Liquid staking protocols have emerged as a transformative force in DeFi and Web3 at large, unlocking liquidity for Proof-of-Stake (PoS) tokens used to secure blockchains, such as Ethereum. By depositing PoS tokens into a staking contract through a protocol, users receive Liquid Staking Tokens (LSTs), which represent a claim on the staked and otherwise usually locked tokens. These original tokens can be withdrawn by burning an equivalent amount of LSTs, and the primary advantage of LSTs lies in their liquidity and their ability to be reused or collateralized in other applications. Essentially, LSTs allow for the separation of work (node operators) and capital (liquid stakers) in the Ethereum space and thus allow for more optimal allocation of resources.

In this blog post, we will delve into the utility of native tokens associated with liquid staking protocols and compare existing approaches. We'll also discuss the relationship of utility and demand, which is important since a more distributed holder base increases the security of the protocol (protection against governance attacks). We will wrap up with some general conclusions on what that means for the DIVA token specifically.

Unlocked Liquidity Based on Secondary Markets

The unlocked liquidity allows LSTs to be used in DeFi applications, for instance as collateral, or to be traded on automated market makers - all while simultaneously accruing staking yield. Furthermore, LSTs provide easier access to staking yields by eliminating the need for minimum deposit amounts and lockup schedules, offering users greater flexibility to participate in staking. As such, LSTs greatly improve the utility of originally locked staking tokens. They do however rely on the presence of a liquid secondary market, usually between the LST and the staked proof-of-stake token. So there is an additional depegging risk for LST holders.

Recent Catalysts: The Shanghai Upgrade & SEC Lawsuits Against Centralized Staking Services

Two major catalysts have amplified discussions around LSTs earlier this year: the Shanghai hard fork of Ethereum and the SEC action against Kraken's staking program, followed by a lawsuit against Coinbase too a few weeks later. The Shanghai hard fork has enabled the highly anticipated withdrawal of staked ETH, derisked staking in general and boosted overall staking penetration rates as stakers do not solely rely on secondary markets but can also withdraw through the protocol native route, thereby opening up ways to arbitrage prices in the event of the LST losing its peg. Additionally, the SEC's fines imposed on Kraken and Coinbase highlight the increasing relevance of trustless staking protocols, as centralized staking programs have been scrutinized regarding regulatory implications.

Comparing Tokens of Liquid Staking Protocols

Governance Token Utility

Comparing the utility of some of the major liquid staking protocols is a great starting point for understanding the landscape. First of all, it is important to note that the native tokens of liquid staking protocols are quite different in their utility. The utility of a token directly influences how different stakeholders interact with it and its supply dynamics as a result.

Project by Project Comparison

The table below compares the major token utilities found in the native tokens of four major liquid staking protocols: Lido, Rocketpool, Stakewise and Stader. We look at governance, necessary access to operate nodes (staking as well as oracle nodes), and rewards. In some cases, there is also a staking mechanism for the native protocol token (as opposed to staking the proof-of-stake assets). We also include information on whether the token supply is fixed or includes inflation.

LST native token utilities

Lido, the largest and most established protocol, also has the most "vanilla" token utility. The only use of the token is for governance of the protocol. Lido is also giving out LDO as rewards for liquidity providers.

Rocketpool stands out both in terms of its utility as well as its inflationary supply: The protocol uses is native token to decide who can be a node operator. Both staking and oracle nodes need to stake RPL to provide their services. This increases the performance of the overall network through the additional slashing conditions for the native token (in addition to slashing conditions that staking nodes have on the proof-of-stake network they operate on). The native token staking mechanism is also used as a protocol insurance, protecting users against potential failure modes. In order to compensate for the risk they take on, stakers get an APR paid out which is financed from the RPL inflation. The fact that 47% of all RPL is staked shows that the utility of RPL has proven effective so far.

Stader, a more recent protocol, uses staking of their native token for the general community to access governance, which has a similar effect. The yields to stakers are paid from a part of the protocol fee that Stader levies to users who stake their PoS tokens with the protocol. While staking the native token is not required to operate nodes, it is optional and grants preferential delegations.

Stakewise, a smaller contender in the space is similar to Lido in its utility: the main focus is governance and the token is also used as rewards for liquidity mining. In addition, SWISE was distributed to early adopters in a temporary incentive program.

The Big Picture

All of the analyzed liquid staking protocols grant some form of governance for their token holders. Generally, governance tokens are a form of crypto-native capital, as argued by Placeholder VC. Governance makes tokens relevant because it grants influence over a decentralized protocol and the more decentralized and effective the governance is, the stronger that relationship.

All of the protocols we analyze use their own native tokens as a means of governance. Lido is additionally debating a "two-party" type of governance mechanism with additional governance power for the actual LST - mainly a measure to alleviate centralization concerns. While the details of the governance mechanisms differ, it is clear that governance is the primary utility of these protocols, allowing the community to define and adapt mechanisms and parameters, as well as govern over the treasuries.

In the quite unique case of Rocketpool, node operators are required to use their native token as a gating mechanism for nodes to participate. Other staking mechanisms are also thinkable, e.g. native token staking could be used to gate access to governance.

Most protocols also use their token for some reward function, with liquidity mining rewards being most common. Note that rewards for liquidity are often primarily targeted at the liquid staking tokens rather than governance tokens (e.g. stETH rather than LDO in the case of Lido), since liquidity is more important there as a price as close as possible to peg is essential for usage in DeFi applications.

