The Weekly Update

Week 37, 2022

luno

Provided by arcane research

1

Market Update

- BTC is down 13% in the last seven days after a wide de-risking response to another negative inflation surprise last week as market participants brace for tightening conditions after tomorrow's FOMC.
- The merge became a sell-the-news event. ETHUSD is down 17% since the merge and has fallen 13% compared to BTC, as ETHBTC currently trades at 0.07.
- Ethereum PoW forks have underperformed Ether seeing losses extending 66% since launching five days ago.
- All eyes are on the FOMC this week after yet another negative inflation surprise reaped havoc in crypto and equities alike, and this FOMC is likely to introduce volatility to the market.

2

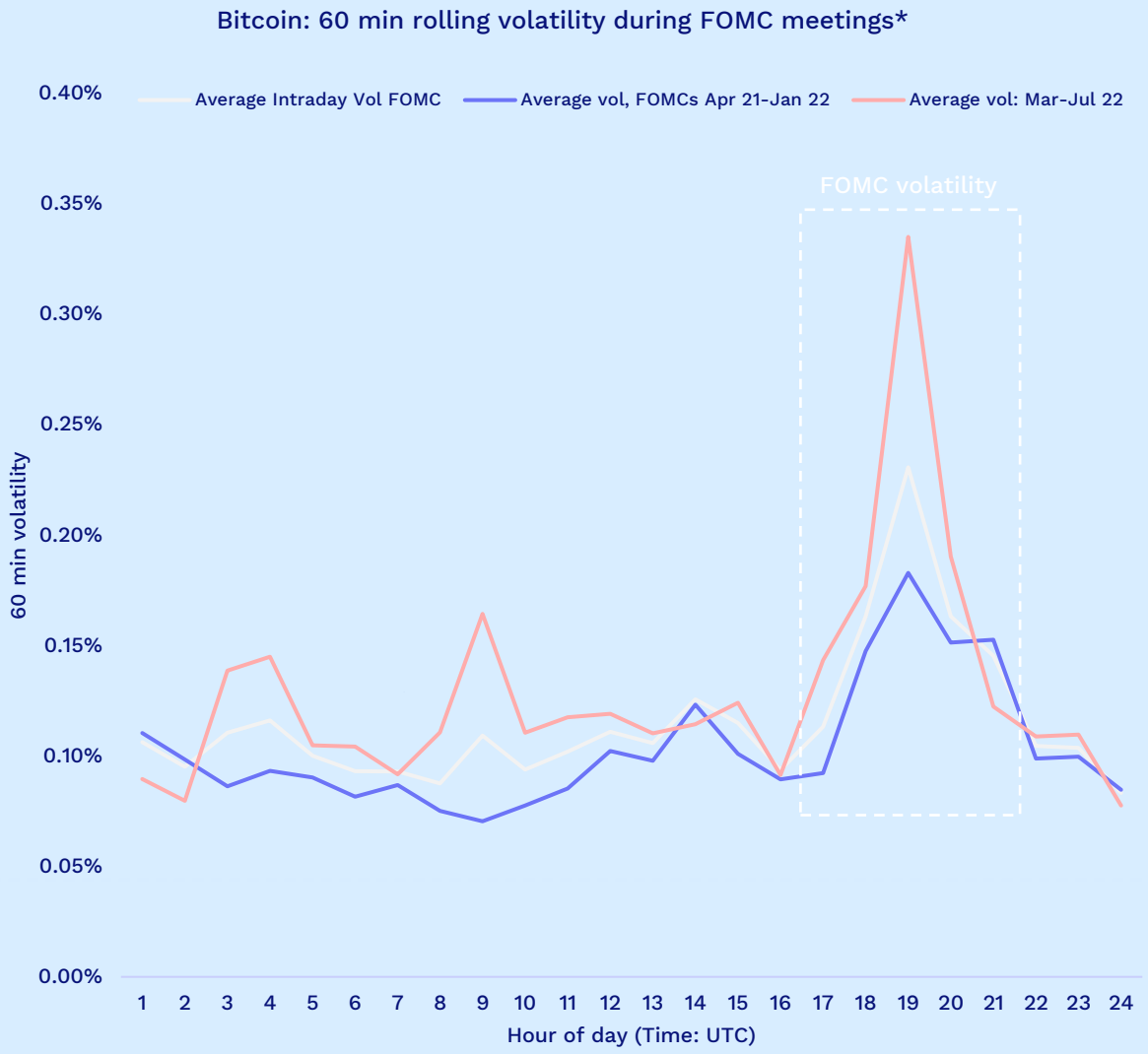
Valuation

- Bitcoin again revisits range lows after a tumultuous week.
- Funding rates declined to a 12-week low on Monday as BTC visited June lows.
- Ethereum funding rates and futures basis has normalized post-merge, and the derivatives normalization had no major impact on prices.

3

Blockchain Activity

- The profitability of bitcoin mining has fallen to 2020 levels due to the lethal combination of the declining bitcoin price and surging mining difficulty.
- Less than a week after the successful merge, Ethereum staking is facing increased scrutiny for being overly centralized. The data shows that staked ether is highly concentrated to a small set of large depositors but doesn't equate to the same centralization of voting power.



Source: FTX API (Minutely trade data during FOMC meetings)

All eyes on this week's FOMC as macro sends crypto south

- BTC is down 13% in the last seven days after a wide de-risking response to another negative inflation surprise last week as market participants brace for tightening conditions after tomorrow's FOMC. BTC has fallen in tandem with Nasdaq (-7%) and the S&P 500 (-6%), albeit on a higher beta.

- ETH has faced an even stronger downward pressure. After the successful merge last Thursday, ETH has plunged 20% and now trades at 0.07 versus BTC, on par with the average price in the last year. Short-term, the merge was a sell-the-news event, but now, market conditions have normalized, and fork effects have settled.

- Interestingly, BNB has outperformed both ETH and BTC in this challenging environment, seeing losses of 7% as Binance benefits from both enhanced volumes amid soaring volatility and an already established PoSA consensus mechanism.

- This morning, Wintermute announced a hack amounting to $160m involving their DeFi operations. The hack likely utilized a vulnerability identified by 1inch, explained in detail by Mudit Gupta. In short, the hack may have been run by brute forcing with GPUs. The lost funds include 671 WBTC and 6,900 WETH + approximately $100m worth of stablecoins, and the situation is worth monitoring.

Last week of top 50 by market capitalization

Best Performing	Price	Last week	Last month	YTD
Chiliz	0.24	21.1%	32.5%	-18%
XRP	0.38	6.3%	12.6%	-55%
ApeCoin	5.78	5.8%	14.8%	-54%

Worst Performing	Price	Last week	Last month	YTD
Ethereum Classic	30.09	-21.5%	-9.0%	-16%
NEAR Protocol	3.97	-21.4%	-4.4%	-73%
Avalanche	16.87	-20.9%	-24.3%	-85%

Source: CoinGecko, messari.io

Bitcoin Correlation:

90-day correlation (weekly change included)	ETH		GOLD		S&P500	
BTC	0.832	-0.037	0.321	0.075	0.620	0.006

Source: CoinMetrics

Top 3 by Market Cap: Percentage Change in Price Over the Last Week

Source: Tradingview (Coinbase, Binance US)

Crypto investors are seeking refuge in stablecoins

As usual, during market routs, crypto investors are moving funds into stablecoins – the safe haven assets of the crypto market.

- September has historically been the weakest month for the crypto market, and there isn't much optimism to identify this year either. So far in September, all our indexes are either flat or slightly down. The Mid Caps Index is flat, bitcoin is down 2%, the Small Caps Index has declined by 5%, and the Large Caps Index is the worst performer after falling by 6%.

- The Large Caps Index's poor performance is mainly caused by ETH, which experienced a sell-off following the merge last week. Its underperformance has resulted in it losing a 1.9 p.p. market share over the past seven days.

- September started promising for the crypto market, with all indexes up between 8% and 15%. We saw a slight decline a couple of days before the merge as some traders attempted to front run a potential sell-the-news event. It turned out these traders were right, as all indexes have continued plummeting after the merge.

- Stablecoins are stealing market shares from BTC and particularly ETH. The current highly uncertain market environment has led the sentiment to fall to extreme fear (next slide), incentivizing crypto traders to reduce risk by rotating into stablecoins. USDT grew its market share by 0.9 p.p., USDC by 0.52 p.p., and BUSD by 0.3 p.p.

- Over the past seven days, the total crypto market cap declined by 11%. At the same time, the combined market cap of the three largest stablecoins has stayed put, ultimately leading their market dominance to surge.

