LEVEL 1.5 Treasury Ownership Anti-Dilution Provision

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Abstract

LEVEL 1.5 is a state-of-the-art combination of science, economics and finance that brings forward numerous, innovative features not yet found in the perpetual protocol space. As the protocol continues to grow and scale, it is necessary to broaden access to LVL token and governance. Here we propose a mechanism to protect current treasury ownership and LGO holders from dilution, in which LGO issuance from LVL staking is dynamically modified to meet the issuance rate of LGO auctions.

1 Motivation

LEVEL 1.5 Part II introduces the LVL and LGO auctions, an innovation with the objective to enable further user and investor participation and ownership in the platform. The LVL auctions will not create dilution events for existing holders, given that the LVL put up for auction already belongs to the Treasury. However, since LGO auctions require minting of new LGO from the contract, we must devise an anti-dilution measure to protect existing holders of LGO.

2 Anti-Dilution Measure

Let L be the amount of LVL from the previous daily LVL Dutch auction. At the purchased price of P \$, the total raised funds for the Treasury equals $L \cdot P$.

$0.25 \cdot L \cdot P$ \$ will be used to add LVL/USDT liquidity, while $0.75 \cdot L \cdot P$ \$ will be converted to Senior LLPs and both are transferred to the DAO Treasury.

Let S be the current supply of LGO at the day of LVL auction and A \$ the current amount of liquid assets in the DAO Treasury. The base redemption value of 1 LGO will be

$$\frac{A}{S} \tag{1}$$

Let n be the amount of LGO to be auctioned that day. Since the existing holders of LGO will be diluted from n LGO minted from the contract, we will add $\alpha \cdot n$ LGO to the LGO rewards from the current LVL staking program. That means that the emission of LGO for LVL stakers will increase by $\alpha \cdot n$ LGO for that day. Ideally, $\alpha = 0$ indicates that the emission of LGO for LVL stakers will not increase, while $\alpha = 1$ means the emission will increase at an equal rate to the amount of LGO to be auctioned.

Before LGO auction starts, the DAO treasury increased in ΔA \$ and the supply of LGO increased in ΔS, so the new redemption value of 1 LGO will be

$$\frac{A + \Delta A}{S + \Delta S} \tag{2}$$

At the end of the day, the new redemption value of 1 LGO after the auction will be

$$\frac{A + \Delta A + 1.25 \cdot L \cdot P}{S + \Delta S + n + \alpha \cdot n} \tag{3}$$

To ensure that the value of LGO redemptions will not be diluted by the auction, we will have

$$\frac{A + \Delta A + 1.25 \cdot L \cdot P}{S + \Delta S + n + \alpha \cdot n} \geq \frac{A + \Delta A}{S + \Delta S} \tag{4}$$

Solving the equation, we will have

$$n \leq \frac{1.25 \cdot L \cdot P \cdot (S + \Delta S)}{(1 + \alpha) \cdot (A + \Delta A)} \tag{5}$$

As long as the amount of daily, auctioned LGO satisfies the equation (5), we mathematically prevent dilution for LGO holders.

The new floor price for the LGO auction could be determined using the equation (3).