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Proof of Deflation: Ultra-Sound Money

As we approach the end of a tumultuous year for the markets, it is worth noting there are some things still working as intended, even amid the bear market. Although some lenders and funds may be throwing in the towel, some projects and technologies are continuing to thrive. Let's take a look at Ethereum as one example of something that is successfully moving forward despite challenging market conditions.

Ethereum's supply has become deflationary, with the network now burning more ETH than is being produced, thereby decreasing the supply. This is one reason why Ethereum is sometimes referred to as "ultra-sound money" in the cryptocurrency community. Even in the current bear market, high gas fees on the Ethereum network are helping to create this dynamic. In addition, the successful implementation of The Merge and its aftermath have shown demand is still strong for Ethereum.

Bitcoin vs Ethereum – What's more deflationary?

Bitcoin has a fixed supply of 21 million bitcoins, which is programmed into its protocol and cannot be changed. This relative scarcity compared to fiat currencies makes it valuable as demand grows and enables Bitcoin to serve as a store of value.

Ethereum, on the other hand, is a smart contract platform that uses its native cryptocurrency, Ether, to pay for transactions. The recent implementation of the EIP-1559 upgrade, and the switch to a proof-of-stake (PoS) consensus algorithm, have now made Ethereum a deflationary system. These changes have also solidified Ethereum's position as a platform for decentralised finance (DeFi) and non-fungible tokens (NFTs).

As usage of applications built on top of Ethereum increases, and as layer 2 solutions demand more blockspace from Ethereum, the demand for ETH will grow. This, in turn, will affect the supply, issuance, and burning of ETH, making it a new type of asset.

One factor that may affect the price of Ethereum is the staking of ETH in contracts with no current exit option. This essentially means that a significant amount of the market supply is being locked up for staking purposes. As we await the date for the "Shanghai Upgrade," this could potentially impact the price of ETH.

If the Shanghai upgrade goes live and early stakers on the beacon chain have the option to unstake, it is likely the discount for liquid staking derivatives such as stETH will no longer exist and may trade at a premium. This could be similar to how stSOL trades at a slight premium to SOL in the market. Additionally, it is expected that large, centralised players, such as Coinbase and Binance, will likely unstake a portion of their assets to adjust for the new liquidity on their books. This may be accompanied by a rush to exit for some users, but it is also possible that early individual stakers will continue staking.

There is also the possibility that users waiting on the sidelines for the unstaking function to be turned on will create a "risk-free yield mechanism" with the newly available assets. However, earning staking yields is not a riskless exercise, requiring validators to take positive action to earn it. Furthermore, block proposers can be slashed for malicious behaviour, adding another potential risk factor. To use the staking yield as a benchmark, adjustments may need to be made to account for these risks, which could make the rate inherently variable.

Overall, the use of staking yields as a benchmark for more complex financial engineering in the Ethereum space may require further exploration and consideration of the risks involved.



What's next for ETH?

The Merge upgrade was designed to simplify and streamline the transition to proof-of-stake. As a result, certain features, such as the ability to withdraw staked ETH, were not included in this upgrade. The Shanghai upgrade, which is planned to follow The Merge, will introduce this feature and enable stakers to withdraw their ETH.

At a meeting in late November, Ethereum developers discussed and considered eight Ethereum Improvement Proposals (EIPs) for inclusion in the upcoming Shanghai hard fork for the Ethereum network. This hard fork upgrade will enable Beacon Chain staked ETH withdrawals and may also include proposals to address scalability issues and improve the Ethereum Virtual Machine. However, there is currently no consensus on what will take place.

While developers have agreed on the specific EIPs to focus on leading up to the Shanghai upgrade, they have not yet determined a timeline for its mainnet deployment. The Ethereum Foundation previously provided a rough estimate of six to 12 months after The Merge for unlocking staked ETH. However, the language surrounding this has recently changed and it is now unclear when the Shanghai upgrade will be ready for mainnet deployment.