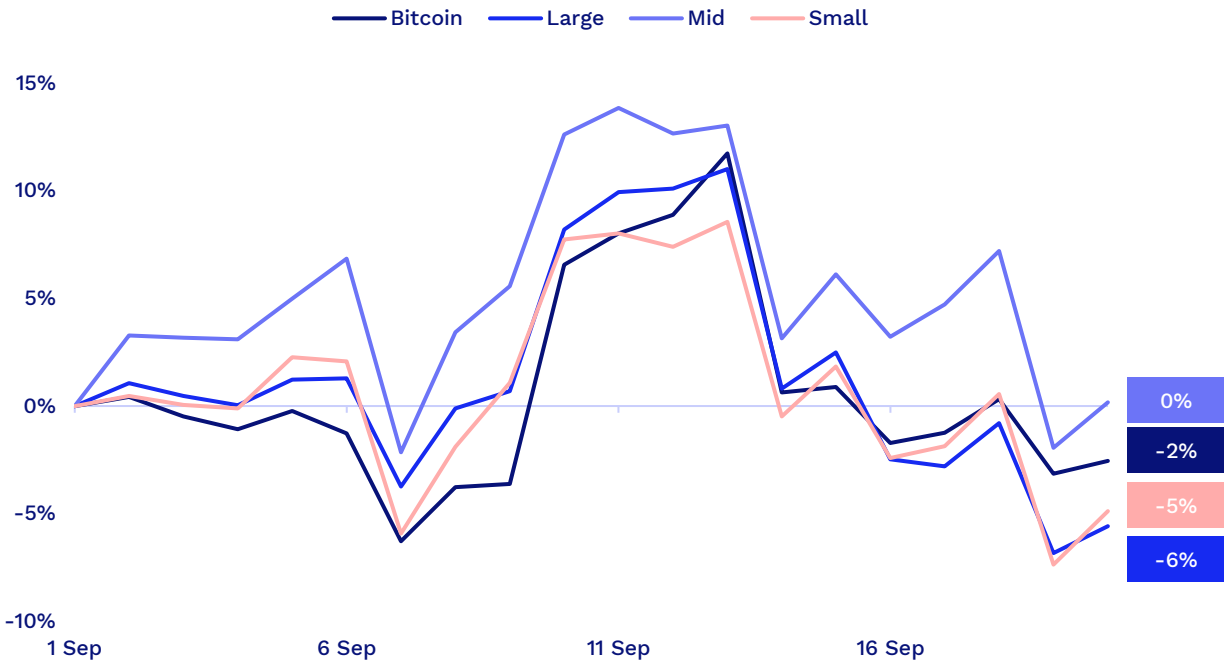
Percentage of Total Market Capitalization

	BTC	ETH	USDT	USDC	BNB	BUSD	XRP	ADA	SOL	DOGE
Market Share	39.63%	17.78%	7.25%	5.35%	4.67%	2.19%	2.00%	1.64%	1.22%	0.83%
Weekly Change	-0.44%	-1.90%	0.90%	0.52%	0.22%	0.30%	0.33%	0.03%	-0.06%	0.04%

* Weekly change in percentage points

Source: CoinMarketCap

Monthly Performance of Market Cap-Weighted Indexes

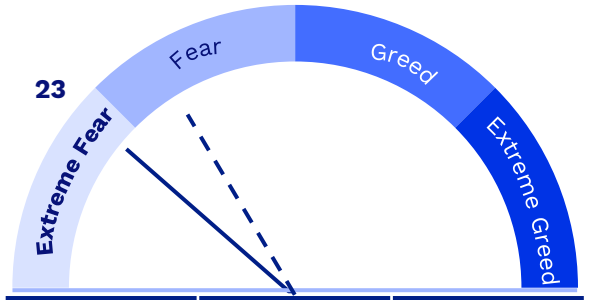


Source: Bletchley Indexes, Tradingview (Coinbase)

Crypto market participants have been fearful for 169 days

The crypto market sentiment has been fearful since early April, as indicated by the Fear and Greed Index. The market has been in the fearful territory for 169 days, the most extended stay since the Fear and Greed Index's inception in 2018. The market sentiment improved slightly ahead of Ethereum's merge but has since fallen considerably as the merge turned out to be a sell-the-news event.

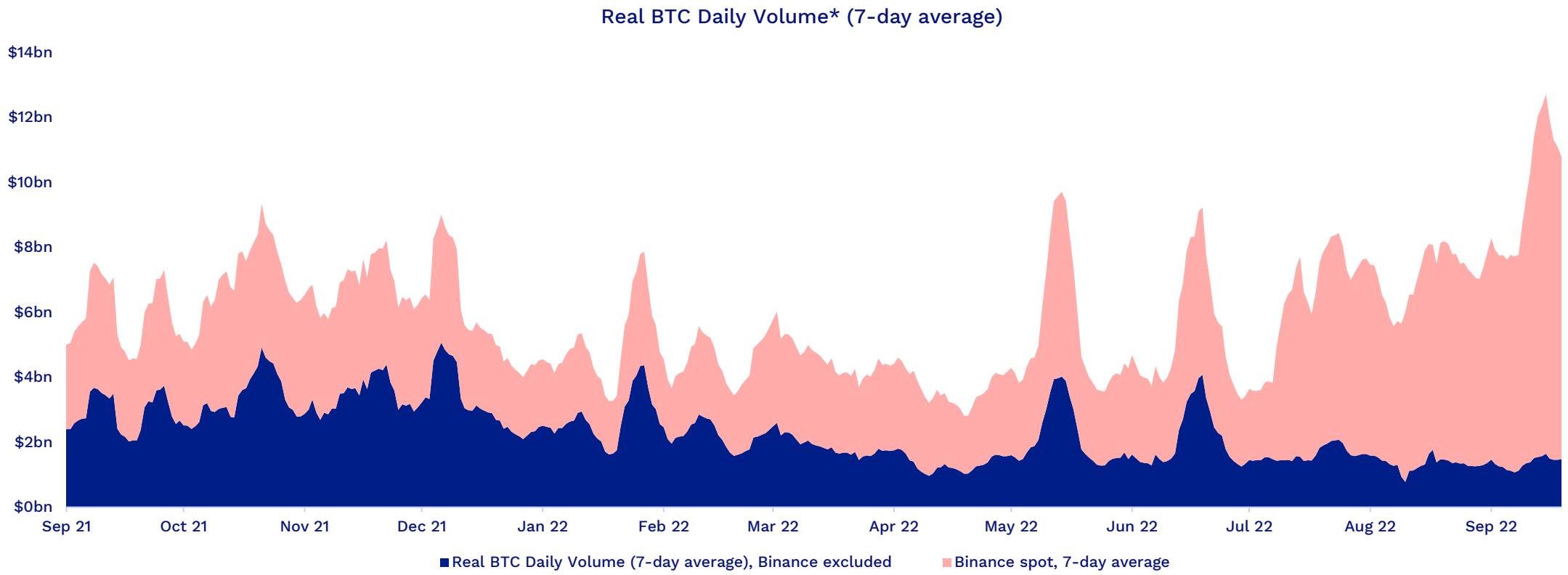
Source: Alternative.me



Now	Last week	Last month
Extreme Fear (23)	Extreme Fear (34)	Fear (29)

The bitcoin spot volume stays at yearly highs

Surging trading activity leading up to the merge led the overall crypto trading volumes to reach elevated levels. The bitcoin spot volume was no exception, as its 7-day average grew to a yearly high of $12.7 billion. With the merge behind us, trading activity has slightly contracted over the past week. Bitcoin's 7-day average spot volume currently sits at $10.8 billion.

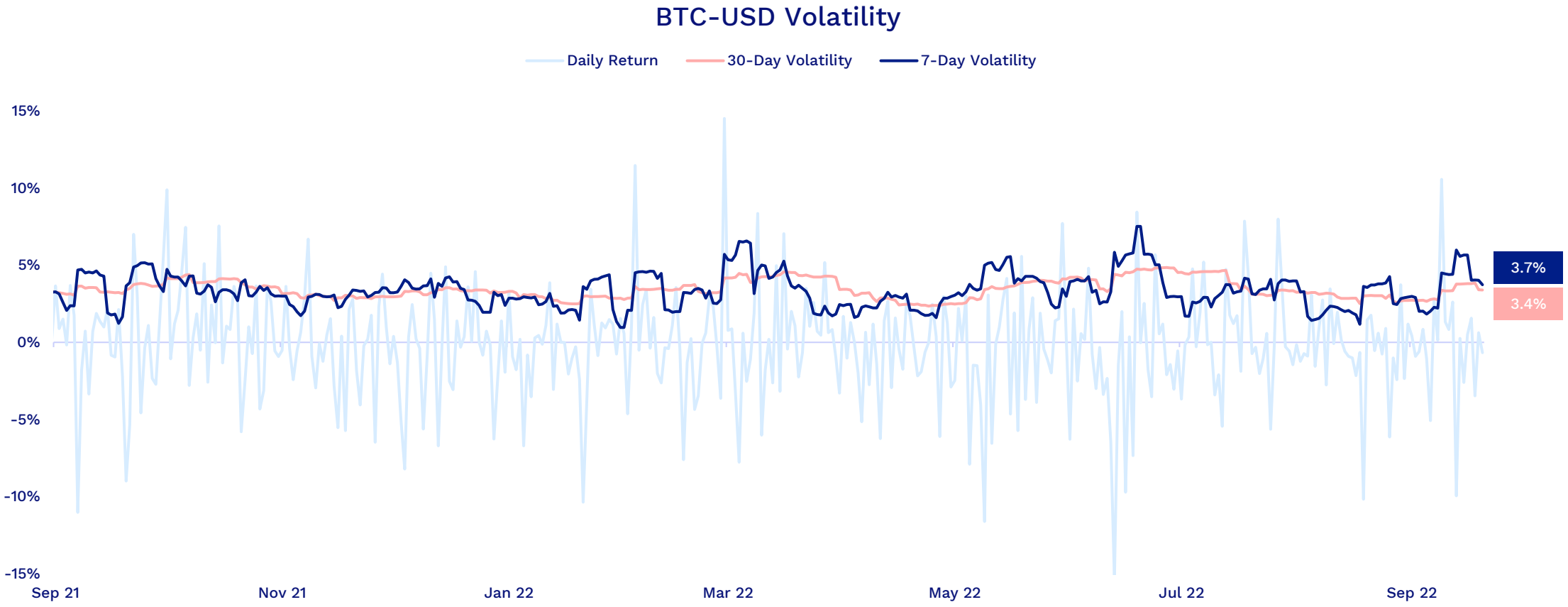


Source: Skew, Tradingview (Binance, Binance US, Bitfinex)

*Includes Bitwise 10 exchanges, LMAX, FTX

Bitcoin’s volatility retracts to normal after a turbulent period

Bitcoin and the overall crypto markets experienced a volatility burst at the beginning of September. The crypto market has calmed down over the past week, as indicated by bitcoin’s 7-day volatility stabilizing close to its historical average at 3.7%. This volatility stabilization will likely be short-lived, as the FED will hold its monthly FOMC meeting on Wednesday, which has been a catalyst for volatility surges on multiple occasions this year.

