ENIGMA SECURITIES

De-Coding Crypto

Weekly Analysis

ASOL in aberration and the mempool dump

November 20, 2019

In this week's issue, we focus on the ASOL metric, assess the extreme spike registered in it this week, and discuss whether it should be taken seriously. We also examine how on-chain metrics can be distorted even in the case of legitimate activity.

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Our Market View

May you live in interesting times. As expected, a difficult week, as the bleed downwards took us right to the bottom of the $8000-$8500 range discussed in the last weekly. The question now, then: where does it end? While the temptation continues to be to draw parallels with November 2018, and there are certainly similarities between then and now, we see a situation where key variables are bending, but not breaking.

While there is always risk with trying to catch a falling knife, our tendency is to see the current price level as at or extremely close to a local bottom. The bleed seems unlikely to continue below $8000, and we consider a cascade downwards from there unlikely under current conditions; hence, we expect a short-term reversal within the next week.

Please direct all queries about this week's research to jedwards@enigma-securities.io.

Market Snapshot

Major

Ticker	Price	7D	1M	6M	12M	Cap
BTC	8085.47	-7.58%	-1.40%	0.15%	88.40%	146.0B
ETH	174.922	-6.21%	0.69%	-30.61%	43.95%	19.00B
XRP	0.250953	-7.63%	-13.84%	-35.34%	-37.66%	10.87B
BCH	240.007	-15.78%	2.44%	-40.91%	17.18%	4.35B
LTC	55.0483	-9.35%	1.27%	-46.58%	73.54%	3.51B
EOS	3.10001	-10.08%	6.78%	-51.60%	-12.80%	2.95B

Selected

Ticker	Price	7D	1M	6M	12M	Cap
LINK	2.76562	-7.73%	7.60%	19.30%	N/A	1.01B

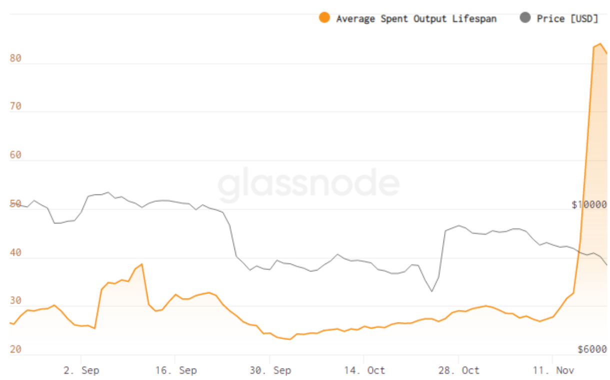
ASOL in aberration and the mempool dump

We have talked in past issues of the weekly about Glassnode's on-chain metric ASOL (Average Spent Output Lifespan) and how we consider it one of the more edifying on-chain metrics for predicting price action on BTC ahead of time. For a fuller view, see our October 10th edition, but for the quick digest, this is how we explained it then:

> To put it as simply as possible, ASOL is derived from spent transaction outputs - so, for instance, if a coin was moved into a wallet 100 days ago, and then was moved from that wallet to another wallet today, the spent output lifespan would be 100. This is calculated across all transactions on the blockchain, so does not exclusively refer to exchanges between crypto and any other token or currency; nonetheless, as with most blockchain metrics, these are clearly the major guiding hand on it.

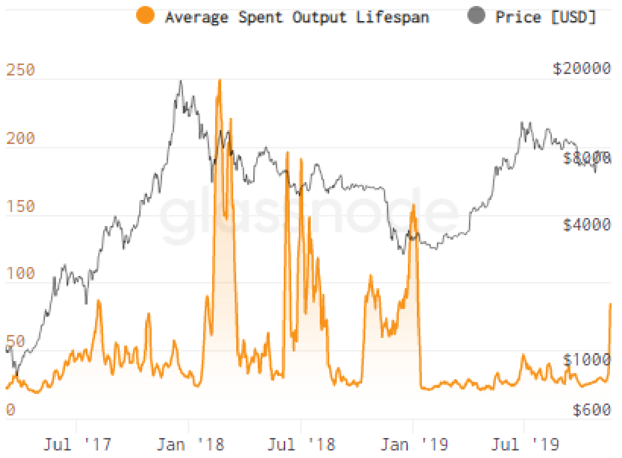
ASOL is not the simplest metric to interpret, but as a general rule, a low ASOL leans towards being a bullish metric, and a high ASOL leans towards being a bearish one, because it tends to reflect whether or not long-term holders are moving to liquidate their positions, and because a downwards trend and local trough has tended to help signal breaking points for volatility and hence the conditions for a breakout.

