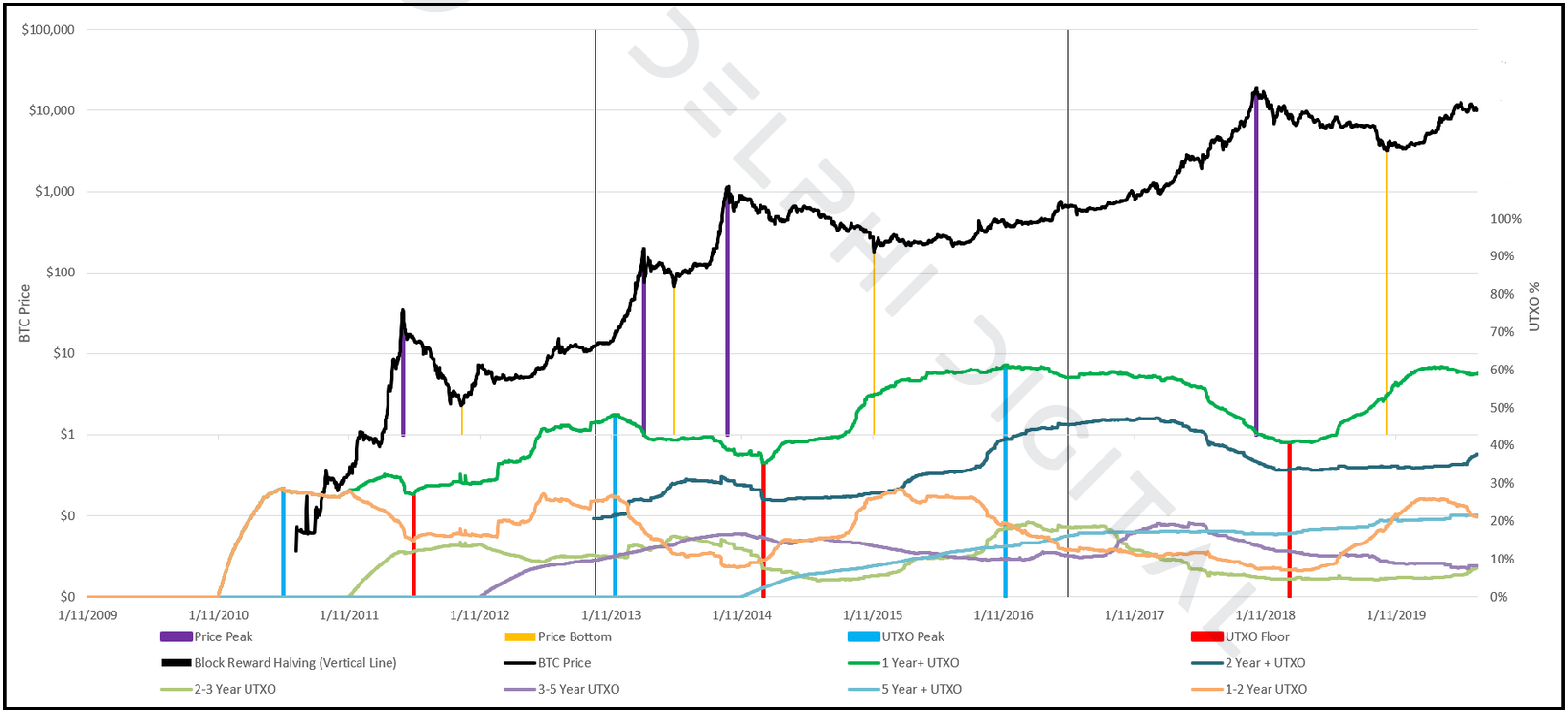
Adjustment Overview

In our first refresh of the UTXO analysis we had to adjust for a hiccup caused by Coinbase, through no fault of their own, which we further expand on below. Our analysis will permanently incorporate this adjustment to ensure the consistency over time. In early December 2018 there were several concerns surrounding the intentions of a large holder that was moving 856,000 bitcoin, a valid concern given this was ~5% of the total circulating supply. It turns out this large holder was likely Coinbase, based on a handful of factors, one of which being a scheduled maintenance announcement they issued on November 29th. Coinbase indicated the maintenance may cause movement on all Coinbase-supported blockchains over the next seven days. The issue is that a large portion of this movement came from UTXOs that haven't been moved in at least 1 year, with a concentration in UTXOs that haven't moved in 3-5 years, which would distort our aggregate analysis if left unadjusted. However, we were able to adjust for most of the shift, allowing the analysis to continue to function in its intended form. Another silver lining of the maintenance driven UTXO shift is that lost coins will make up a larger percent of the 5 year+ band, making the analysis more accurate in the long run.

UTXO Analysis & Market Cycles

August has remained a fairly quiet month in terms of holder patterns. The rapid ascent to $12k in the beginning of the month lead to underlying shifts as individuals took profits, but **profit taking has continued be dominated by short term holders, primarily by 1-3 month holders in this recent rally.**

Long term holders remain relatively unchanged with the 1 year holder rate at 59%. In August we started to see an **uptick in the 2 year holder rate as well**, which indicates that those individuals who purchased during the summer of 2017 have continued to hold despite the price volatility over the past 2 years. A similar trend happened in the build of the previous cycle with comparable levels of 2 year holders being achieved at the end of 2015. This reinforces an idea we've strongly believed in which is that a **majority of current price action is dictated by short term traders rather than a departure of long term holders.**