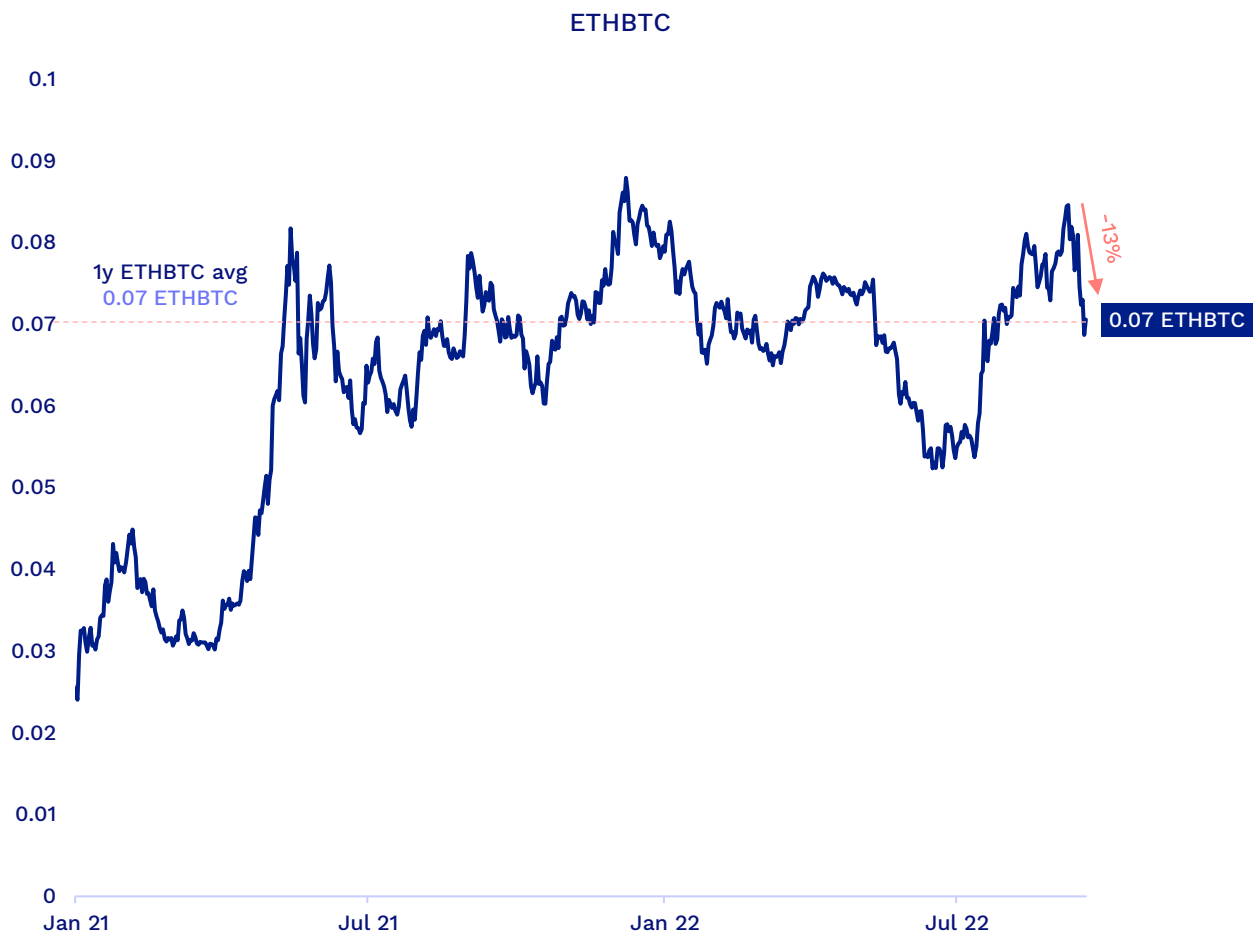


Source: Tradingview (Coinbase)

The sell-the-news event: Ethereum plunge

The merge became a sell-the-news event. ETHUSD is down 17% since the merge and has fallen 13% compared to BTC, as ETHBTC currently trades at 0.07.

- Ether has struggled since the merge, experiencing a sharp drop in the last five days. Nevertheless, despite the poor price action, the merge was successful, and Ethereum is now a Proof-of-Stake network.
- In advance of the merge, traders were cautiously positioned in derivatives and held spot exposure in anticipation of merge airdrops. We drill into the performance of Ether forks in the next slide and how perp funding normalized promptly after the merge on slide 17.
- Concerns have also been raised regarding staking concentration among Ether stakers, a topic we explore on slide 21 and 22.
- Ether traded idly after the merge, and volatility remained low until U.S. markets opened down. The ETH blow was related to a correlated environment to risk assets, but excess leverage from long traders contributed to exacerbating Ether's relative underperformance versus BTC.
- Since the merge, Ether (ETH) is down 17% in USD and down 13% compared to BTC, with ETHBTC currently trading at 0.07. ETH has found support at 0.07 ETHBTC, which represents the average ETHBTC price over the last 365 days.



Source: Tradingview (Coinbase)

ETH forks underperforming ETH since merge

Ethereum proof of work forks has seen losses extending 66% since launching five days ago.

- Ether has not struggled in isolation, Ether forks have experienced severe headwinds, and both ETHW and Poloniex's competitor fork EthereumFair (ETF) have seen more than two-thirds of their valuation slashed since launch.
- The poor performance of forks is no surprise. Forks will struggle to gain meaningful adoption and hold no significant economic DeFi activity. The selling pressure in ETHW and ETF is likely caused by Ether holders dumping their airdropped tokens.
- ETHW plunged as low as 80% from its listing on FTX. Since its low, ETHW has recovered slightly, suggesting that the airdrop selling pressure has stopped for now.
- Ethereum Classic has also underperformed versus ETH. Amid the merge, many miners migrated to ETC, leading ETC's hashrate to peak at 300 TH/s. However, as the difficulty has increased in ETC, the hashrate in ETC has declined to 186 TH/s.
- The hashrate rally and plunge in ETC is best explained by looking at revenues. ETH used to yield miners $20m in revenue per day versus less than $1m in revenues generated from ETC. Thus long-term mining ETC is far from viable on the scale as ETH mining once was.
- ETC has declined 25% since the merge. In sum, all forks have underperformed Ethereum.

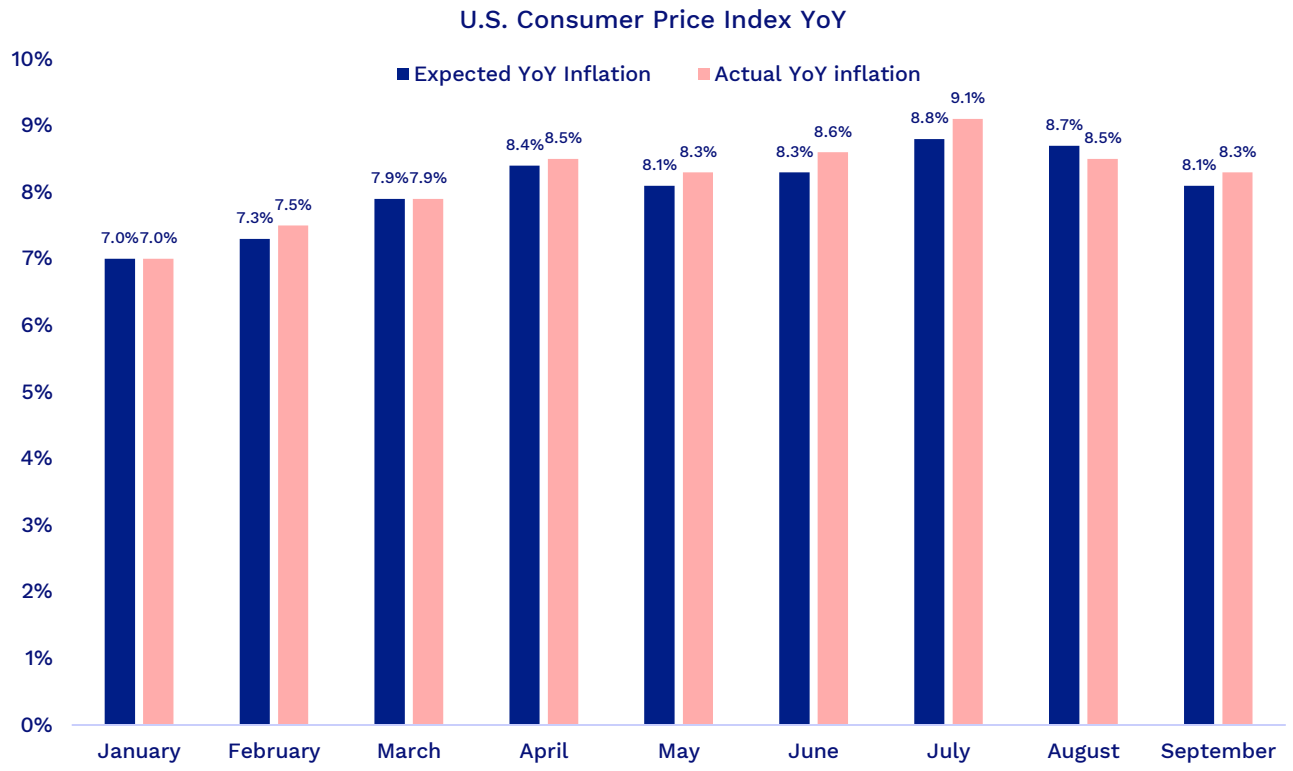
ETH versus ETH forks

Source: Coinmetrics, Tradingview (Bitfinex)

