Innovative Solutions Emerge as Industry Addresses centralisation Challenges in Liquid Staking

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As the crypto industry continues to evolve and develop, more innovations keep emerging. Part of this is the concept of liquid staking which offers users the ability to earn rewards while maintaining liquidity. The rise of this new staking method, however, has brought with it concerns about centralisation, a challenge that industry experts are now tackling to find solutions. This is discussed further below.

What is Liquid Staking?

Liquid staking is an emerging solution in the realm of proof of stake (PoS) blockchains, enabling users to lock in their tokens while contributing to network security. This method allows participants to stake on a PoS network while retaining the ability to transfer their staked tokens. It achieves this by creating a liquid staking token (LST), a transferable asset representing ownership of the staked tokens and any rewards accumulated from them.

In contrast to traditional staking methods, which often involve lengthy bonding and nonbonding periods, liquid staking offers greater liquidity and capital efficiency. When token holders stake their assets, they receive a receipt token, serving as proof of their staked token ownership. This receipt token can be freely transferred, stored, traded, or used within DeFi platforms or compatible decentralised applications (Dapps).

Liquid staking can enhance the efficiency of DeFi protocols by allowing users to use their staked assets as collateral in services like lending and borrowing, without needing to unstake them. This process improves liquidity in the DeFi ecosystem, potentially leading to better capital efficiency, reduced costs, and enhanced liquidity for DeFi projects.

Additionally, liquid staking could reduce centralisation risks prevalent in traditional staking, where large validators or pools often dominate. By enabling smaller stakeholders to participate without concerns about the liquidity of their assets, liquid staking promotes a more diversified and decentralised network.

Centralisation Challenges

Despite its advantages, liquid staking has fairly significant risks relating to centralisation. centralisation in the digital asset industry can lead to a concentration of power, reducing network security and potentially leading to manipulation. In liquid staking, these risks are heightened as large entities or validators could gain greater control over the network. All of the mentioned would defeat the whole purpose of cryptocurrencies as their key component is functioning as decentralised finance.

Industry Solutions

Solutions proposed by Vitalik Buterin

Ethereum’s founder, Vitalik Buterin revealed a proposal to address and solve the challenges posed by liquid staking. Buterin's proposal targets the current staking system's shortcomings, focusing on decentralisation challenges and inefficiencies in the Layer 1 consensus mechanism. He notes issues with the selection of node operators and the constraints of solo and liquid staking, which currently limit the system's capacity to around 100,000 to 1 million BLS signatures per slot. Additionally, the need for accountability in signing, which requires a participation record, presents a challenge, especially as Ethereum aims for global scaling. Even with full dank sharding, the system might still be inadequate, offering only 16 MB per slot for approximately 64 million stakers.

Inspired by Rocketpool and Lido, Buterin proposes a dual-tier staking system, with Node Operators and Delegators playing key roles. The first tier involves high-complexity, slashable participation with limited members (about 10,000), while the second tier features low-complexity

participation with minimal slashing risk. This model suggests altering the validator balance cap and setting a threshold for categorising validators.

Buterin outlines specific roles for small-stakers, like randomly selecting 10,000 of them per slot to verify the slot's head, a system for delegators to declare availability and endorse node messages, and a mechanism for delegators to signal availability and validate blocks. These roles, marked by intermittent participation and a non-slashable nature, address the risk of a 51% node operator majority conducting transaction censorship. Lastly, Buterin considers these solutions in relation to staking pool features. He recommends protocols for validators to use two staking keys – a persistent one and a temporary one – to influence the block finalisation process.

Centralisation solution according to Tenderize Protocol

Tenderize is a web3 platform that offers liquid staking so users can stake and profit. Tenderize v2 is a new class of liquid staking protocol that delivers liquidity for staked assets without centralising the underlying validator set.
As introduced by Tenderize Labs - they believe that the Web3 movement is about internet users taking back their well-deserved digital sovereignty. For this to happen, a credibly neutral layer of the internet is required. This layer is currently being built on top crypto networks that feature a decentralised validator set.
A decentralised validator set ensures that when a user interacts with a crypto network, the data presented is accurate and their transactions are final. With censorship resistance, users can prove and trust the integrity of the data and transactions without the need for a centralised institution. The current state of liquid staking protocols threatens the decentralisation of Ethereum's validator set.

Experts at (funnel_name) interviewed the CEO of Tenderize Labs, Alec Shaw who exclaimed that Tenderize v2 represents more than just a protocol; it's a foundational element for a thriving, liquid-staking DeFi environment. This platform empowers users to stake their assets while maintaining custody, contributing to the decentralisation of the underlying network. Participants in Tenderize v2 are part of a community-driven movement that prioritises both decentralisation and security, alongside financial gains.

To combat issues of centralisation, Tenderize v2 unveils an innovative structure. Diverging from traditional liquid staking platforms that are controlled by a single entity, Tenderize v2 is an open-source protocol accessible to everyone. It generates a unique liquid staked token (LST) for each validator, known as tTokens. This approach of creating validator-specific LSTs allows stakes to be directed to validators based on market preferences.

When users create a tToken, they unlock the potential to utilise this LST in various DeFi activities. They can leverage their tTokens to accrue additional yields, secure stablecoin loans,

or seamlessly convert them back to their unstaked form. To facilitate liquidity for these tTokens, Tenderize v2 introduces TenderSwap, a decentralised exchange anchored in a unified liquidity pool. This eliminates the necessity for separate pools for each LST pair, streamlining the exchange process.