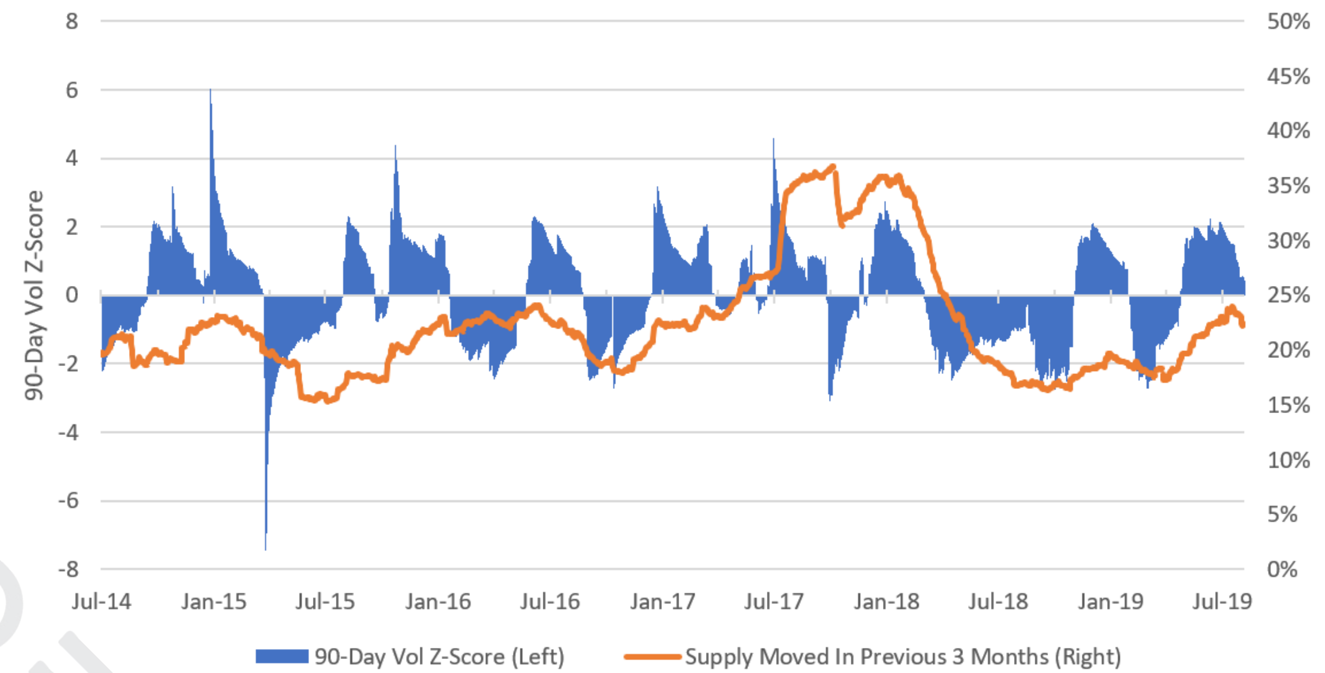


Data as of August 25th, 2019

Source: Digital Assets Data

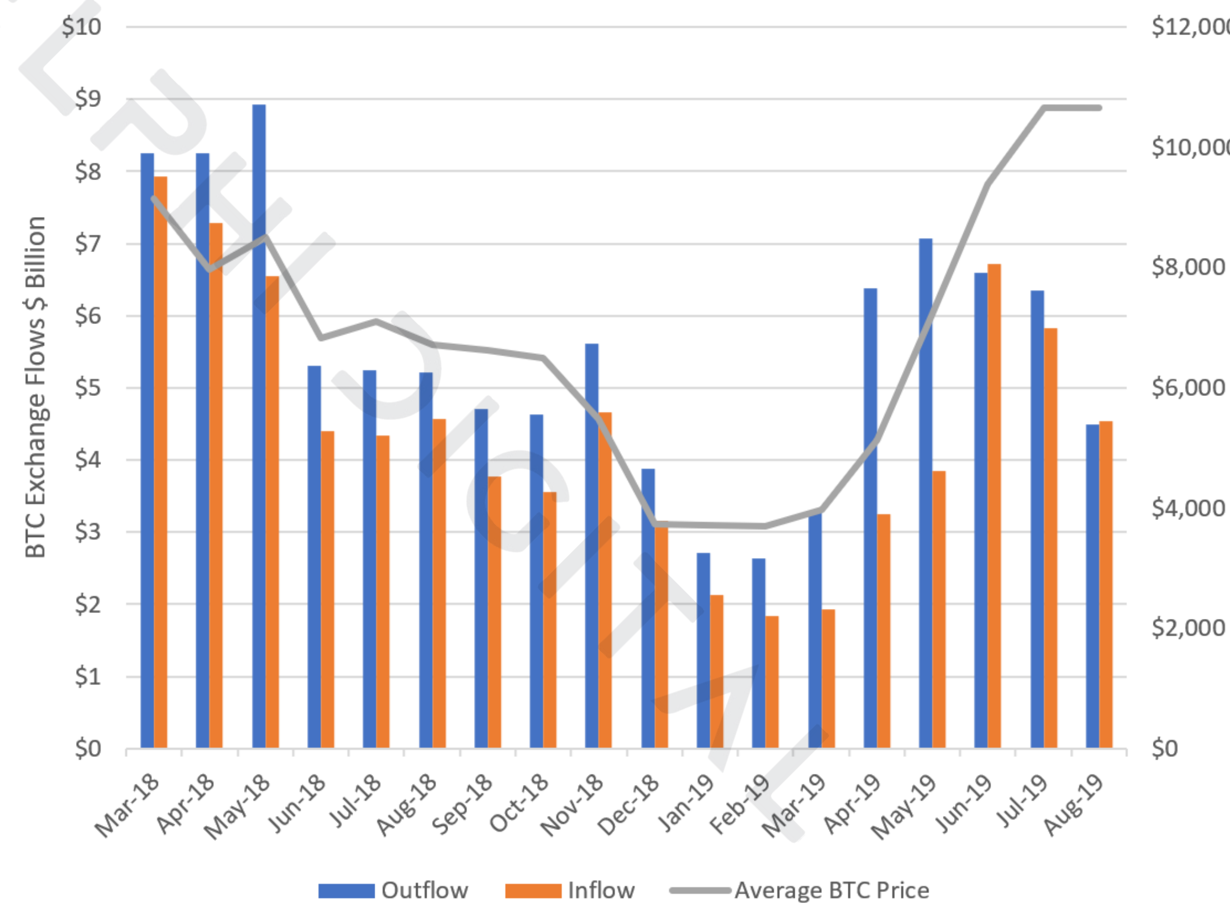
Long Term Net Exchange Flows

Volatility has recently declined a bit as price movement has been a bit more range bound towards the end of the summer. This also coincides with the latest peak and subsequent pull back in liquid supply, as evident in the chart on the right. **These spikes in liquid supply typically occur either during market cycle tops or during periods of significant volatility, as that's when you typically see the most trading occurring.** The recent price action we've seen represents a reasonably expected stage of consolidation following a several month price rally.



Exchange flows, both inflows and outflows, have come down quite a bit relative to levels in June and July. This analysis includes Binance, Bittrex, Bitstamp, Bitmex, Bitfinex and Poloniex. Outflows dwarfed inflows In the months leading up to the summer as the price of Bitcoin rallied, and this makes intuitive sense.