BTC plunged amid surprise CPI as the market braces for a massive hike

All eyes are on the FOMC this week after yet another negative inflation surprise reaped havoc in crypto and equities alike.

- The August CPI print exceeded expectations by 0.2% last Tuesday, leading BTC to plunge alongside equities, as YoY inflation printed 8.3%, while core CPI, which excludes volatile assets such as energy, rose 0.6%.
- BTC saw a massively negative reaction following the CPI release, ending the day down 10%. Nevertheless, the surprise impacted all risk assets, as the S&P 500 experienced its worst daily drawdown in 2022.
- The BTC drawdown was harsher than any previous CPI-related drawdowns this year. This brutal reaction is caused by expectations and uncertainty ahead of this Wednesday's FOMC, where the market is pricing in a lofty interest rate hike.
- Currently, 75bps seems to be the base expectation, priced in the market with an 80% likelihood. However, there are also investors bracing for a possible 100bps hike, presently priced in at a 20% chance.
- The upcoming FOMC is particularly important. Jerome Powell has previously communicated that the outcome of the upcoming FOMC will rely heavily on macro data from July and August.
- Nevertheless, in a speech at Cato Institute, Powell emphasized that "History cautions strongly against prematurely loosening policy", and the FED seems eager to combat inflation.
- All FOMC events have caused volatile markets in the last year, and active investors should be prepared for new bursts in volatility tomorrow as we elaborate further in the next slide.



Bitcoin daily return at CPI release date

Month	January	February	March	April	May	June	July	August	September
Deviation of actual CPI vs expected	0.00%	0.20%	0.00%	0.10%	0.20%	0.30%	0.30%	-0.20%	0.20%
BTC: Daily return at CPI release date	2.7%	-2.0%	-6.0%	1.4%	-6.5%	-3.4%	4.7%	3.5%	-9.9%

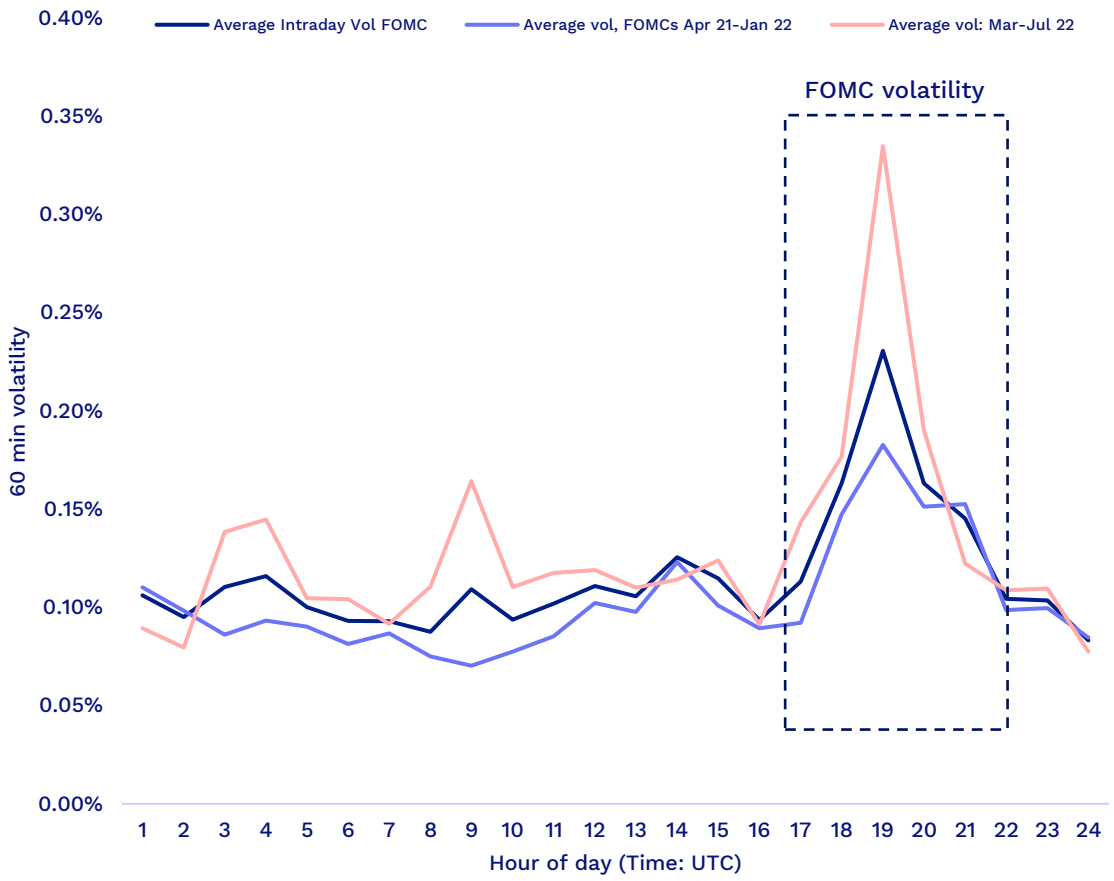
Source: Investing.com, Tradingview

Expect volatility during tomorrow's FOMC

FOMC meetings generate volatile markets, and their impact on volatility has increased as monetary conditions have tightened alongside interest rate hikes.

- The FOMC hours are always volatile in the market. The attached chart illustrates the rolling minutely volatility of BTC amid prior FOMC meetings. It's evident that the FOMC meetings tend to lead to higher volatility, and the effect has been particularly notable after the FED began hiking interest rates in March.
- The FOMC price action in BTC reflects the reaction of equity indexes, as BTC tends to move in a highly correlated manner during critical macro events.
- The observation of elevated volatility during FOMC illustrates the importance of the FOMC and the volatility that it offers. The two latest FOMC meetings have seen soaring volatility during the press conference, as Jerome Powell's guidance further contributes to directionally impacting the market.
- Active day traders should be aware of the volatility effects of FOMC and should prepare for a very volatile Wednesday. Volatility will likely be exceptionally high due to conflicting rate hike expectations. The market is pricing in a 20% chance of a 100bps hike. A "softer" hike of 75bps may thus reflect positively on the market, while further guidance in the press conference may act as a further catalyst for volatility. On the other hand, a 100bps hike would likely have a negative short-term impact on the market.
- Over longer time frames, this intraday volatility is irrelevant. Clues regarding the FED's medium-term view, liquidity conditions, and the hiking cycle will have a prolonged directional impact on the market.

