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Shanghai in Sight

Following the highly anticipated Merge upgrade in September, which saw Ethereum transition to a proof-of-stake network, the focus for the core team has been preparing for the next major upgrade, known as Shanghai. The Shanghai upgrade, scheduled for March, will allow staked Ethereum to be withdrawn — something not currently possible during Ethereum's current staking period. There is currently over 17 million staked Ether across over 500,000 validators. To operate an Ethereum validator, a minimum of 32 ETH must be staked.

Why is the Shanghai upgrade important?

Price When Staked vs Price Now

\$100 buckets, in ETH

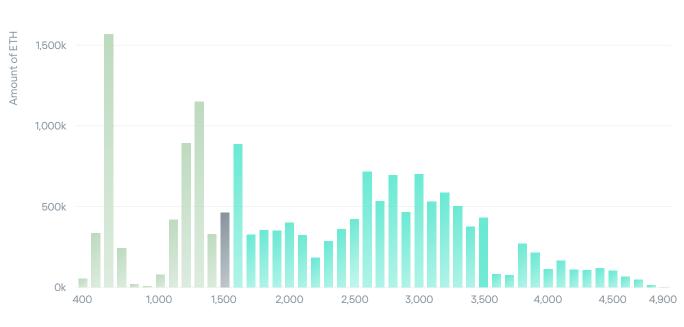
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Currently, staked Ether cannot be withdrawn from the contract. Although this was known before 'The Merge', there was uncertainty over the timelines for the Shanghai upgrade. The Ethereum 2.0 staking contract, which has been live since December 2020 when the Beacon chain was first launched, received over 1.1 million staked Ether in the contract's first week.

While the price of Ether is still multiples higher than it was at that time (\$568), early stakers potentially have sizable unrealised profits on the table. As a result, we may see relatively large amounts of Ether unstaked following the upgrade for early adopters to realise their gains. However, having witnessed the market highs of November 2021, others may continue to hold in anticipation of price returning to these highs. It is estimated that 70% of staked Ether is currently held at a loss, following the explosion of staking interest over the last two years coupled with the long-lasting market downturn.

Dune Analytics:

Ethereum ETH Staking Deposits (dune.com)



📕 In the Money 📕 Breakeven 📒 Underwater



Liquid staking continues to rally

Liquid staking tokens, such as Lido Finance (LDO) have rallied impressively over the last two weeks following recent developments around the Shanghai upgrade. Even once the upgrade is complete and staked Ether can be withdrawn, it will still be inaccessible while staked to the network. Liquid staking providers issue a tradeable derivative that can be used widely through the Ethereum DeFi ecosystem, increasing liquidity and capital efficiency. As network usage grows and more Ether is staked, the use cases for these derivatives will likely increase. Prior to the rise of liquid staking, there were many Ether staked that remain locked away for now. Following Shanghai, we may see some stakers opt to withdraw their physical Ether and redelegate via a liquid staking provider to access liquidity while still receiving rewards. There is a trade-off here as the rewards received will be slightly less than when operating a validator directly, but the derivative token can be utilised in other activities to generate returns. In a recent announcement, MetaMask confirmed integration with Lido and RocketPool, allowing holders of Ether to easily stake to these protocols through the MetaMask interface.

Preparation for the upgrade

In preparation for the Shanghai upgrade, the Ethereum core team have released a 'Shadow Fork' to begin testing the staking withdrawal functionality. This is a key development showing real progress, adding evidence and legitimacy to the proposed upgrade date of March. A public test net will soon be released for further testing.

What happens next?

Following the Shanghai upgrade, we could see an initial influx of Ether Staked, as the network will be fully functional for withdrawals. Many Ether holders have been hesitant up until this point, as previous timelines had been uncertain and subject to change, and those willing to stake their Ether had no indication of when their coins would be redeemable. As more Ether is staked, the network will become more efficient, secure and decentralized. The Shanghai upgrade is a welcomed boost towards an exciting future for the Ethereum network.