Flows to exchanges are typically indicative of individuals selling, while flows from exchanges suggest individuals are looking to hold. **June was the first month where inflows grew substantially, even outpacing outflows, as individuals were looking to cash in on bitcoin reaching 2019 highs. Since then, Bitcoin's price has been in a consolidation pattern and overall flows have steadily decreased, with inflows being on par with outflows.**



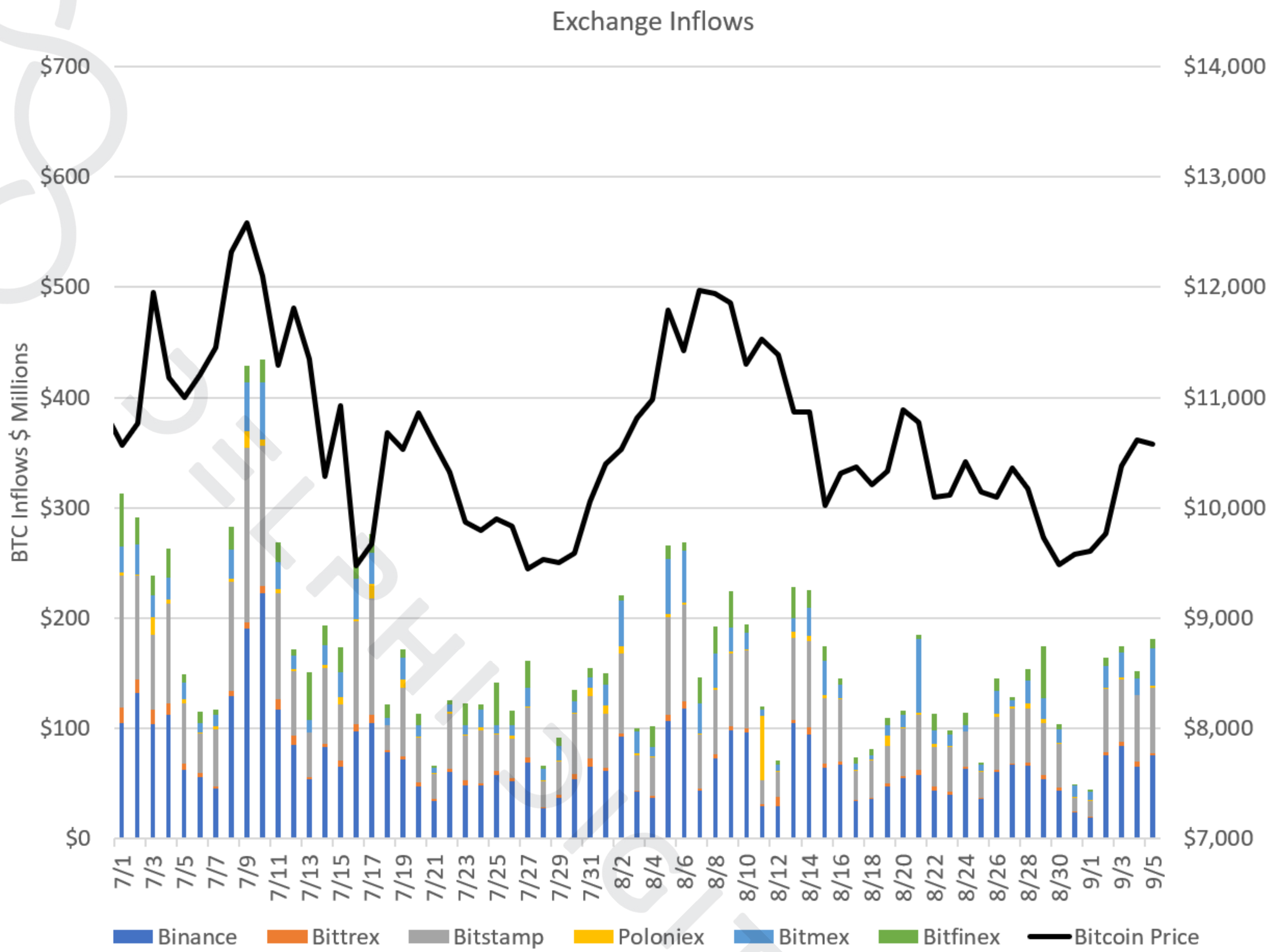
Data as of Aug 31st, 2019

Sources: Token Analyst, Digital Assets Data

BTC Inflows to Exchanges

Net flows are certainly important on larger time frames to get an idea of general sentiment from the market. It's clear in the previous chart there were significant net outflows during the big rally in Q2 as bullish sentiment really started picking up and individuals were moving Bitcoin off exchanges because they had no intention of selling in the immediate future. **However, when looking at shorter time frames, gross inflows inflows can be a stronger signal** because individuals move Bitcoin to an exchange with the intent of doing something that has a direct impact on price, selling.