Bitcoin: 60 min rolling volatility during FOMC meetings*



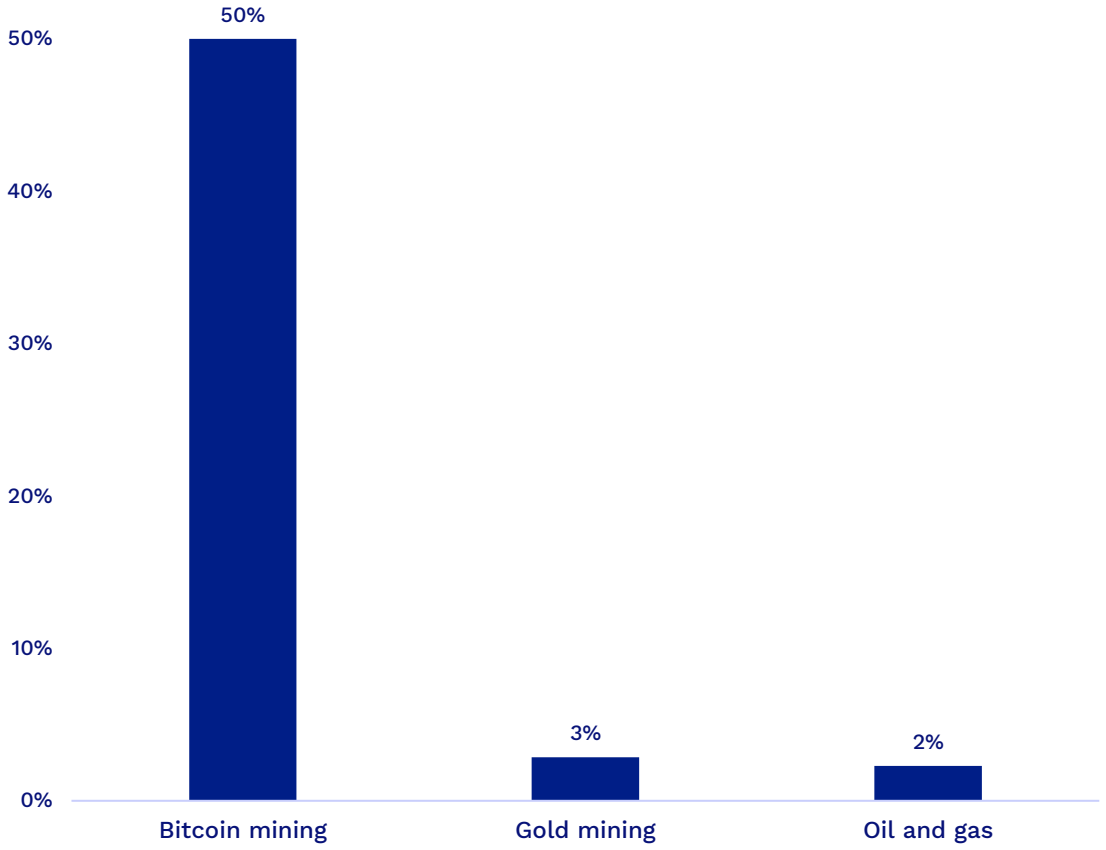
Source: FTX API (Minutely trade data during FOMC meetings)
*Dates included: **2021:** Apr 28th, Jun 16th, Jul 28th, Sep 22nd, Nov 3rd, Dec 12th. **2022:** Jan 26th, Mar 16th, May 4th, Jun 15th, July 27th

Public bitcoin miners spend half their revenue on administration

Some public bitcoin miners spend more than half their revenue on administrative costs. Why are the public miners' administrative costs a problem, and who are the biggest spenders?

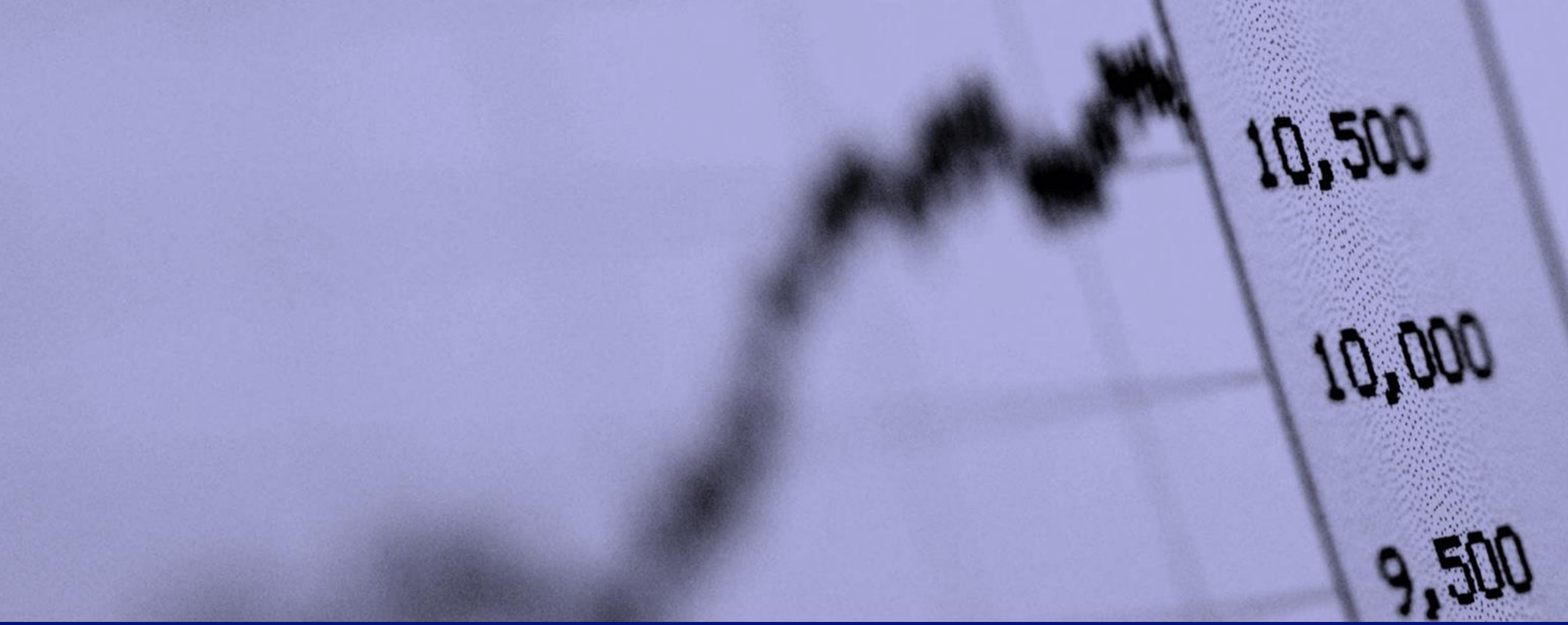
- Most public bitcoin miners have tended to spend between 20% and 50% of their revenues on administration. Some companies have been decent at cutting costs, like Argo, whose administrative costs have made up 16% of its revenue since 2021.
- Marathon sits at the other end of the spectrum after spending nearly 100% of its revenue on administration. Since 2021, the company has had revenues of $266 million and spent $259 million on administration.
- Marathon's massive spending on administration is a result of their very generous executive stock compensation program. Marathon gave its executives $161 million in stock compensation in 2021 alone due to its executives hitting all their performance targets.
- On average, public bitcoin mining companies spend 50% of their revenue on administration. This share is massive compared to what is usual in similar but more mature commodity-based industries. For example, the average in the oil and gas industry is 2%, while it's 3% in the gold mining industry.
- Bitcoin mining is a capital-intensive industry. With all this capital on the balance sheet, it becomes easy to finance sizeable executive compensation programs or other non-revenue generating administrative costs. In addition, due to the industry's immaturity, many investors don't understand what is going on, and the shareholder oversight in these companies is weak compared to in more mature industries.

SG&A's Share of Revenue by Industry: Bitcoin Mining vs Gold Mining vs Oil and Gas*



Source: 5 biggest public miners, gold miners, and oil and gas producers

* Average since 2021 of the five biggest companies by market cap in the respective industries



Valuation

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Run it back turbo: BTC revisits June lows

Bitcoin again revisits range lows after a tumultuous week.

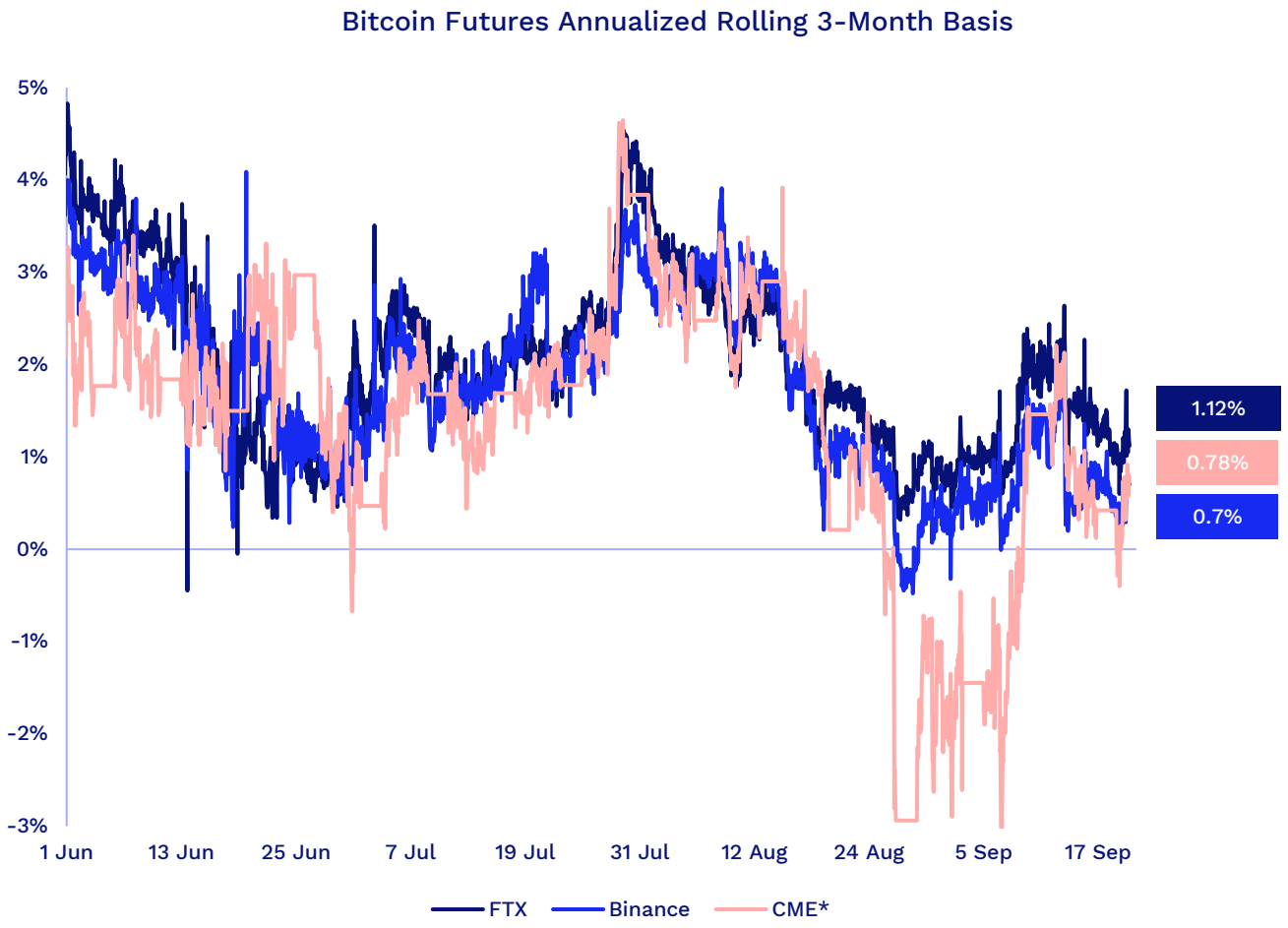
- Bitcoin failed to power through the $22.5k resistance area and plunged towards June lows of $18k this Monday after seeing its lowest weekly close since June 27th.
- Bitcoin, for now, remains within its 3-month long consolidation range between $17.5k and $25k after finding support at $18k, pushing towards $19k.
- $17.5k remains a very important support area. Below this level, BTC has support at $15.5k and strong support at $12k.
- A push towards $12k would be analogous to previous bear market cycles in BTC, representing an 80% drawdown, as we saw during both the 2014 and 2018 bear markets.
- Within this prolonged consolidation range, $22k and $25k represent substantial resistance areas. Should momentum turn, traders should pay particular attention to any breakouts from the $25k resistance, which would signal a bullish breakout.

