DIGITAL ASSET SOLUTIONS

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The Ethereum Shapella Upgrade and its implications

The Ethereum Shapella upgrade, a combination of the network updates Shanghai and Capella, is on the horizon. This next milestone for the Ethereum blockchain allows stakers to withdraw their deposited Ether, along with network rewards, starting this week.

Since the successful "merge," a proof-of-stake (PoS) consensus algorithm has been securing the largest smart contract network, Ethereum. Consensus algorithms play a central role in the security and stability of distributed systems, allowing for decentralization and ensuring that all network participants are operating on a shared information basis. Some of the most well-known algorithms include proof-of-work (PoW), proof-of-stake (PoS), and delegated proof-of-stake (DPoS).

How does Ethereum staking work?

The proof-of-work (PoW) consensus algorithm is used by some of the largest blockchain networks, such as Bitcoin. The mechanism enables transaction validation through complex mathematical calculations that require high computational power. In a proof-of-stake (PoS) algorithm, validators provide pledged cryptocurrencies (referred to as "stakes") instead of computational power. In exchange, stakers receive native token rewards and network transaction fees.

In the case of Ethereum, each validator needs a minimum of 32 ETH, currently valued at over $50,000. However, after the merge, the rules required validators to lock up their ETH and rewards until a later chain update. Some stakers deposited their Ether when the Beacon Chain was introduced in December 2020, but have not been able to withdraw them since. Currently, almost 15 percent of all Ether (ETH), worth around $34 billion, are locked up in such stakes. The Ethereum Shapella Upgrade is designed to enable flexible withdrawals of these stakes in the future.

Liquidity for Ethereum stakers

The upcoming upgrades bring various improvements to the network, including some technical innovations of the Ethereum Virtual Machine (EVM). However, the main focus of most investors is on the withdrawal function of staked Ether, which is expected to be processed through a queue.

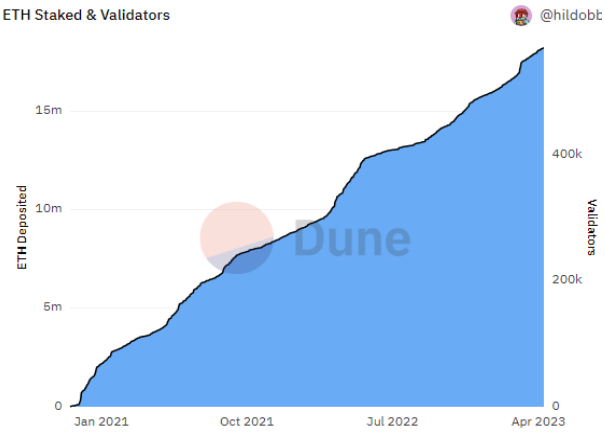

Figure 1: Currently deposited Ether and number of Ethereum validators | Source: Dune

For many investors, a successful network upgrade eliminates the last concerns about staking, as locking thousands of dollars in Ether for an uncertain period is no longer required. On the other hand, the owners of nearly 15% of the total Ether supply ($34 billion) will gain access to liquidity over the next few weeks. This could result in increased selling pressure for the native cryptocurrency if there is a surge in withdrawals.

In the medium term, it is expected that the number of deposited ETH will significantly increase over the

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next few months. For reference, up to 60% of all circulating tokens are staked on other proof-of-stake blockchains such as Polygon, Cardano, and Polkadot.

A new reference rate for crypto assets

After the Shapella Upgrade, any network participant can earn a passive return as a staker through validator software or freely tradable staking derivatives. Ether becomes a digital asset that generates regular rewards, estimated to be in the range of 4-10%. It should be noted that the distribution takes place in Ether, but an investment in the fastest-growing Web3 network now offers an opportunity for a passive return.

This additional option for generating returns is a significant step for the second-largest cryptocurrency by market capitalization and is likely to make it more attractive for institutional investors. Additionally, the Ethereum staking rate could become a benchmark for crypto returns, against which the rest of the sector is measured, similar to the risk premium of corporate bonds compared to government bonds.