With that in mind, we charted cumulative daily inflows broken down by exchanges to display the relationship. **Out of the exchanges we include, over 42% of the inflow volume ($4.4B) across July and August went to Binance.** The relationship between Bitcoin price and flows is pretty apparent. **Price rallies were typically accompanied by sizable inflows to exchanges as individuals looked to take profit.** The takeaway here is the size of the move. When large inflows took place, like in early July, it can lead to significant selling pressure. On the other hand, some of the inflows in the beginning of August didn't have an immediate impact on price. Inflows to exchanges declined ~30% month over month in August, but that's just a function of general flow decline this month.

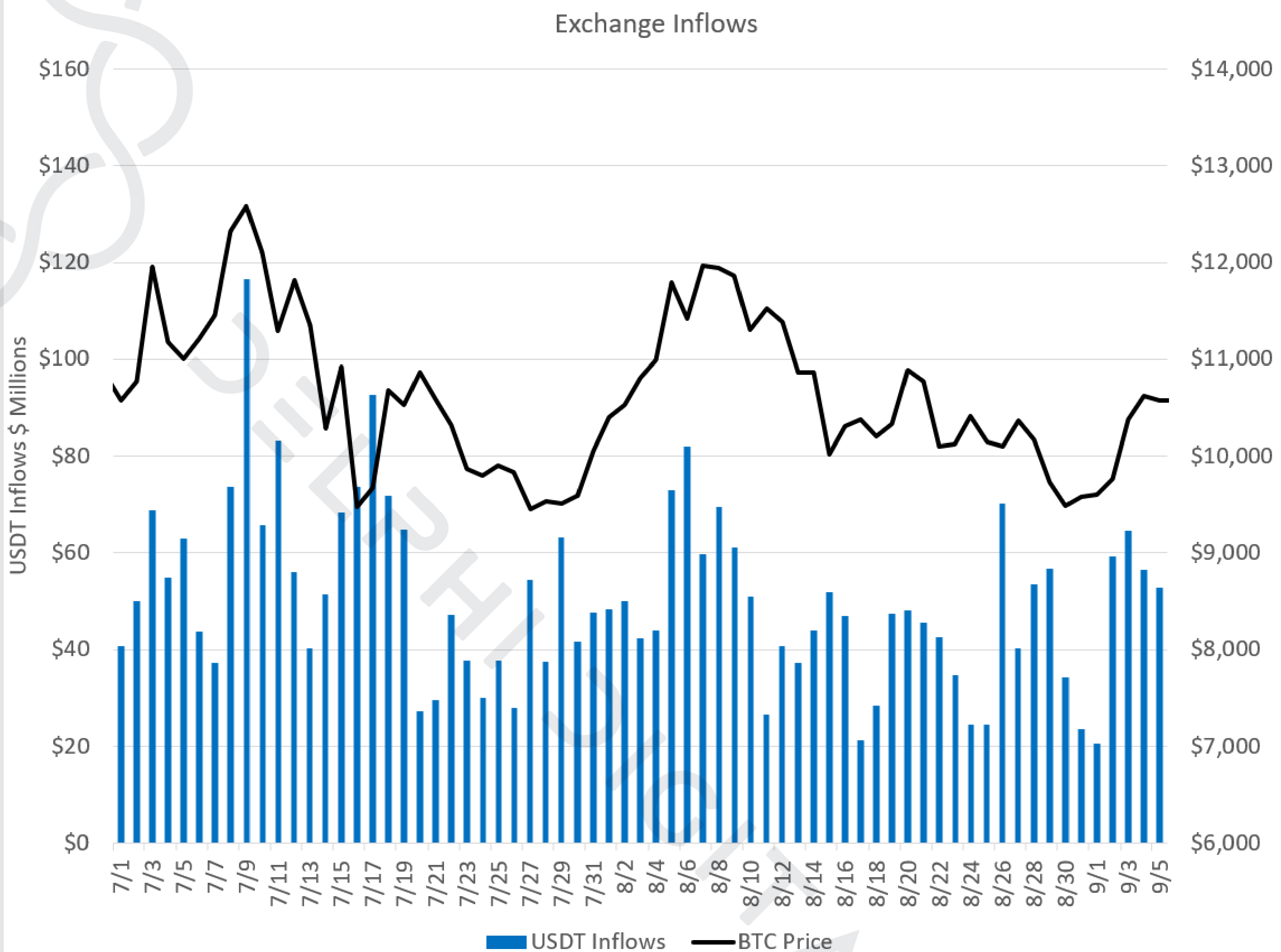


Data as of Sept 5th, 2019
Sources: Token Analyst.

USDT Inflows to Exchanges

Knowing that moves to exchanges have a more direct impact on price, it's worth tracking stable coin flows to exchanges. On the right we combine both omni and erc-20 USDT inflows on a daily basis. Tether has been migrating coins from omni, which uses the BTC network, to erc-20, which uses the ETH network. This transition is taking place because Ethereum's block confirmation time is a lot shorter, fees are smaller, and it becomes immediately compatible with a variety of wallets.

USDT inflows definitely offer some predictive value as these transfers to exchanges generally translate to immediate demand. Although there are instances where large inflows can come in during a rally to suggest some more continuation, **we believe the more interesting dynamic is how these inflows can also predict a potential local bottom. USDT Inflows that take place as price is declining can signal the arrival buying support.** You can see this dynamic at play during the dip in the middle of July, end of July and the end of August.