Source: Tradingview (Coinbase)

Futures traders unwilling to add long exposure in BTC

Futures basis has declined towards 1% again as traders stay cautious while BTC trade near range lows.

- Futures basis has once again fallen amid market weakness and now trails around 1%, at levels close to historic lows.
- Ever since the June sell-off, futures have traded at low premiums compared to spot, indicating a prolonged low demand to add long exposure and overall bearish sentiment in the market.
- CME and offshore premiums align. Last week, we noted how healthy ETF inflows helped CME's basis recover. These uplifting flows suddenly halted as elevated U.S. inflation numbers kicked in.
- Overall, activity is low in BTC futures, and traders remain cautiously positioned.



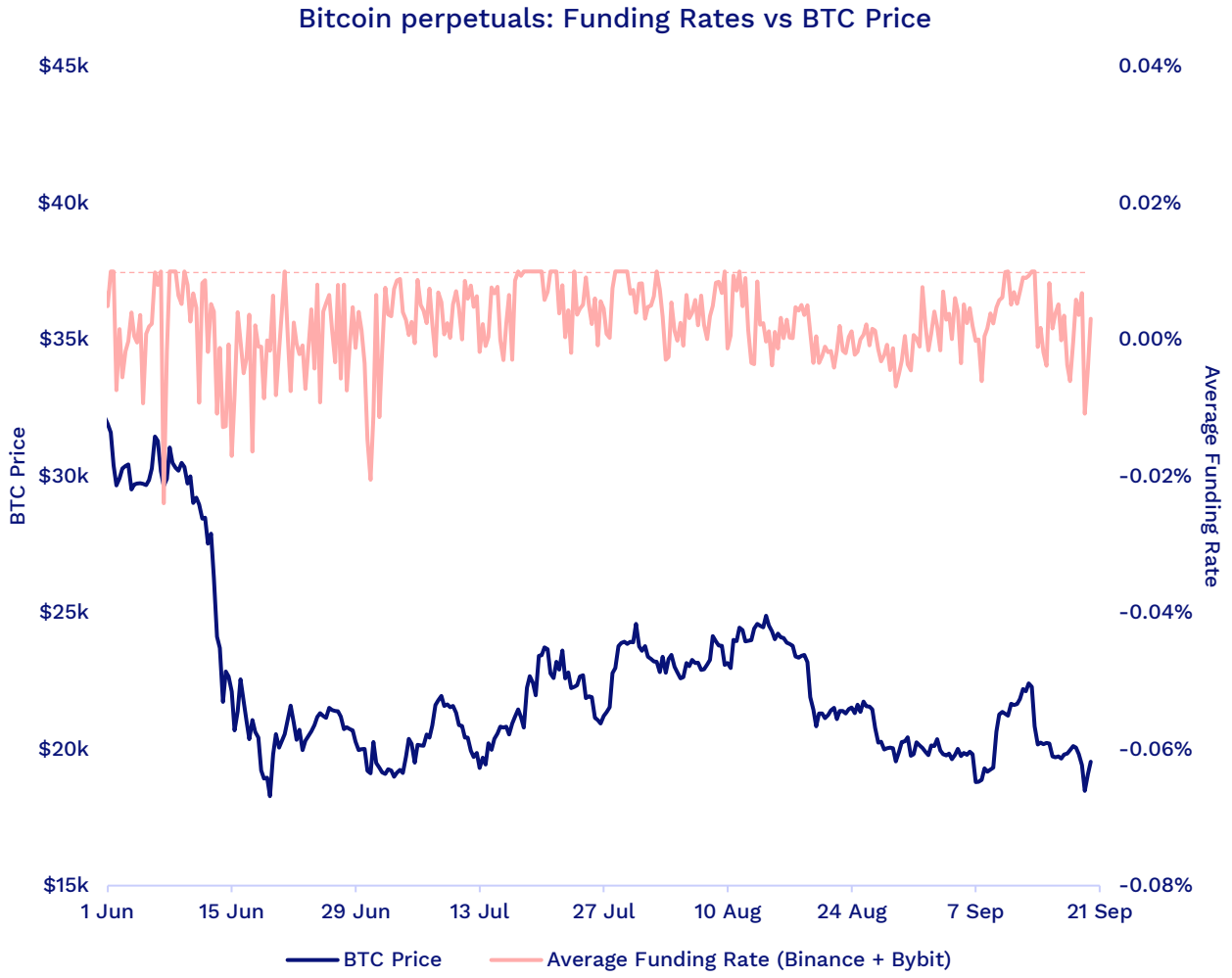
Source: Skew, Laevitas, Tradingview, CME

*Closed Saturday - Sunday

Funding rates reached 12-week lows on Monday

Funding rates declined to a 12-week low on Monday as BTC visited June lows.

- Funding rates stay negative to below neutral, and Monday's push down towards June lows caused funding rates to reach lows not seen since July 1st.
- Substantial long liquidations accompanied Monday's negative funding push as $97m worth of longs got liquidated.
- Last week, we noted yet another all-time high in open value in BTC perpetual swaps. Since the notional open interest has declined, currently sitting at 380,000 BTC, down 40,000 BTC compared to last Tuesday, as the negative inflation shock and overall weak markets have shaken off overleveraged longs.
- Funding rates have mostly remained negative since the June crash and have only reached neutral terrain near local highs. This suggests that perp traders on aggregate perform badly in this choppy trading range, buying high and selling low, or vice versa for shorts.
- In these choppy conditions, sitting on your hands and waiting might be wise. Opportunities will arise in due time, and eroding your capital in a directionless market seems unwise.