By the end of the developer call, the timeline for the Shanghai upgrade was still uncertain. Some developers suggested expediting the upgrade and including only the ETH withdrawal EIP and a few other smaller EIPs in a fork scheduled for March 2023. Another fork, that is set to implement the proto-danksharding scaling upgrade, has been proposed for Autumn 2023. However, there was no consensus found for this timeline and it is yet to be finalised.

As we are witnessing the birth of a new type of asset and renewed network in real-time, it is an exciting time for builders and individuals with a long-term perspective. Copper will continue to develop our products and keep our clients informed so they can effectively participate in this era-defining asset class. Despite the chaos in the market, we remain focused on building and staying informed.

Source: [Ethereum Foundation](#)

Increased energy costs bad news for BTC miners amid bear market

In the wake of the latest market downturn, with Bitcoin prices falling to lows of sub-\$16,000, many public mining companies face difficulty keeping afloat. In recent months, miners have faced a potential death spiral of rising energy costs and hash rate against a sharply declining Bitcoin price and deteriorating macro backdrop starving them of both profit margin and access to external liquidity to fund their ongoing capex requirements.

Hashrate refers to the computational power of a PoW network. Throughout 2022, we have seen the BTC hash-rate steadily increase, with an all-time high of 273 EH/s (exahashes per second) on 2nd November — likely caused as miners finally took delivery of much of the mining hardware ordered throughout the 2021 bull run. An increasing difficulty results in a securer network and reduces the risk of attack — but it is usually accompanied by an increase in the difficulty adjustment as more computing power chases each block. Hashrate pressure is not so problematic during a bull market, as miners can liquidate their decreasing BTC rewards against an increasing USD value to offset their costs.



However, it's a simple case of trying to survive when both rewards and margins are running against you, as they have done at record speed during 2022.

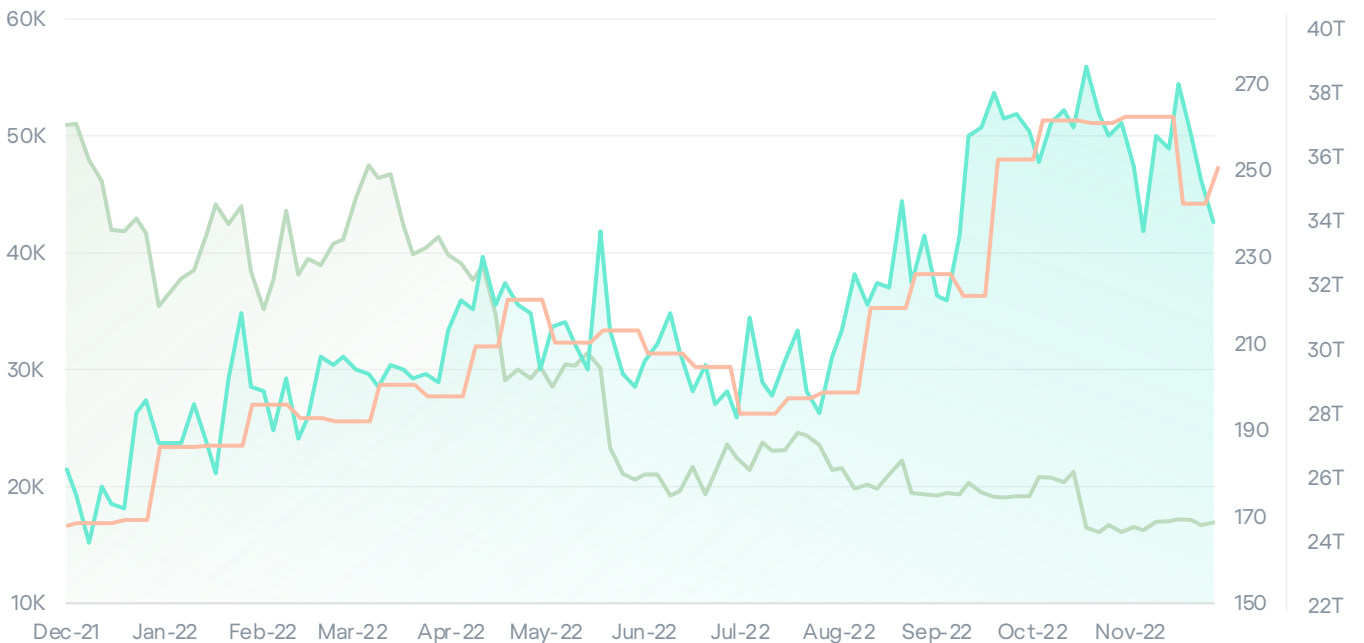
Data from the Hashrate Index shows that the 'Hash-price' (expected revenue based on current hash-rate/difficulty) is on a steady downtrend.