With that in mind, the current 3-month graph is a little concerning:



Credit: Glassnode. 7-day MA.

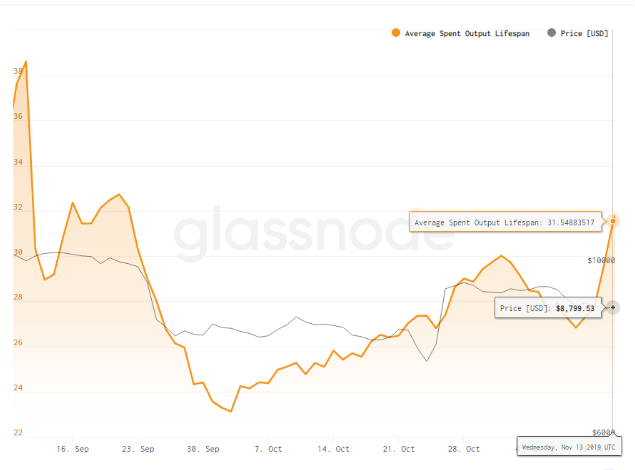
This level is absolutely without precedent over the last few months. That isn't to say that there isn't any precedent for it more broadly, but the precedents are not exactly reassuring ones:



Credit: Glassnode. 7-day MA.

Significant ASOL spikes lead the drawdowns in both February 2018 and October/November 2018. Similar spikes in July 2018 and January 2019 saw less destructive price action, but neither particularly augured well, and on a smaller scale, ASOL was effective at finding the tops through the late summer and autumn consolidation this year.

Is it time, then, to panic? We should note that the ASOL trend in general has not been too encouraging, and prior to escalation over the weekend, we were already seeing notable growth in daily and 7-day levels (after near-historic lows in late September and October):

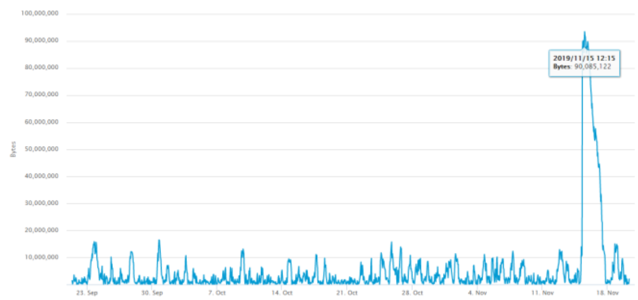


Credit: Glassnode. 7-day MA.

While not totally invalidating the possibility of a breakout upwards (see the breakout in March), this undoubtedly did cast something of a bearish shadow on price.

However, we do not believe that the rise from Friday onwards has any implication either way for price levels. Why? The key here comes in the form of another on-chain metric that was raising concern over weekend - namely, the mempool.

Put simply, the mempool is comprised of all the transactions currently waiting to be confirmed on the BTC blockchain. This tends to be fairly low, usually in the range of 5-15MB, and periodically getting cleared entirely; at times of extremely high volume, it tops 50MB. On Friday, for the first time since the early 2018 bubble, it was all the way up to 90MB:



Credit: Blockchain.com.

Why? Somebody was attempting to process an incredibly high number of transactions, for small individual quantities of BTC, at the minimum transaction fee (1 satoshi, i.e. one-hundred-millionth of 1 BTC) for each, and at a time where volatility and volume on BTC everywhere were both minimal.

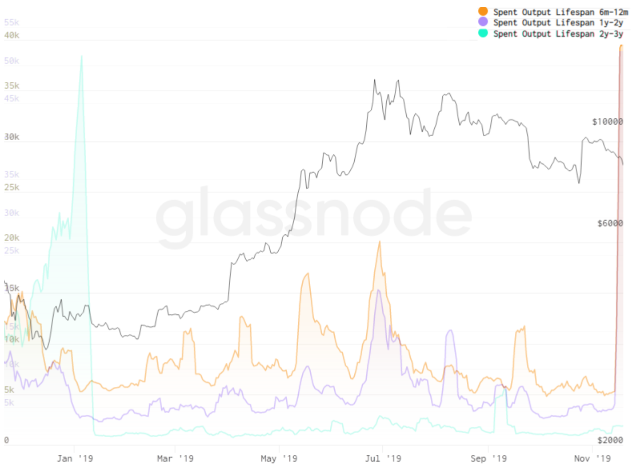
Why, then, was it? The working theory that most quickly came through was that it was an entity with large holdings spread across multiple wallets consolidating said wallets (i.e. almost certainly an exchange, given that said entity would have to be transacting in a way where they could end up with such a situation technically-speaking); Sergej Kotliar, CEO at Stockholm-based BitRefill (and one of the first to notice the mempool spike) provided a more specific answer:

> Did a bit of friday afternoon digging. The origin of this dump can be found here...That BTC address (1FoWyxwPXuj4C6abqwhjDWdz6D4PZgYRjA) is Binance's Tether wallet. Each tether tx creates one dust output of 546 sats and this cleans up ~a million of them.

