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OlympusDAO and (3,3)

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This article explores OlympusDAO and its game theory. It references DAOs, stablecoins, and yield farming. If you are unfamiliar with the concept of DeFi, do read our introductory article to DeFi before reading this article. This article aims to provide an overview of the concepts of staking and (3,3) by evaluating the rebasing protocol of (OHM) Olympus.

What Is Olympus?

Olympus is a reserve currency protocol built with the goal of creating a decentralized, censorship-resistant reserve currency for the emerging Web3 ecosystem. The protocol is run by OlympusDAO, a network of dedicated community members who execute decisions and protocol mechanisms voted on through community governance. Despite decentralization being one of the most fundamental principles of Web3, there is over $100 billion USD in dollar-pegged stablecoins circulating the market right now. Ironically, this shows that we are still heavily reliant on fiat currency despite the whole notion of decentralization in Web3 and DeFi. Fiat-backed stablecoins are susceptible to inflati
which causes their real value and purchasing power to decline over time along with t

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What Is OHM?

OHM is a treasury-backed reserve currency issued by Olympus protocol. It is fully collateralized and backed by a basket of decentralized assets such as DAI, FRAX, ETH, BTC, and many others including Liquidity Provider (LP) tokens from Decentralized Exchanges (DEXs).

Backing vs. Pegging

OHM is backed by several different assets and not pegged to a certain one. Since the price of OHM is not tied to the price of another asset in a 1:1 ratio, it is also not considered a stablecoin. Instead, every OHM token is backed by at least $1 worth of assets in the treasury, with no upper limit imposed by the protocol. This means that the minimum price of 1 OHM is $1, and there is no maximum price.

How Does OHM Maintain Its Value?

Since each OHM token is backed by at least $1 worth of assets in the treasury, the floor price of OHM is essentially $1.

If the price of OHM drops below $1, the protocol buys back OHM from the market and burns it. This causes its supply to fall, leading to an increase in its price. The goal is to drive OHM price back up to a minimum of $1.

If the price of OHM rises above $1, the protocol mints new OHM and sells it into the market. This causes its supply to increase, leading to a decrease in its price. Though the protocol allows the price of OHM to be free-floating and primarily decided by market forces, it tries to keep the price as close to $1 as possible.

Protocol-Owned Liquidity (POL)

To ensure that the price of OHM is stable, there needs to be sufficient liquidity in the market. Olympus' treasury owns most of its liquidity instead of renting liquidity from users by enticing them to deposit into liquidity pools with attractive yield rewards. This guarantees a liquid market for OHM while creating a revenue stream from LP fees for the treasury. OlympusDAO currently owns 99.57% of OHM's liquidity.

Staking

Staking on Olympus allows OHM holders to earn rewards on their tokens, but more importantly, it is the primary value accrual strategy of OlympusDAO. It enables the su
OHM to grow over time while maintaining its value. This makes OHM viable to be used

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Olympus protocol currently boasts over 944% APY on their single-sided staking feature, distributing rebase rewards to stakers every 2200 Ethereum blocks (8 hours). Since rewards are given out every 8 hours, they can be compounded three times a day. This explains why the interest rates for staking OHM are so high.

When staking OHM, users are essentially locking their OHM tokens in the protocol, decreasing the supply of OHM circulating in the market. In return, they receive sOHM (Staked OHM) tokens of equal value. sOHM tokens are transferable, meaning that they can be used on other DeFi protocols on Ethereum for various sorts of yield farming. As of writing, approximately 86% of OHM's total supply is staked. Users can also wrap sOHM into gOHM (governance OHM), which is set up for on-chain governance. It is also cross-compatible with other blockchains such as Avalanche and Arbitrum. When unstaking, sOHM tokens are burned, and users get back the equivalent amount of OHM.

Bonding

Bonding is the secondary value accrual strategy of OlympusDAO. It is the process of selling assets to the protocol in exchange for discounted OHM tokens that would be distributed over five days. When Olympus issues bonds to users, they are effectively raising funds to back the OHM token and distribute staking rewards. Users can sell their LP tokens from DEXs such as SushiSwap, Uniswap or Curve, and other crypto assets such as DAI to buy OHM tokens at a discount. Since the price of OHM is currently higher than $1, which is the backed value, the treasury is generating profit even from selling discounted OHM.

When bonding, users are essentially minting new OHM tokens to be bought while providing assets to grow the treasury. It is a win-win situation as users get to buy discounted OHM tokens while the treasury generates profit and accumulates LP tokens which can even gain rewards from transaction fees.

Olympus Game Theory

Game theory is the study of strategic interdependence. To understand this theory in relation to the Olympus protocol, let us consider the case in which two players are Olympus users. Each player is given three possible actions: stake, bond, or sell OHM. Staking gives a value of +3, bonding gives a value of +1, and selling gives a value of -1. These numbers represent how much each action benefits OlympusDAO and its users. When both players pick an action, we can visualize and evaluate how beneficial the outcome will be. To put it simply, the higher the value of the outcome, the more beneficial it is for all parties.

	Stake	Bond	Sell
Stake	(3,3)	(1,3)	(-1,1)
Bond	(3,1)	(1,1)	(-1,1)

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What Is (3,3)?

The table above shows that (3,3) is the most beneficial outcome, with the highest value of 6. This is the result of both players choosing to stake. The least beneficial outcome is (-3,-3), with the lowest value of -6. This is the result of both players choosing to sell. Although this interpretation is highly simplified, it points out that staking OHM would be the most beneficial strategy for both players.

Conclusion

OlympusDAO was an ambitious project built to tackle the overreliance on fiat currency. They created OHM, a decentralized reserve-backed currency backed by a basket of crypto assets. Since OHM is not pegged to any fiat currency, it avoids the risk of being centralized and indirectly regulated by the Federal Reserve. In fact, OHM was created to be a credible reserve currency for Web3 and a store of value designed to preserve its real purchasing power over time. With interesting tokenomics and mechanics developed to ensure the sustainability of OHM, Olympus is an extremely innovative protocol that has managed to rapidly grow its treasury along with its community. Its game theory incentives had even exploded on the internet, with the (3,3) meme going viral all around the web. This project has seen tremendous success over the past year, but only time will tell if OHM succeeds in becoming Web3's reserve currency in the long run.

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