Liquid staking solutions according to Swell

Daniel Dizon, the founder of Swell - A non-custodial ETH liquid staking protocol that helps you optimise yield in DeFi discussed his opinion regarding the challenges and future of liquid staking.

Emphasising the importance of decentralisation, Swell advocates for a diverse staking market with multiple providers, each holding a small market share. Introducing the Super SwETH Vault, Swell redirects all Swell DAO commissions to depositors, offering attractive terms to SwETH holders and promoting market diversity.

Despite entering the liquid staking field two years after Lido's dominance, Swell turned this delay into an advantage by learning from earlier players. Strategic choices include adopting a reward token model for simpler tax management, prioritising ecosystem integrations, and designing an intuitive staking interface. This approach propelled Swell to rapid ascension among top liquid staking protocols on DefiLlama shortly after launch.

In an interview, Daniel Dizon highlighted Swell's unique approach, focusing on liquid staking tailored for DeFi. The incorporation of gamification elements, such as Pearl hunts and the Swell Voyage, alongside over 40 DeFi integrations accessible through their app's new Earn page, fostered an enthusiastic community known as the Aquanauts. Dizon mentioned an upcoming token generation event in early next year, introducing Swellnomics, their proprietary tokenomics model, aiming to position Swell as a comprehensive hub for staking and yield generation in the DeFi space.

Top 3 cryptocurrencies that use liquid staking

1. Ethereum (ETH)

Ethereum, a decentralised blockchain network, facilitates a peer-to-peer system enabling secure execution and validation of application codes, known as "smart contracts." This platform allows parties to interact through smart contracts without the need for a central authority, unlike conventional banking systems. The Ethereum ecosystem comprises validators, miners, smart contracts, and users but doesn't operate on traditional revenue-generation models. It supports applications ranging from cross-border transactions to digital currency usage.

With its decentralised finance system, Ethereum enables activities like sending, receiving, lending, accruing interest, and even streaming money globally with just an internet connection. Beyond monetary transactions, Ethereum is also utilised for representing, exchanging, and managing assets as non-fungible tokens.

Ethereum's native currency, Ether (ETH), launched with the platform on July 30, 2015. ETH is crucial for operating smart contracts, rewarding validators (miners or those participating in Ethereum 2.0's proof-of-stake system), and is also used as a store of value.

Ethereum has been a frontrunner in adopting liquid staking. With Ethereum 2.0, staking became an integral part of its shift to a proof-of-stake consensus mechanism. Liquid staking on Ethereum allows users to stake their ETH while receiving a tokenized version of their staked assets, maintaining liquidity. Protocols like Lido and Rocket Pool have gained prominence by offering such services to Ethereum users, allowing them to earn staking rewards without locking away their assets.

2. Polkadot (DOT)

Polkadot is a blockchain designed to connect oracles, public and permissionless networks, private and consortium chains, and emerging technologies. The platform was launched in May 2020 by Gavin Wood, the co-founder of Ethereum, Robert Habermeier, and Peter Czaban, who created it. In its initial coin offering, which took place in October 2017, the project raised about $144.3 million.

By using the Polkadot relay chain, Polkadot enables a decentralised internet where separate blockchains can communicate and transact in an untrusted manner.
Decentralised applications, services, and institutions are now more simple to build and connect, thanks to Polkadot. The platform mainly aims to liberate society from its reliance on a broken web where its powerful institutions cannot betray our confidence by giving entrepreneurs the tools they need to create better solutions.

Polkadot stands out for its unique interoperability features and multi-chain architecture. It also offers liquid staking, enabling users to secure its network while participating in its ecosystem actively. Through Polkadot's liquid staking, users receive derivative tokens in exchange for their staked DOT, which they can use across different parachains or for trading. This feature enhances user flexibility and fosters a more vibrant and engaged community within the Polkadot ecosystem.

3. Solana (SOL)

In 2017, Anatoly Yakovenko, previously an executive at Qualcomm, developed Solana, an open-source blockchain platform. Solana's primary objective is to enhance the scalability of

blockchain technology, offering superior performance compared to existing blockchains while maintaining affordability.

Solana, utilising SOL as its native cryptocurrency, stands out as one of the most favoured cryptocurrencies, with a user base exceeding 10,000. It operates as a global network capable of processing thousands of transactions each second, thanks to its unique proof of history mechanism. The platform also supports the execution of smart contracts.

As a decentralised network, Solana ensures data security and resistance to censorship through the independent operation of thousands of nodes. It is designed for widespread adoption, catering to the needs of its users and providing robust capabilities for developers. Solana effectively bridges the gap, enhancing user experiences while offering the technical prowess required by developers.

Liquid staking on Solana allows users to stake their SOL tokens and receive derivative tokens, which can be used in various DeFi applications within the Solana ecosystem. This approach not only supports the network's security but also keeps the assets liquid, offering a dual advantage to the stakers. By integrating liquid staking, Solana enhances its appeal to users who wish to participate in staking without sacrificing liquidity.

In the dynamic evolution of the digital asset industry, challenges inevitably arise, inherent to any developing concept. Yet, the industry remains remarkably promising, with a continuous stream of innovations addressing challenges and enhancing overall functionality. As we move forward, the digital asset sector is poised to witness a surge in transformative innovations, solidifying its position as a pivotal player in the landscape of global finance.

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