Source: [Hashrate Index](#)

Brains insights data also shows how Bitcoin price fell below both the hashrate and difficulty adjustment in mid-2022 and have since reached record discount to these two metrics in Q4.

- Price, K
- Hashrate
- Difficulty, T



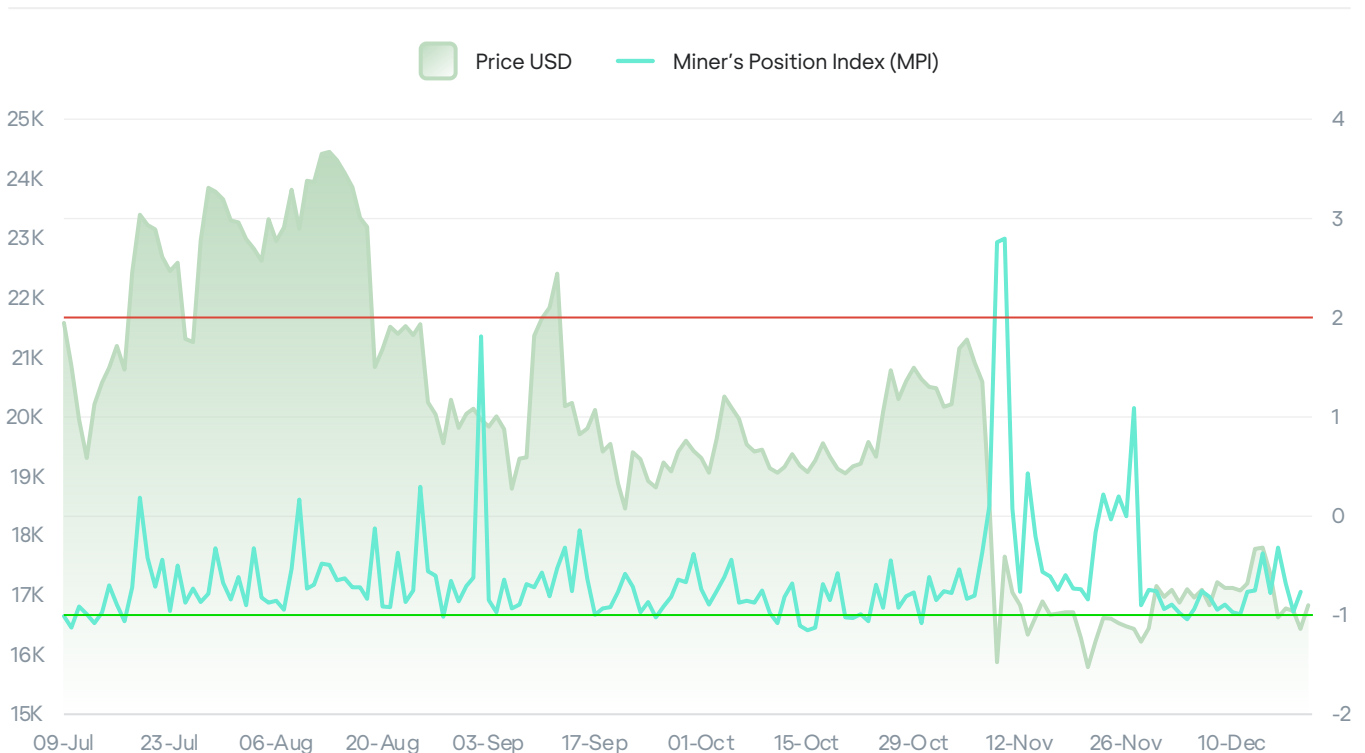
Source: [Brains](#)



Large miners that took on debt during the bull market now find themselves needing to raise capital or liquidate assets to maintain payments on their loans. Many of these loans are secured by their mining equipment, the value of which has also decreased as global supply chains recover from the impact of COVID-19 that saw GPU's reach record highs.