Our Views On the Staking Ecosystem

We can draw some general conclusions from the comparative analysis above, before diving into implications for the design of a new native token of a liquid staking protocol.

First, like in many other DeFi applications, governance is at the core for all of the analyzed tokens. Some critics argue that LSTs essentially cause PoS protocols networks to degrade to generally considered inferior dPoS networks (where the d stands for delegated). However, we believe that 1) a diverse set of liquid staking protocols, with 2) limited market share captured by the leading LST protocol, combined with 3) governance tokens that allow for a liquid democracy type of checks and balances. Ultimately, market capture would be balanced or even set-off by market prices, allowing for PoS systems to preserve their superior robustness as opposed to dPoS ones.

Another observation is that the additional utility on top of governance functionality really matters: Utility of the token drives its relevance and demand for it. Certain kinds of utility mechanisms (so-called "token sinks"), for instance staking mechanisms, are popular and also impact the supply side: The circulating supply is reduced at least temporarily as tokens are locked in a staking mechanism. For instance, the use of the native token as required collateral for node operators in the case of Rocketpool at once increases the security and performance of the protocol, while adding a sustainable source of demand to the token and reducing circulating supply. A staking mechanism connected to governance like Stader has a similar effect. They do however reduce capital efficiency for node operators, as they establish new, additional staking requirements.

However, some mechanisms might also have a negative impact on the supply dynamics: Especially using the native token as rewards for providing liquidity could cause sustained sell pressure on the token. A report on Lido's liquidity incentives program found that the vast majority of LPs sold all Lido tokens they received almost immediately. Other mechanisms for providing liquidity rather than using the native token as an incentive seem more promising for a sustainable solution. On the other hand, Lido's adoption in DeFi applications relied heavily on the presence of a liquid and tightly pegged secondary market between ETH and stETH. If it wasn't for these incentives, Lido might have never gained such a market penetration.

Finally, an indirect observation through the case of Lido compared to the smaller competing liquid staking protocols: decentralization of a protocol also seems to matter in this context. The more decentralized a protocol, the more influence governance tokens actually confer, the more useful those tokens become. Also, decentralized protocols carry less counterparty risk and thus fewer regulatory requirements apply. For those reasons, the tokens of more decentralized protocols may see more demand. We call this a "decentralization premium". Additionally, due to its leading market position, Lido may have been pressured to share governance power with LST holders, essentially diminishing the governance power of Lido token holders.

Implications for the DIVA Token

A Primer on Diva

Diva Labs is a new entrant to the liquid staking market. The project came up with a significant innovation: providing a Liquid Staking Derivative (divETH) powered by Distributed Validation Technology (DVT). This approach aims to address Ethereum's staking centralization problem. Diva's DVT offers a series of innovations for truly decentralized staking as opposed to centralized delegated pools. Diva introduces a distributed peer-to-peer network of nodes running validators collaboratively, making staking more accessible and resilient. Diva Operators require only 1 ETH to set up and run a validator node, and Diva's decentralized architecture makes it collusion-resistant. Diva aspires to become the leading staking

solution in Ethereum, removing barriers to entry for both stakers and operators and promoting decentralization. very early Ventures was among Diva's early backers alongside Metaweb, Gnosis, A&T Capital, and other prominent supporters. Read more about Diva in their announcement blog post. Diva has recently launched a non-transferrable token to enable decentralized governance over the protocol. As such, the exact use and utility of the token will be decided by the decentralized community.

Recommendations for the Utility of the DIVA Token

The comparative analysis of currently leading liquid staking protocols provides us insights into what token designs are most common and what mechanisms should be considered by the Diva protocol. The following are recommendations based on the analysis:

1. Include a mechanism that has node operators stake DIVA tokens
2. Consider additional rewards for node operators who stake DIVA
3. Ensure node operators staking DIVA can participate in governance
4. Minimize the use of DIVA for liquidity mining rewards

Include a mechanism that has node operators stake DIVA tokens

Consider additional rewards for node operators who stake DIVA

Ensure node operators staking DIVA can participate in governance

Minimize the use of DIVA for liquidity mining rewards

Utility, demand, and security are in a positive feedback relationship. If the utility of the DIVA token is higher, more users will want to hold the token. As a result, the protocol is more resilient against governance attacks. We would therefore recommend to use the DIVA token not just as a means of governance but also as a staking mechanism for node operators. This could add additional security and resilience to the protocol, which in turn might increase its decentralization premium. In addition, the incentives of every node operator to choose Diva as opposed to another liquid staking protocol could be influenced positively by offering boosted yields via native token staking. In addition, there may be other places where staking mechanisms could be eventually implemented for DIVA, for example for governance participants.

As shown by the report on Lido's program, the negative effects of distributing tokens to mercenary, short-term actors are not negligible and the liquidity gained by such programs often turns out to be temporary only. While this is not an issue for a non-transferrable token, we want to caution against liquidity mining or similar reward programs in the future (in case governance should ever enable transferability). Instead, we would recommend exploring alternative routes, from providing liquidity from the DAO treasury to using another asset (e.g. CRV) for incentives.

The recommendations here are meant as an input to the Diva community, which has started discussing potential token utility. Ultimately, it will be up to the decentralized governance to decide what mechanisms should be introduced at what point. We hope that the analysis of LST native token utility will prove useful not just for this discussion, but for a larger audience interested in liquid staking or token design.