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Key Points

- Through its [Quant Platform](#), ITB customers have been deploying hundreds of millions into Lido protocols. As part of that, ITB has developed fairly sophisticated risk management models to protect assets deployed into the strategies.

- [ITB DeFi Risk Radar](#) is a new offering to monitor risk in DeFi based on the experience of the ITB DeFi Quant platform. Prior to its launch, ITB has partnered with over 20 of the top DeFi protocols in the market to a consistent experience for automated risk monitoring.

- The goal of this proposal is to outline a potential partnership with Lido for the ITB Risk Radar. This proposal is not about analytics but risk signals used to protect institutional capital at scale.

Introduction

The ITB Research and Engineering teams have three years of experience in DeFi, integrating and delivering products to help institutional and retail users better understand and deploy capital into the DeFi ecosystem. The main products delivered by ITB are the DeFi Quant Platform, DeFi Risk Radar and Analytics app

- The ITB Quant Platform serves as the gateway to many of the largest crypto institutions to access DeFi yields via sophisticated quantitative strategies with corresponding risk management models. Through this platform, ITB has allocated $1B+ into DeFi, including $200M+ into Lido products.

- ITB's DeFi Risk Radar App is a new product, spinning off the risk management used to secure the Quant Platform. ITB has partnered with 20+ blue-chip protocols to democratize access to risk monitoring tools, creating greater transparency and ultimately attracting more inflows into DeFi protocols.

- The ITB Analytics App that tracks cryptocurrencies, NFTs, and DeFi protocol metrics. The Analytics app is used by users directly through ITB's platform and through 300+ institutional partners' websites.

Purpose

As the largest liquid staking provider, it is important for Lido and its users to understand and monitor any potential risks to the protocol. ITB's Risk Radar aims to complement existing Lido analytics, leveraging ITB's expertise at securing institutional capital at scale. The key objective of this proposal is to setup a baseline for risk monitoring and management in Lido that will allow institutions to deploy capital into the protocol at scale.

The risk indicators outlined below are intended to identify and monitor both intrinsic and extrinsic risks to the Lido protocol:

Risk Indicator

Category

Description

Visualization

Why is it Useful?

Historical Lido Rebases

Protocol Status

Historical data on Lido rebases and future expected rebases based on current track

Line graph with a confidence band on expected rebase

A lower than expected rebase is one of the initial triggers for bunker mode on Lido. A abnormal rebase can be a leading indicator of consensus problems on Lido or mainnet

Lido Withdrawal Time

Protocol Status

The time it takes to withdraw stETH to ETH from the Lido network

Line graph that is a time range

Increasing unstaking times can indicate uncertainty in PoS system. This can also be a leading indicator of increased price impact when swapping from stETH to ETH if the unstake queue becomes too long

Bunker Mode Trigger Status

Protocol Status

Information tracking the status of the parameters for entering Bunker Mode

Table

If Bunker Mode being triggered usually indicates a situation where prices on stETH could be volatile and can affect LPs and lenders

stETH Staking Age Distribution

Protocol Status

Distribution of stETH holding time, showing what percentage of supply has been held for <1 day, 1 day - 1 week, 1 week - 1 month, 1 month - 3 months, 3 months - 6 months, 6 months - 1 year and 1 year+

Stacked Area

Spot trends among LSTs if users are holding stETH as a store of value or if they are seeking the highest staking APR. This can help identify points of volatility for stETH

Historical Consensus Client Distribution

Validators

The distribution of consensus clients being run by nodes

Stacked Area

High concentration of client distribution puts Lido and mainnet at higher risk of chain halts or invalid blocks

Historical Blockspace Distribution

Validators

The distribution of blockspace proposed by different builders

Stacked Area

High concentration of blocks by the same builders could lead to attempted collusion or censorship that affects Lido

Lido Missed Block Ratio

Validators

Number of missed blocks by Lido Validators compared to the total missed blocks by all validators