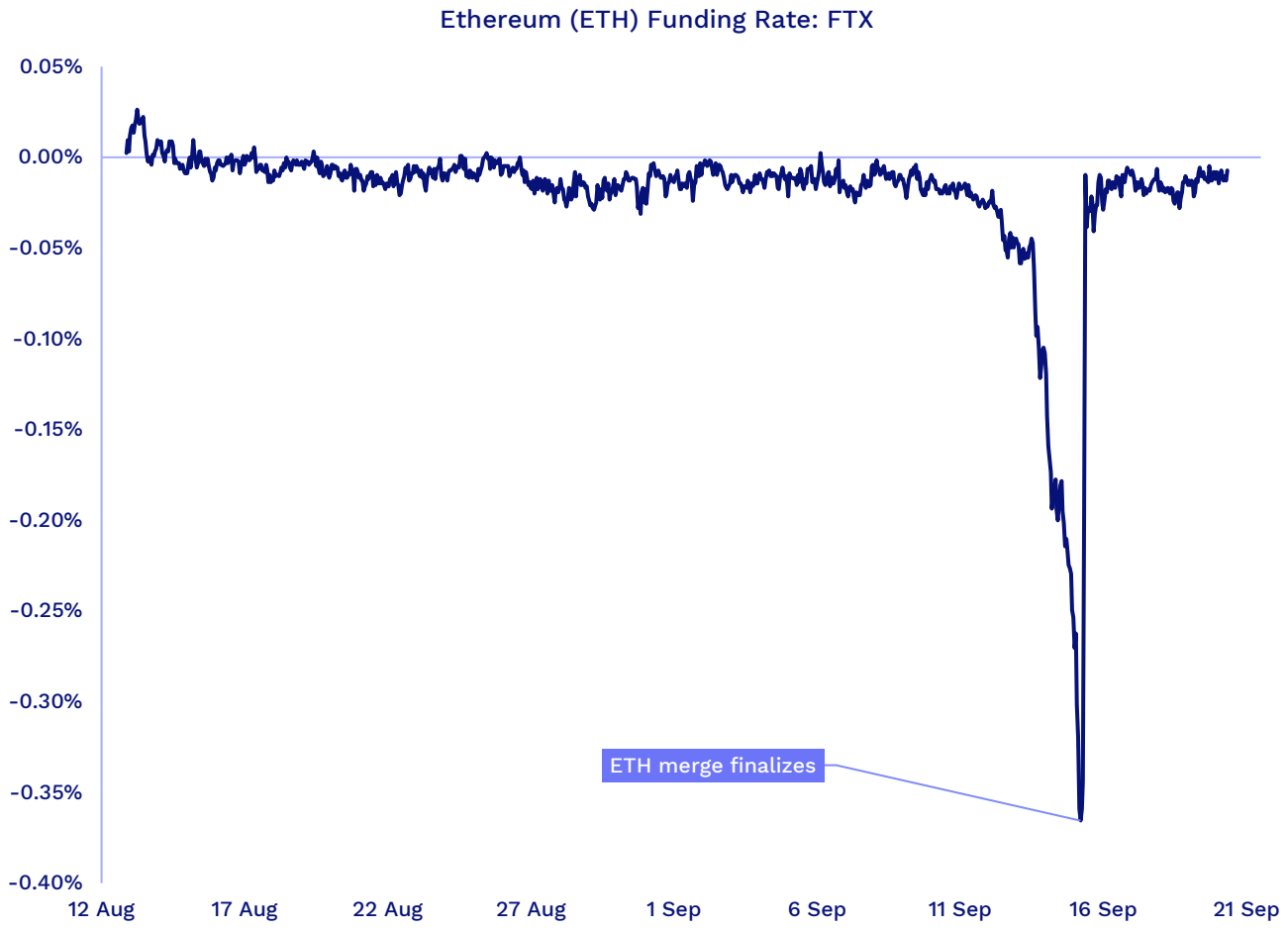


Source: Skew, Bybit, Binance

ETH funding rates normalizes post merge

Ethereum funding rates and futures basis has normalized post-merge, and the derivatives normalization had no major impact on prices.

- From midnight Monday until the merge Thursday morning, shorts paid a total of 9.92% in funding to longs on FTX to hedge.
- However, as the merge took place, funding rates and futures basis quickly normalized towards August levels.
- Structural effects from the derivatives market had an insignificant impact on the overall ETH market post-merge, and ETH prices did not see a substantial move as market conditions in derivatives readjusted.
- However, ETH experienced substantial downside as U.S. equities opened in the red on Thursday.
- The ETH sell-off was fueled by optimism ahead of the merge. While funding rates and futures basis reached extreme lows, the $125m liquidation volume on Thursday suggests that under the hood, traders held significant long exposure as the merge neared, increasing the effects of the sobering post-merge sell-off.



Source: Skew

Blockchain Activity

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Bitcoin mining profitability falls to 2020 levels

The profitability of bitcoin mining has fallen to 2020 levels due to the lethal combination of the declining bitcoin price and surging mining difficulty.

- The rough times continue for the bitcoin miners, as their daily revenues plummeted by 10% over the past seven days. Miners are now scraping together $17.9 million per day. This is among the lowest since November 2020, before the start of the previous bull market. To put that into perspective, miners earned $62 million per day at the peak in November 2021.

- The cause of the plummeting miner revenues is, first and foremost, the falling bitcoin price. In addition, the difficulty sits at an all-time high after undergoing four consecutive upwards adjustments. This has led to a slowdown in the block production rate from 6.28 blocks per hour to 5.9.

- The falling mining revenues mean miners with higher energy prices will be squeezed out of the market. The break-even energy price of running the energy-efficient Antminer S19j Pro is currently 0.09 per kWh. This break-even price is far below the current energy spot prices in most densely populated regions, meaning mining is only profitable in areas with stranded or underutilized energy sources.

- Other than that, we see a 36% surge in the daily transaction volume, primarily caused by the 39% increase in the average transaction value, reaching $19.8k.

- The active addresses increased significantly as the merge approached, but has retracted as the markets have calmed down following the event.

Powered by: BYTETREE

	Bitcoin Network Data				
		9/19/2022	7d prior	7d Change	30d Trend
Network	Daily Miner Revenues	$ 17,897,188	$ 19,839,495	-9.79%	
	Fees per day	$ 315,540	$ 289,494	9.00%	
	Fees % Revenues	1.76%	1.46%	0.30%	
	Daily TX Volume ($M)	$ 5,021	$ 3,680	36.43%	
	Transactions per day	254,415	259,763	-2.06%	
Utility	Avg TX value $	$ 19,735	$ 14,167	39.30%	
	# Blocks per hour	5.90	6.28	-5.97%	
	Avg. # TX per block	1,795	1,833	-2.06%	

Source: Bytetree

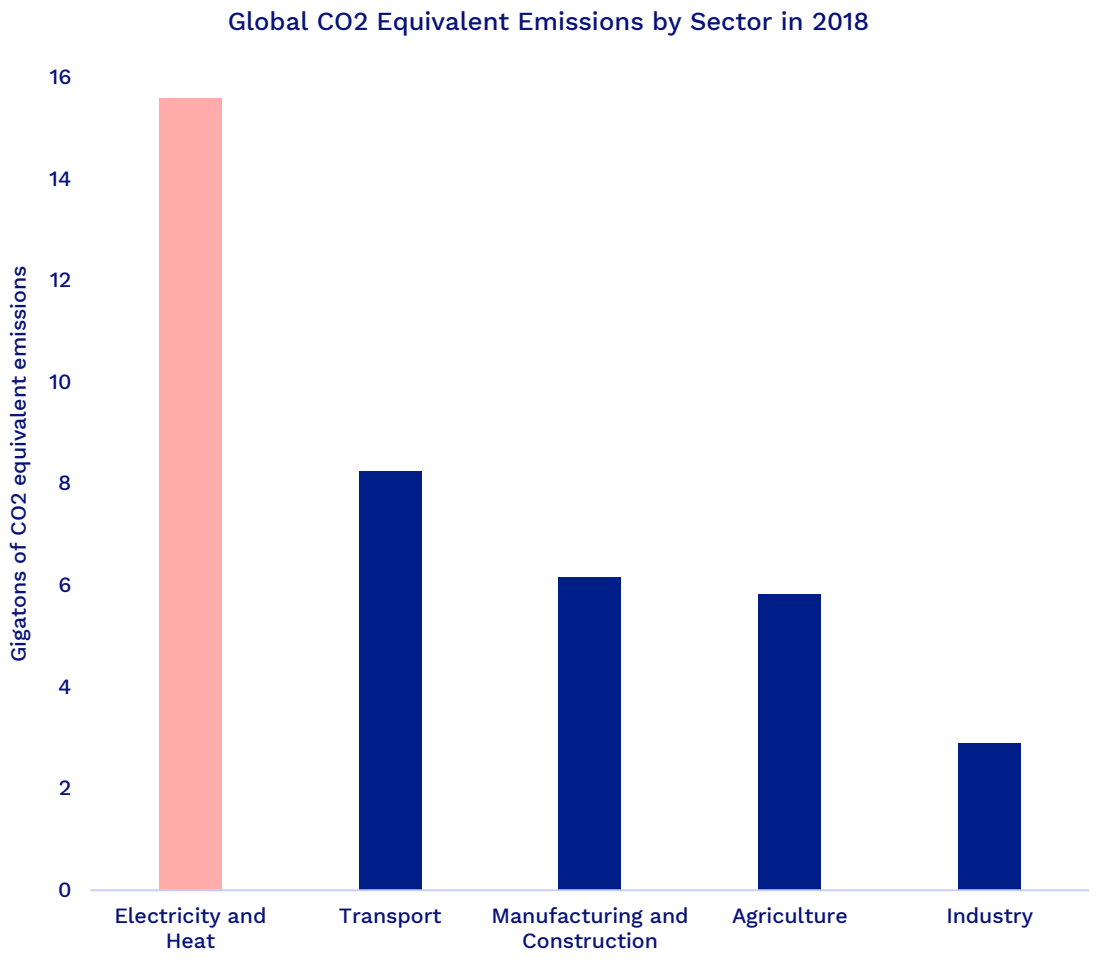
Bitcoin Hashrate (7-day average)

Source: Blockchain.com

Recovering waste heat from bitcoin mining has several advantages

Heating is the world's largest energy end-use. Luckily, bitcoin mining generates heat that we can repurpose to heat homes or use for food production.

- Providing heating for homes, industries, and other applications is the world's largest energy end-use, accounting for almost half of global final energy consumption in 2021. Fossil fuels are the most common heating energy source, accounting for about three-quarters of the energy mix.
- The bitcoin mining industry generates about 100 TWh of heat annually, which is sufficient to heat Finland. Bitcoin miners are starting to see the potential in recovering the heat. This growing focus is primarily driven by a potential for lowering costs as the industry becomes increasingly competitive, but the possibility of reducing carbon emissions is also a driving force.
- Bitcoin miners generate low-grade heat that can provide baseload heating for many purposes, including district heating and food production.
- The Canadian company Mintgreen is a pioneer in repurposing waste heat from bitcoin mining. This leading position has allowed them to work with the city of North Vancouver to supply heat for 100 buildings with 7000 apartments.
- Many food production processes require low-grade baseload heat that bitcoin miners can provide. This include vegetable production, algae farming and fish farming.
- Repurposing heat from bitcoin mining has two main advantages. The bitcoin income subsidizes the cost of the electricity used to produce the heat. In addition to lowering heating costs, using bitcoin mining for district heating can reduce carbon emissions if the machines are powered by renewable energy.

