Hi there!

The purpose

of this thread is to collect discussion and community alignment with regards to support EIP-7251: Increase the MAX_EFFECTIVE_BALANCE

in Lido protocol.

Initially, @Mol_Eliza and me conducted a study to evaluate the potential impact of this EIP on changes in APR and to assess how consolidation might influence the likelihood of penalties.

Analysis and Key Findings

1. Impact on APR:

2. In the event of EIP implementation, we may observe a slight increase in APR from 0.000094% to 0.001958%, depending on various network parameters and validator's size. This translates to approximately 9.4ETH to 195.8ETH per 10 million in quantitative terms.

3. Under normal network conditions, validators of type 0x02 with a volume less than 1700ETH will marginally decrease the APR.

4. If the network experiences huge stake inflow and validator activation queue or TX mempool overloading, then 0x02 validators will be more effective.

5. Slashing Risks:

6. Consolidating to >100 Validators under same host is not impactful in terms of expected losses, therefore could be utilized by large staking actors. However consolidation leads to increase in variance for whole interval under consideration (1500 → 1), therefore increasing uncertainty, even with almost the same expected values

7. Consolidating to low amount of validators leads to significant increase in expected losses due to increase in expected initial losses

8. In harsh network conditions or long reaction time negative effect of consolidating decreases (and could became insignificant)

The approach details, analyses, and conclusions are detailed here: EIP-7251: Risks & Rewards and were presented during Node Operator Community Call #18.

Based on the conducted research, there is no clear evidence to suggest that immediate support for EIP and the transition to type 0x02 validators is necessary. The risks of incurring penalties increase with the consolidation of validators.

Thank you, feedback & suggestions are highly appreciated!