Data as of July 31th, 2019

Sources: Token Analyst, Unchained Capital

UTXO Adjusted NVTS

UTXO adjusted NVTS has remained relatively flat over the course of the month and it **isn't in clear buy or sell territory**. This variation of the ratio adjusts the market cap to only account for the liquid portion that's being used to support on chain activity. Although on-chain volume has decreased this month, price has decreased along with it, causing the ratio to remain relatively flat.

Data as of August 25th, 2019

Source: Digital Assets Data, Coinmetrics

Summer of Consolidation

This summer has been marked by an extended period of price consolidation following bitcoin's parabolic run up through the end June. The relatively tight trading range for the world's largest crypto asset recently implies a significant move is likely on the horizon. **A breakout above the $11,000 - $11,200 range for BTC could be the catalyst for another strong move higher.** Conversely, a break below ~$9,400 may signal more pain ahead in the near term, though we've seen significant buying pressure in this range, evident in bitcoin's quick bounce off these levels in mid-to-late July and the end of August. Volatility for BTC has been trending lower as well, though it remains more elevated than levels seen in Q4 2018 just before bitcoin's major sell off and those in early April before BTC's rapid upward move.

Bitcoin Price Consolidates

Data as of September 6th, 2019

Source: Coinbase, TradingView

Key Technicals

There are a few key indicators for bitcoin that have turned positive recently, notably the most recent bullish crossover on the daily MACD. Over the last three years, the median and average return for BTC in the 14 days following such an event is 2.5% and 3%, respectively.

However, we did note a similar bullish crossover in last month's Bitcoin Monthly Outlook, though the positive momentum for BTC was relatively short lived.

BTC vs. Daily MACD

BTC vs. 50, 100, 200-Day MAs

Bitcoin continues to fluctuate around its 50 and 100-day moving averages, briefly dipping below the latter earlier this month for the first time since early March. Bitcoin's 100-day moving average has served as a key support level in prior bull runs, so any substantial drop below it would warrant some concern.

Its longer term weekly moving averages are all trending higher, however, providing further reassurance of the strength of BTC's recovery thus far.

Data as of September 6th, 2019
Source: Coinbase, TradingView

Non-Sovereign, Uncorrelated Asset

It is tough to argue BTC is a “safe haven” in its current form, **but its appeal as a non-sovereign, uncorrelated asset is difficult to dismiss.** The correlation between bitcoin and more conventional asset classes like stocks, bonds, and commodities has risen the last several months, in part driven by the growing awareness of BTC and its potential value as a hedging instrument for more traditional investors. However, over a longer time horizon (i.e. 3 years), these relationships are largely inconsistent.

Asset Correlation with BTC (3 Years)

	BTC	GLD	IWV	QQQ	SPY	TLT	VIXY
BTC	1	0.032	-0.0064	-0.015	-0.0054	0.0038	-0.015
GLD	0.032	1	-0.11	-0.079	-0.11	0.45	0.12
IWV	-0.0064	-0.11	1	0.92	1	-0.31	-0.83
QQQ	-0.015	-0.079	0.92	1	0.92	-0.21	-0.77
SPY	-0.0054	-0.11	1	0.92	1	-0.3	-0.84
TLT	0.0038	0.45	-0.31	-0.21	-0.3	1	0.25
VIXY	-0.015	0.12	-0.83	-0.77	-0.84	0.25	1

Asset Correlation with BTC (Year-to-Date)

	BTC	GLD	IWV	QQQ	SPY	TLT	VIXY
BTC	1	0.19	-0.19	-0.17	-0.18	0.061	0.21
GLD	0.19	1	-0.25	-0.23	-0.25	0.57	0.3
IWV	-0.19	-0.25	1	0.95	1	-0.55	-0.88
QQQ	-0.17	-0.23	0.95	1	0.95	-0.49	-0.82
SPY	-0.18	-0.25	1	0.95	1	-0.55	-0.88
TLT	0.061	0.57	-0.55	-0.49	-0.55	1	0.52
VIXY	0.21	0.3	-0.88	-0.82	-0.88	0.52	1

Data as of September 5th, 2019

Source: Digital Assets Data

Physical vs. Digital Gold

There has been quite a bit of chatter in recent weeks about the "failing" macro narrative for bitcoin, in part stemming from the decoupling of BTC and gold. If bitcoin is this ultimate non-sovereign store-of-value, why doesn't it consistently trade in line with its physical counterpart? There are several explanations for this inconsistency, but **one of the simpler justifications is the drastic difference between the incremental buyers of each.** Gold rapidly made its way back into the limelight earlier this summer following its 10% jump in the first few weeks of June. Tens of trillions of dollars in negative yielding debt and rising concerns of an economic slowdown initially pushed investors towards the precious metal, a trend that hasn't slowed much since.

BTC vs. Gold 90-Day Correlation

Demand for gold-backed investment vehicles, for example, has grown substantially the last few months, especially in the U.K. where uncertainty surrounding Brexit has put investors on edge. Global gold-backed exchange traded products saw net inflows of $6 billion in August, according to data from the World Gold Council, continuing a trend of strong demand throughout this summer. Bitcoin investors, on the other hand, do not have access to the same kind of investment vehicles, limiting the potential pool of buyers in the short to intermediate term.

Central bank purchases have also been a key driver behind gold's recent surge, most notably those in emerging market countries. China and Russia are two leaders in the movement away from U.S. dollar dependence in favor of non-sovereign reserve assets like gold. In contrast, central banks are not stocking up on bitcoin in a similar fashion (at least as far as we know), which may exacerbate the dislocation between BTC and gold in the foreseeable future.