Line chart of Ratio and Lido Dominance

missed block ratio helps determine if Lido NOs are performing well. Large gap between missed block ratio and Lido market dominance ratio would indicate issues with Lido NOs

Lido Slash Ratio

Validators

Number of slashes compared to total number of slashes

Line chart of Ratio and Lido Dominance

Slash ratio helps determine if Lido node operators are performing well. A Large gap between the slash ratio and Lido market dominance ratio would indicate issues with Lido NOs and higher risk of capital loss for stakers

Average Validator Lifespan

Validators

Area chart that is composed of buckets representing the total count of NOs in each bucket and a line chart showing the average lifespan of all NOs

Stacked Area w/ Line chart for Total Average

Increasing validator lifespan signals a more robust network and profitability for validators to secure the network

Oracle Consensus Distribution

Validators

Historical distribution of oracles that have voted to reach consensus on validator reports

Stacked Area W/ toggle to switch between Accounting Oracle and Exit Bus Oracle

High concentration of consensus votes among a certain selection of oracles increases collusion risk of misreported oracle data or forced exits of specific validators

wstETH Flows by Chain

stETH Markets

The in and outflows of wstETH to each L2 chain

Flow chart

Indicate trends in wstETH usage among L2s and potential exposure risks

Collateral Risk Tolerance

stETH Markets

Size of health factor drawdown before repay

Stacked Area similar to Health Factor Chart

Addresses that have higher risk tolerance before they pay down debts will be more exposed to liquidation in volatile markets. High risk tolerance across stETH markets could lead to large liquidation events

Leveraged Staking Share

stETH Markets

Percentage of (w)stETH liquidity provided that is made up from recursively looping ETH into stETH collateral

Stacked Area

Provides a sense of how to expect liquidity to behave when rewards/yields change

Liquidation Profitability Simulation

stETH Markets

Indicator showing the predicted profitability that lilquidators would make

Line chart

If liquidations are not profitable, positions will accrue bad debt. Bad debt in a market will reduce usage in the market.

stETH DEX Slippage

stETH Markets

Amount of stETH to be bought/sold to move its price by a given percentage, based on 1Inch aggregator data

Amount needed to change the price in total. 1 tab for snapshot, another for historical

To understand how vulnerable stETH is to slippage and how resilient its peg is

Pool Asset Distribution

stETH Markets

Distribution of assets for stETH pools in Balancer

Stacked Line

Imbalanced distribution of assets within stable pools can lead to slippage conditions and precede de-pegging events

DEX Exit Fee Simulation

stETH Markets

Simulations projecting stETH slippage for depositors if whale addresses withdraw their liquidity

Bar + Line

Projects slippage conditions if largest depositors withdraw

DEX Pool Concentration

stETH Markets

Amount and percentage of liquidity provided by largest addresses into stETH pools

Bar chart

Provides insight into the reliance a pool has on whales to provide liquidity depth

The goal of this tool is to promote open access to the risk management models that ITB has used to safeguard hundreds of millions in DeFi deployments for institutional clients. Additionally, the integration of the Risk Radar dashboard will give Lido greater exposure to these institutions while providing them with additional assurances when deciding deployment strategies within the LST space.

Summary

ITB is requesting a grant of $48,000 to build the risk monitoring tool for the Lido protocol. The grant will cover the following deliverables:

- Risk API: REST API enabling access to risk indicators for Lido

- Risk Dashboard: Web interface displaying the 18 custom-made Lido risk metrics

- Documentation: Complete documentation of all risk indicators included in the release

Details

Timeline:

The aim would be to have the Lido ITB Risk Radar product available with these proposed indicators 2-4 months after the final grant terms have been agreed upon.

Milestones & Expenses:

1. Upfront payment ($12k)

2. Signals 1-9 (dashboard + API) ($12k)

3. Signals 10-18 (dashboard + API) ($12k)

4. Documentation covering risk dynamics and indicators ($12k)