Sources:

Latest Ethereum 'Shadow Fork' Brings Blockchain's Shanghai Upgrade Closer to Reality (coindesk.com)

Ethereum ETH Staking Deposits (dune.com)

Open Source Ethereum Blockchain Explorer beaconcha.in - 2023

SEC vs Mango Grove

In this Risk Bytes, we will explore a complaint filed against the exploiter of the Mango Markets exchange, (see Code is Law, Risk Bytes Vol 8 for background) Avraham Eisenberg ("Avi"). The US government does not need to prove that Mango's MNGO tokens are securities to prosecute (market manipulation is a crime, even for non-securities), but the SEC is seizing this opportunity to arguably reiterate its jurisdiction over the whole digital asset space.

According to the SEC's complaint, beginning on October 11, 2022, Avi allegedly engaged in a scheme to steal approximately \$116 million worth of crypto assets from the Mango Markets platform. The complaint alleges that Avi, who perpetrated the scheme while living in Puerto Rico, used an account that he controlled on Mango Markets to sell a large amount of perpetual futures for MNGO tokens and used a separate account on Mango Markets to purchase those same perpetual futures. The



complaint further alleges that Avi then engaged in a series of large purchases of the thinly traded MNGO token for the purpose of artificially raising the price of MNGO token relative to the crypto asset USD Coin.

Crypto-friendly lawyers will challenge the SEC's interpretation of Howey, but it is unclear whether the consensus view of the digital asset community will prevail with the judge assigned to SEC v. Eisenberg. With all the bad press of late, we may be seeing a wave of support to regulate crypto by enforcement and the courts may be happy to let them.

The primary hope for crypto-friendly regulation is Congressional legislation, which lies in showcasing the technology's utility. Just as Silicon Valley convinced legislators to legalise the export of internet cryptography in the 1990s, crypto needs to demonstrate its economic benefits for the US to convince legislators of its legality. This is a difficult task, as legislators may not be as open to the logic of crypto legality as judges are. However, lobbying alone cannot solve the problem; it is vital to display the value of crypto to move legislation efforts forward.

Additionally, another goliath task would be demonstrating the utility of DeFi to legislators and regulators as from the outside it looks to them like an unregulated casino. While it may be difficult to show that monkey jpegs and yield farming are viable, this is far from the only capability of DeFi. It also provides the potential for greater efficiency in the traditional financial system. Convincing the powers that be of its worth may be a tough task, but it is far from impossible.

Despite the SEC's protracted investigation into fraudulent exchanges, it took Twitter sleuths

and blockchain analysts just 48 hours to seemingly uncover SBF's fraud after CZ lit the initial spark. This serves as a testament to the power of decentralized ledger technology and blockchain analysis as a tool for financial regulation. The amount of resources required to regulate banks like JPMorgan is high, but if more of traditional finance ran on DeFi rails, it could be drastically reduced. The technology of blockchains could provide regulators and legislators with an extra layer of protection and make it easier for them to detect and prevent fraudulent activity. By embracing decentralized finance, they could see significant benefits, both in terms of the effectiveness of the regulations they enforce, and the resources they can dedicate to financial oversight.

Brief Note on DeFi 2023 & Beyond

Efforts to create a safer decentralized finance (DeFi) ecosystem can be supported by three pillars: the use of code as an enforcement mechanism, the implementation of traditional legal structures and regulations, and market expectations as a filter for safe behaviours. These elements work together to provide a more secure environment for DeFi users and reduce the ability of financially criminal actors to operate successfully.

Traditional legal structures and regulations can serve as an important tool for ensuring safety in finance, but they are not sufficient on their own. DeFi, although subject to rules on money laundering, terrorism financing and sanctions, relies on code to protect user funds in an open and potentially adversarial global environment. In our perspective, centralized finance (CeFi) has a temporary advantage in being able to conceal their internal workings, however, this approach leads to long-term weaknesses and shortcuts.



One example of this is the failure of FTX, which was partly due to certain individuals allegedly having privileged access to certain accounts. In contrast, DeFi operates without any hidden or privileged access, and this is a key aspect of its security. Despite the many incidents of hacks and exploits in the past, DeFi has learned from these mistakes and has continuously strengthened its infrastructure. Unlike traditional finance (TradFi), which relies on written rules or the personal experiences of its leaders, DeFi has built its knowledge and best practices into its code.

In the coming year, we can anticipate the integration of best practices from TradFi into DeFi, with improved legal frameworks playing a supportive role. It's important to note that code and law can complement each other rather than being mutually exclusive.



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