Data as of September 6th, 2019
Source: Coinbase, IDC, TradingView

Falling Yields Favor Bitcoin & Gold

Across the world, yields on government debt have collapsed in recent months as investors bid up the price of "safe" assets. Growing pessimism towards the global economy sparked by ongoing trade wars and tariffs have pushed yields on U.S. 10-year Treasuries below 1.6% for the first time in three years. The yield on its 30-year counterpart dipped below 2% in August for the first time on record. There are many potential causes behind such a rapid decline (see our most recent Quarterly Macro Outlook for more detail), **but the bottom line is government debt simply doesn't pay out what it used to.** On the other hand, **the opportunity cost of holding non-income producing assets like gold or bitcoin continues to fall.** However, unlike physical gold, the storage costs of BTC are rather minimal, though it is a far more volatile asset.

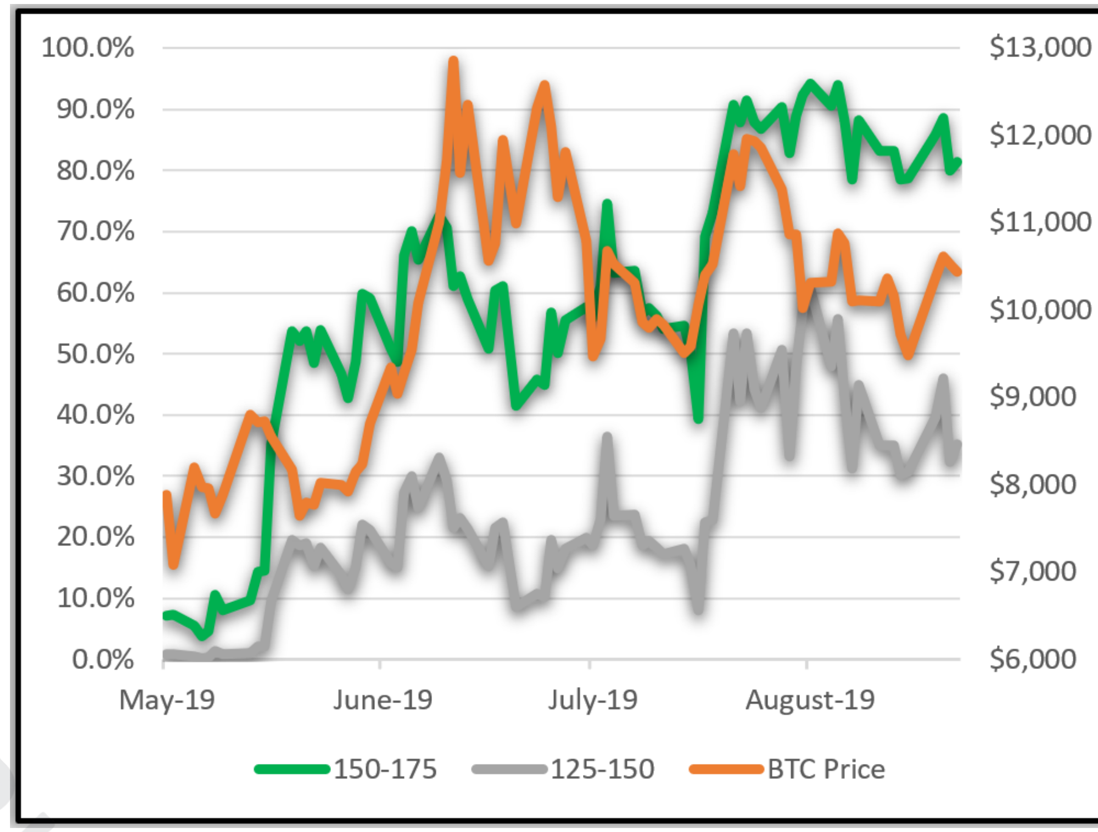
Gold vs. U.S. 10-Year Treasury Yield (Inverted)