In all, while it caused some concern at first, this was a non-event; any transaction with a fee over 1 satoshi was processed as normal, the 1 satoshi transactions were slowly worked through on quick blocks that would otherwise have been underweight, and the whole backlog was cleared over the course of the weekend.

Operationally, it didn't matter; but, it does create some distortion in metrics. In general, most BTC that move around on the network are being transacted over and over, which is why ASOL tends to measure in the 20-40 day range (and why we use it over MSOL, which provides a median figure instead); the last time that the majority of coins being moved were not coins already moved in the previous 24 hours were a handful of days in July 2018. Even extreme spikes in ASOL only mean the proportion of transactions on coins previously held for 3 months or more going from 2-3% to 8-10%, maybe reaching 15+% in crypto winter-level events.

Hence, a consolidation such as the weekend's drives ASOL up hugely on its own, because if there is a need for such a memcap-changing wave in the first place, it implies the movement of coins that have been sitting untransacted for a long time indeed. Going back to Glassnode data, they chart out spent outputs for a number of different age ranges, and looking at three of those graphs overlaid - 6m-12m, 1y-2y, and 2y-3y - is illustrative:



Credit: Glassnode. 7-day MA. Vertical axis for each data set is 0-to-peak over period (last 1 year)

The 6m-12m and 1y-2y graphs saw an enormous uptick over the weekend, while the 2y-3y graph was completely flat, which makes perfect sense; Binance only launched in July 2017, and only really took off towards the very end of the year, meaning that even if these coins had not been touched since day 1 they would largely not fall in the 2y+ range. For some measure of comparison, Binance BTCUSDT volumes were $220m combined for 1st-15th November 2017 (with the usual caveats about potential inflation with old numbers even on exchanges generally now considered to be mostly clean), compared to a sum of $4.80b and a daily average of $320m over the same period in 2019.

These output bands are not useful as hard-and-fast measurements long-term for too many reasons to enumerate here, but for this event, they illustrate the point well - we see the jump in ASOL as essentially 100% predicated on this internal Binance movement.

We in general are still mindful of ASOL movements and other risk factors going forward into November (though we overall do lean bullish over the month at the moment), but we see this weekend's movement on it as neither bearish or bullish, and simply an unfortunate consequence of unusual (legitimate) activity on the blockchain.

What we're reading

Bitcoin Mining Firms Merge to Build World's Largest Purported Mining Farm in 2020 (CoinTelegraph); The notable thing here is that it's yet another major Texas-based operation, following Bitmain opening a farm last month, and Peter Thiel-backed Layer1 raising $50m for its own vertically-integrated farm project next year. The tendency can be to think of such projects as a challenge to Chinese mining, but in truth there's a degree to which they're complementary; wind power is the dominant renewable in Texas (and what most farms are being built to ake advantage of), meaning that generation will tend to be higher in the poor winter months for hydroelectric-based operations.

Bank of America Ices Ex-PayPal CFO's Account, 'Did You Buy Any Bitcoin?' (CoinTelegraph); Amusing week for PayPal between this, their highly derided decision to cut off payment processing for adult website PornHub, and the company investing in a crypto risk management platform. PayPal probably did more in the early-2010s to drive early crypto adoption given the combination of their pioneering status in payment processing and their extremely capricious attitude towards freezing and seizing customer accounts at that time, so it's always interesting to see how they continue to drive the industry forwards both purposefully and accidentally.

Grayscale Bitcoin Trust's Step Forward with SEC Filing (Medium): Grayscale continues to try to stay one step ahead of rivals in its offerings of regulated products. The timing is interesting given how many of its inflows come from miners and how much uncertainty is still abound for mining activity in the next few weeks.

Singapore Poised to Allow Crypto Derivatives on Approved Venues (Bloomberg): Very significant. Singapore has been in an odd state vis-a-vis crypto over the last year or so; plenty of events, plenty of interest all the way up the ladder, but very little actual activity compared to the East Asian countries. The issue has been that, while there is a keenness for innovation and to move in support of that, the nature of the regulatory environment makes "better to ask forgiveness than seek permission" an unspeakable curse. As important as regulated markets are for enabling entry by larger clients in most areas, they are far, far moreso in Singapore.

Until next week – thank you for reading.

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