The market has witnessed high levels of outflows from known miner addresses, potentially leading to increased selling pressure as miners liquidate their holdings into a falling market price.

Using data from CryptoQuant, we can see that large miner outflows on November 9th coincided with new market lows.



Source: [CryptoQuant](#)

However, some respite is potentially on the horizon for those that have made it this far. The mining difficulty is automatically adjusted by the network every 2,016 blocks (roughly two weeks) to maintain a block time of 10 minutes. On 6th December, the difficulty decreased by 7.32% as many miners capitulated due to the worsening conditions. This could act as a short-term reprieve allowing for firms that are suffering liquidity issues to stay afloat.

During this time, we have seen firms such as Blockstream announce a new funding round at a 70% lower valuation compared to their Series B round in August 2021. With a focus on solar energy, Blockstream plan to fund a new farm to expand their operations.

Large-scale mining operations help to increase the overall security and adoption of the Bitcoin network, but it is fair to say many may have underestimated the impacts of a lengthened bear phase and adverse macro conditions.



FTX and Solana: A Love Story Gone Wrong Thanks to the Principal- Agent Problem

One of the fundamental challenges in the crypto world is the tension between self-interest and the common good in building ecosystems. The principal-agent problem, in which an agent acting on behalf of a principal may have conflicting interests, is a key manifestation of this tension. An example of this is the relationship between Solana (the principal) and Sam Bankman-Fried (SBF), FTX, and Alameda (the agents). In this article, we will explore the impact of FTX's downfall on the Solana ecosystem and the pre-existing friction between the parties.

Brief History

Solana is a Layer 1 blockchain platform proposed in a whitepaper published in 2017 by Anatoly Yakovenko. The whitepaper described a technique called "proof of history" that aimed to solve the scalability constraints of blockchains like Bitcoin and Ethereum. Multicoin Capital led a financing round for Solana, raising about \$20 million in private token sales by the end of July 2019. Solana's first block was created in March 2020. The Multicoin team then introduced Solana to SBF, leading to a strategic partnership to accelerate the adoption of Solana's blockchain technology and drive the growth of the DeFi ecosystem. FTX integrated Solana into its platforms, giving users access to Solana assets, dApps and DeFi projects built on the network. This had a positive impact on the price of Solana throughout 2021 going from around \$1 in November 2020 up to a high of around \$250 November 2021.

FTX and Alameda provided support to teams developing projects within the Solana ecosystem (Investing, Market Making via the FTX Exchange, and seeding liquidity in DeFi Protocols), including projects that were once considered potential competitors to Ethereum-based protocols. Some of Solana's flagship projects were more dependent on SBF's support than others. FTX Ventures and Alameda had invested in most of the projects within the ecosystem and were considered stewards of the ecosystem.

The impact on the ecosystem

Solana has faced several challenges in the past, including network outages and hacks on large applications such as Mango Markets. However, the recent downturn in the market and the emergence of well-funded competitors, such as Aptos and Sui, supported by investors like Jump Capital and FTX, has put added pressure on Solana's market share. While the impact of these competitors was anticipated, the backing of a major player like FTX proved to be a significant catalyst for their growth — which in turn has posed a threat to Solana's market position.