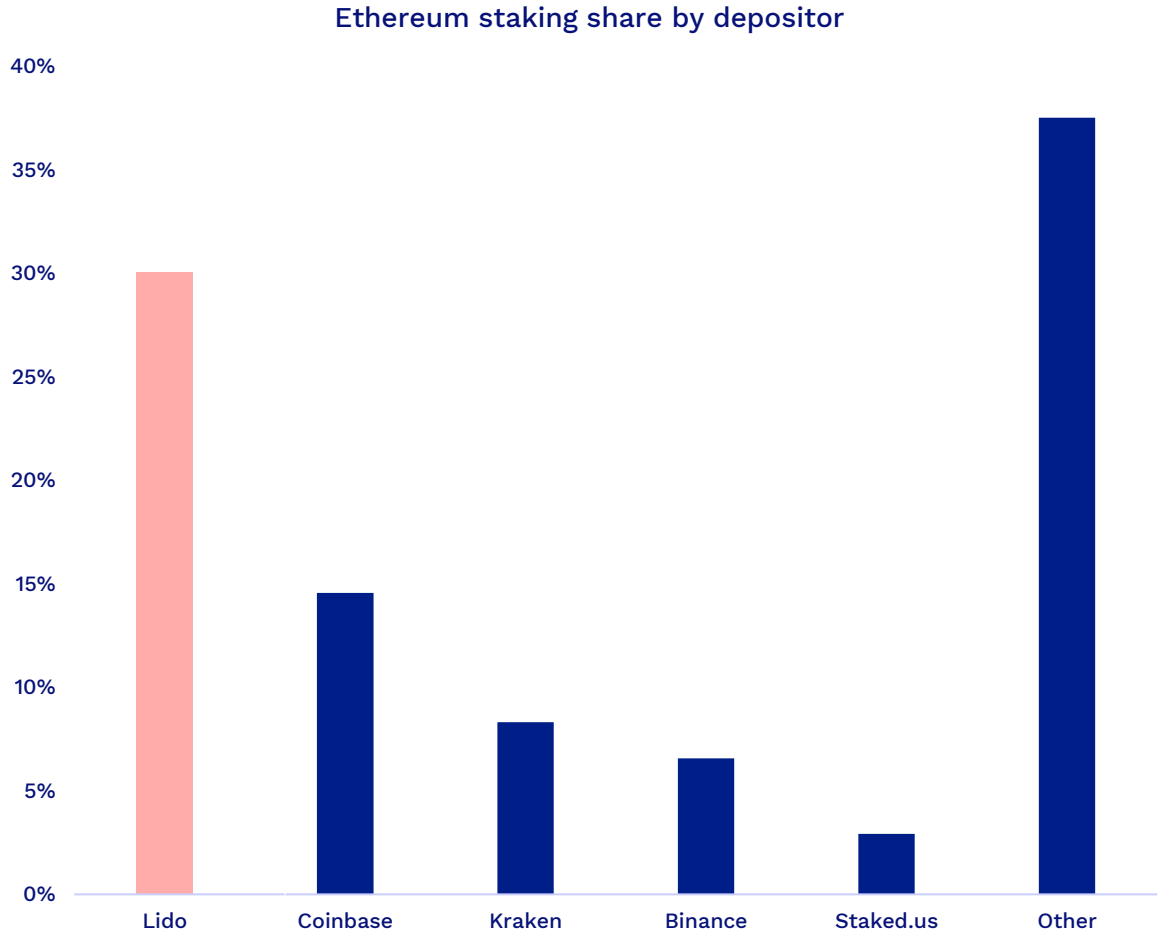


Source: Climate Watch

More than 60% of staked ether is deposited by the five largest stakers

Less than a week after the successful merge, Ethereum staking is facing increased scrutiny for being overly centralized. The data shows that staked ether is highly concentrated to a small set of large depositors but doesn't equate to the same centralization of voting power.

- As of Sep 20, there are close to 14 million ether staked on the Beacon chain, equaling 11.5% of the total ether supply.
- Ethereum validators don't gain voting power when surpassing the minimum validator requirement of 32 ether. The validator set, therefore, becomes large in numbers as single entities will spread staked ether on multiple validator nodes.
- In terms of centralization, the interesting statistic is how many validators are controlled by single entities.
- Scratching the surface by looking at staking depositors, Ethereum voting power appears to be highly centralized. The five largest stakers have deposited more than 60% of the staked ether.
- The single largest depositor is Lido Finance, having deposited a whooping 30% of the staked ether. As we will show in the next slide, Lido's voting power is spread across many independent validators, making Ethereum voting power less centralized than at first glance.



Source: Dune Analytics

Lido’s staked ether is spread among multiple independent validators

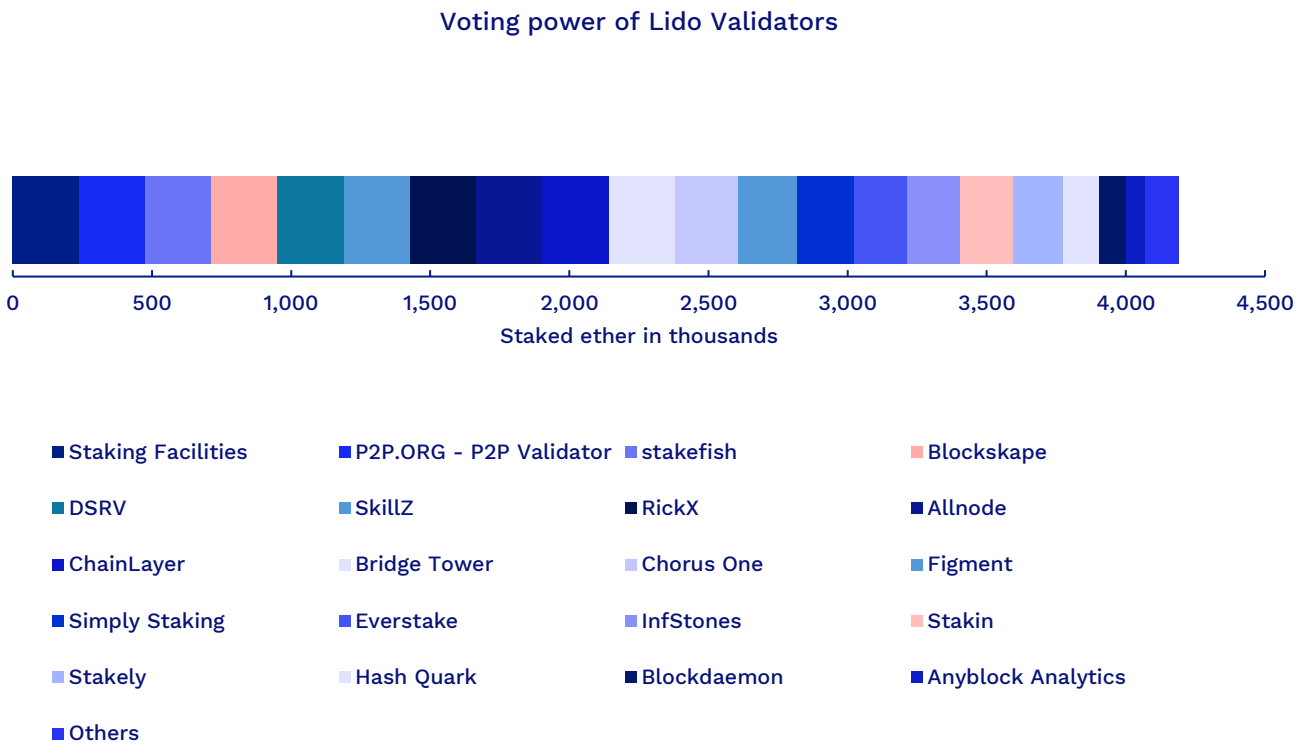
Unlike the centralized exchanges like Binance and Kraken, Lido’s staked ether is not representative for the voting power of one single entity. Under the hood, Lido’s staked ether is handled by several independent validators.

- Lido Finance is a DAO where you can stake ether through a smart contract. In return for staking ether through Lido’s smart contract, you receive an ERC20 token called liquid staked ether, proportional to your staked ether.

- Unstaking and withdrawing rewards from the Beacon chain are not available at the current time. And this feature is not imminent in the nearest future. The liquid staked ether token is a claim on the staked ether when unstaking and rewards withdrawal is enabled. In the meantime, the liquid staked ether token can be traded as any other token. Staking while not locking up your funds has shown to be popular making Lido Finance the biggest staker on the Ethereum Network.

- Lido Finance does, however, not handle the validator duties themselves. Instead, the DAO chooses validators to govern the staked ether for them. The chosen validators gain voting power from Lido’s chest of ether through a smart contract.

- As shown in the figure, a multitude of node operators handle Lido’s validator duties. In principle, Lido has no power over these validators making the voting power from Lido´s staked ether spread among many independent operators.



Source: https://gist.github.com/banteg/b74c572eb4a5e1a0400ec5d511e385d3

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