Data as of September 6th, 2019
Source: TradingView, IDC

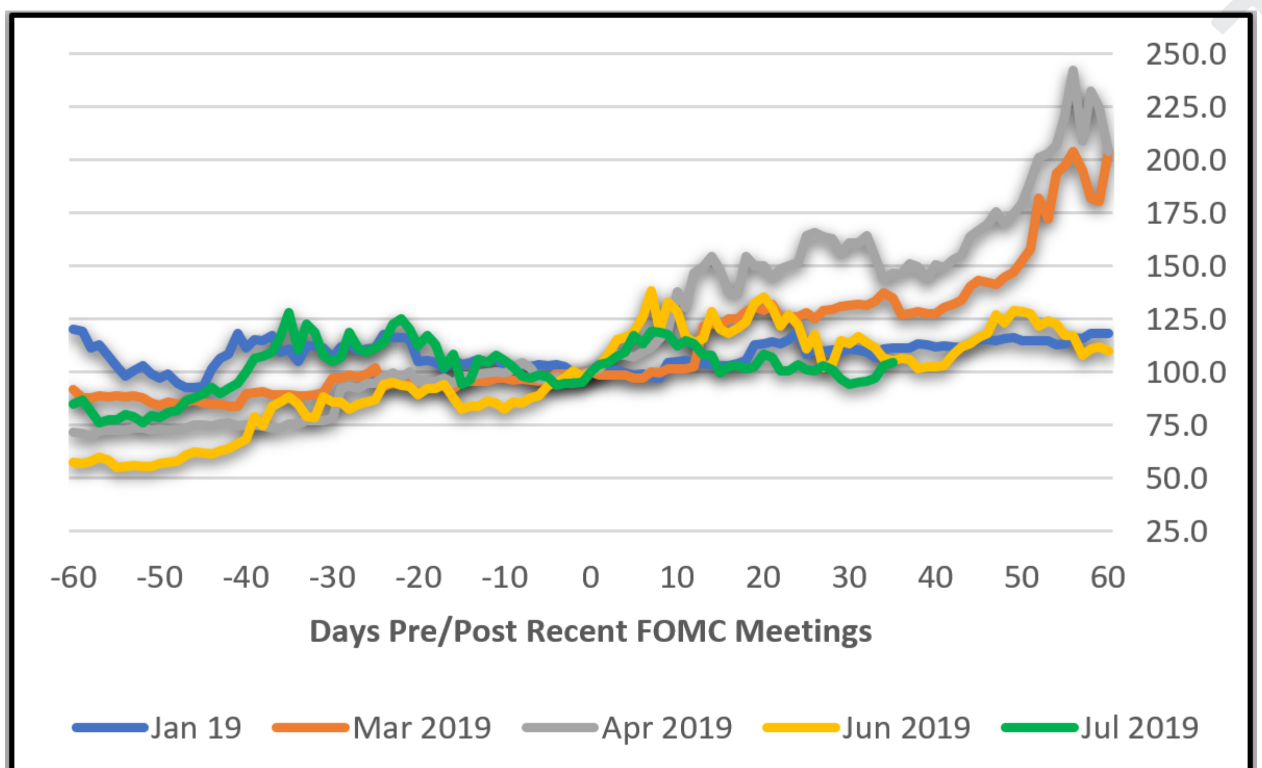
FOMC Meeting Performance

The Federal Reserve is the focal point of global monetary policy, placing a considerable onus on the U.S. central bank's decisions going forward. **The "Powell Pivot" reversed the Fed's monetary policy stance from hawkish (tighter) to dovish (looser) in a matter of months earlier this year as the outlook for both the global and domestic economy became threatened by the fallout from U.S.-China trade disputes and the growing burden of tariffs.** The market has essentially priced in at least a 25 bps cut by The Federal Open Market Committee (FOMC) when they meet later this month (Sep. 17-18th). Interestingly, this comes at a time when economic data in the U.S. is showing mild signs of improvement.

Fed Rate Cut Probabilities - Dec. '19 Meeting



BTC Price Normalized Pre/Post 2019 FOMC Meetings



The Citi U.S. Economic Surprise Index, which tracks the pace of economic indicators coming in above or below consensus expectations, has turned positive for the first time since February. **Nevertheless, the probability the Fed cuts rates at least three more times (or 75 bps) by the end of the year is hovering near 35%,** according to Fed funds futures tracked by The CME Group. The average return for BTC in the 60 days following 2019 FOMC meetings is 60%, largely driven by its +100% gains following the March and April meetings. Other factors certainly played into bitcoin's stellar performance over these periods, **but the macro narrative surrounding BTC has only strengthened because of the Fed's policy pivot this year.**