One of the biggest impacts on the Solana ecosystem was what happened to Serum. Serum, which was founded in August 2020 by a consortium that included the Solana Foundation, FTX, and Alameda Research, was a key DeFi platform and liquidity provider for the growing Solana DeFi ecosystem. Its order book was integrated into many of the largest DeFi projects on the network, such as Jupiter and Raydium. However, the fact that its private keys were housed within FTX has raised concerns about the security of the platform. In the aftermath, the Solana community forked the Serum project because the liquidity provided by the protocol was critical for many applications on the Solana network. Waiting for the private keys to be retrieved was not an option, so the community took action to fork the project.



However, Serum's fork did not effectively address the underlying issues facing Solana. As a result, total value locked (TVL) drained and price followed, leading to a significant decline in DeFi volume on Solana. In the past month, Solana's DeFi volume has fallen by 75%, dropping below \$20 million, according to DeFi Llama. Despite this, there is still \$293 million TVL in DeFi on the network, and many developers, such as former Coinbase engineer Mert Mumtaz, are working to keep the ecosystem alive.

Potential of Solana

It is clear there will not be one network that can meet all the different needs of the various use cases in the blockchain space, such as NFTs, GameFi, and DeFi. Solana has built a robust ecosystem that is attracting more developers, and with recent upgrades such as the QUIC upgrade, it is well-positioned to continue to grow. The Solana Foundation has also reassured the community that its exposure to recent events was minimal, stating that "less than 1% of Solana Foundation's cash or cash equivalents" were kept on FTX, and that "the impact on Solana Foundation operations is negligible." To rebuild and continue to grow, Solana will need to focus on partnering with agents who are thinking like principals and are committed to building with projects in the ecosystem.

While Solana may be facing challenges in the short to medium term, the foundation, Solana Labs team, and other projects and supporters seem confident that there is still significant demand for the network. Some even see this as a potential opportunity for the ecosystem to grow and improve. However, only time will tell if this will be the case.

Sources:

[Solana Completes \\$20 Million Raise Led by Multicoin Capital | by Andrew Hyde | Solana | Medium](#) ↻

[Solana Ecosystem Facts Related To FTX Bankruptcy](#) ↻

[DeFi Llama](#) ↻

[State of Solana Q3 2022 | Messari](#) ↻



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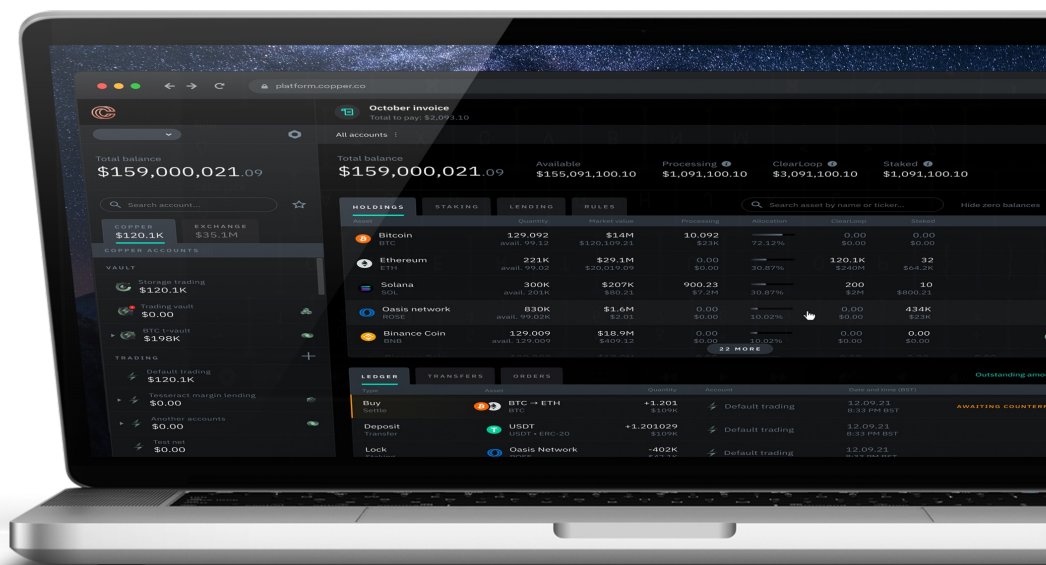
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