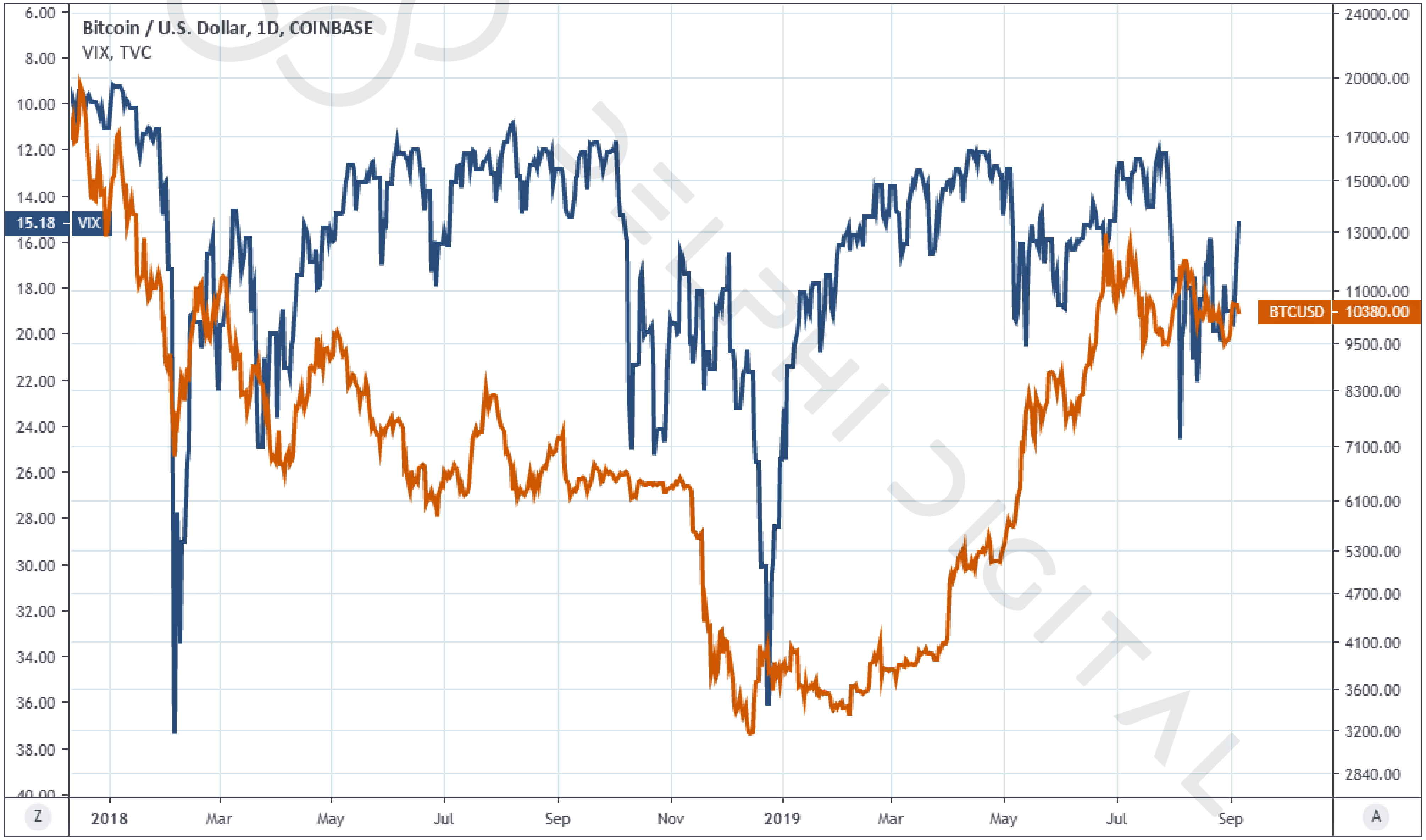
Data as of September 6th, 2019

Source: Coinmetrics.io, The CME Group, The Federal Reserve

Bitcoin vs. Market Volatility

While bitcoin maintains little to no correlation with traditional asset classes over long time periods, BTC typically performs poorly when expectations for market volatility spike. The VIX Index, which measures the market's expectation of 30-day forward-looking volatility, jumped to its highest level since the first week of January at the beginning of August, which may be a contributing factor to the cap on bitcoin's price recently. **Importantly, market volatility typically rises in the final stages of long bull runs, so greater fluctuations in asset prices are likely to occur more frequently going forward.**

BTC Price vs. VIX Index (Inverted)

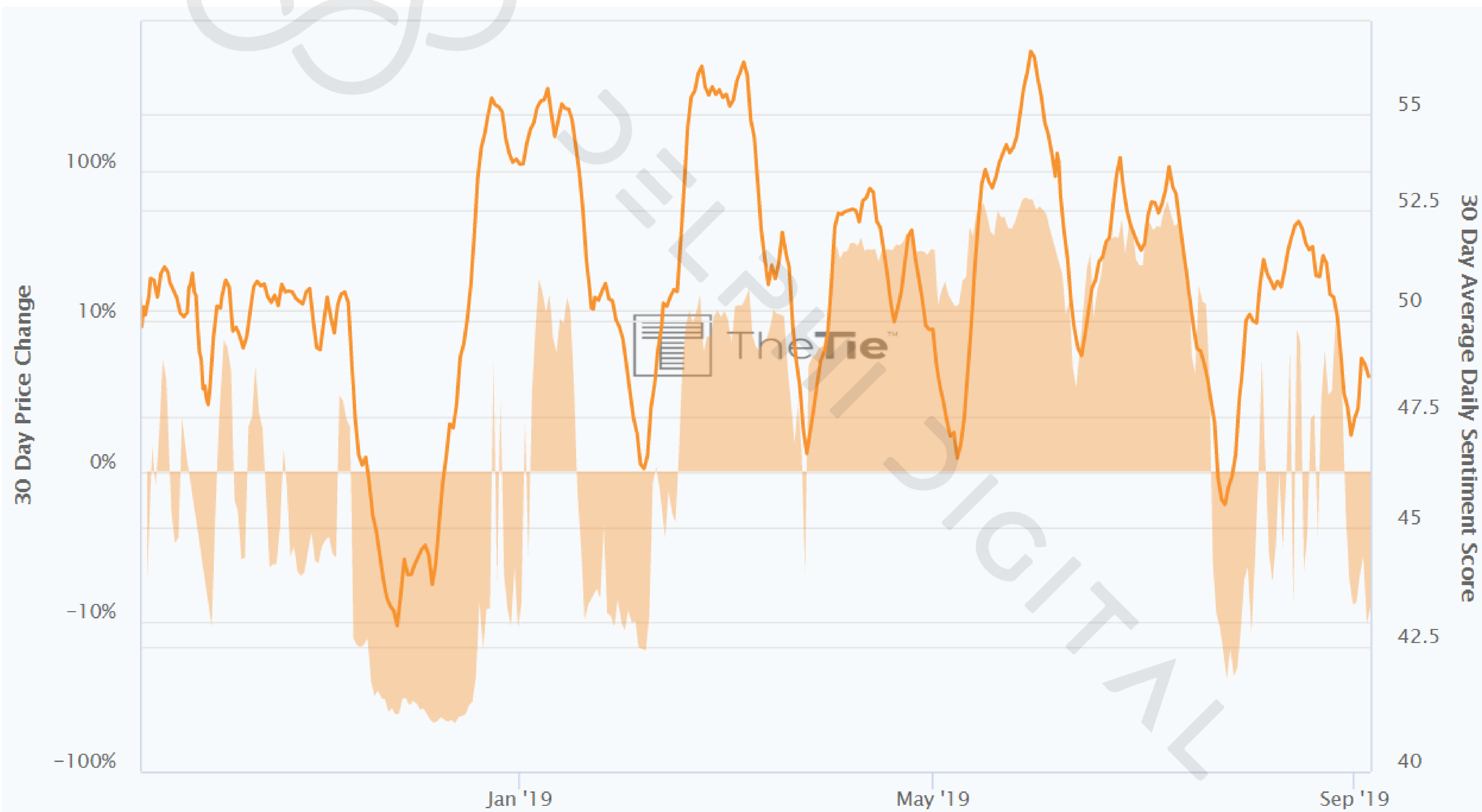


Data as of September 6th, 2019
Source: Coinbase, TradingView, Cboe

Bitcoin Sentiment Mixed

Sentiment is a critical driver of performance in the crypto markets. It can add fuel to the fire during uptrends, accelerating gains as more traders and investors pile in. However, sentiment can reverse course on a dime, which is why we monitor it closely for any indication of short-term price action. **Bitcoin's 30-day average daily sentiment score, a proprietary gauge formulated by The TIE, rolled over at the start of July, coinciding with the sizable pullback in BTC.** The indicator has fluctuated a great deal since, but a recovery in sentiment is likely necessary if bitcoin is to break to new year-to-date highs.

BTC 30-Day Price Change vs. 30-Day Avg. Daily Sentiment Score (The TIE)



Data as of September 6th, 2019
Source: TheTIE.io

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