Olympus Gold Litepaper

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Terms Used:

- OHMG (Olympus Gold)
- LP (Liquidity Pool)
- APY (Annual Percentage Yield)
- DeFi (Decentralised Finance)
- EPOCH (An epoch is an era of time within a blockchain network.)

Olympus Gold

(Part One: What is Olympus Gold)

Introduction

Olympus Gold is the first decentralized reserve currency protocol that will be available on the Syscoin Network based on the OHMG token. Each OHMG token is backed by a basket of assets (e.g.,Gold, Stable coin, Crypto and LP Tokens etc etc) in the Olympus Gold DAO treasury, giving it an intrinsic value that it cannot fall below. Olympus gold also introduces economic and game-theoretic dynamics into the market through staking and minting.

Our goal is to build a policy-controlled currency system, native to the Syscoin network. In the long term, we believe this system can be used to optimize for stability and consistency so that OHMG can function as a global unit-of-account and medium-of-exchange currency. In the short term, we intend to optimize the system for growth and wealth creation.

Why Gold?

Long-term price stability has been described as one of the virtues of the gold standard.

Gold retains its value not only in times of financial uncertainty, but in times of geopolitical uncertainty. It is often called the "crisis commodity," because people flee to its relative safety when world tensions rise; during such times, it often outperforms other investments.

Over time, fiat currencies – including the US dollar – tend to fall in value against gold.

Our goal is to offer this long term price stability gold provides, coupled with our groundbreaking financial technology, giving our investors the best returns on their investments.

Is OHMG a stable coin?

OHMG is not a stable coin, but rather a floating algorithmic reserve currency backed by gold. Similar to OHM in OlympusDAO, upon which our architecture is based.

The purpose of Olympus Gold is to create an ecosystem that provides perfectly balanced exposure to growth coins in a way that goes far beyond simple indexed currency baskets.

Our ecosystem will allow you to invest in assets along the entire risk spectrum with minimized volatility and downside exposure, while enjoying high returns.

This is a first-in-class reduced risk asset that is not pegged to the US dollar.

We have a pipeline of assets and protocol features that will create new, safer DeFi investing opportunities.

How are OHMG tokens created?

Just like OlympusDAO, OHMG consists of a protocol-managed treasury, protocol-owned liquidity, a bonding mechanism and a staking system that control supply expansion and contraction.

New OHMG tokens can only be minted as long as there are enough assets in the treasury to back them.

The protocol profits by issuing bonds.

Network in use:

Initially launched on Ethereum, Olympus Gold will be expended over to the SYS platform for the following benefits:

Syscoin is a strong complement to both Ethereum and Bitcoin. Syscoin will be implementing layer 2 Zkrollup technology and we will be the first layer 2 dao in existence

It resides between both chains. For example, by using wrapped BTC you can go to Syscoin and effectively have the same security as Bitcoin but much cheaper and faster using trustless methods to cross chains.

Syscoin's value is in its security, speed and close ties to the Bitcoin codebase with scalability in mind and flexibility of the Ethereum chain through the aforementioned Bridge.

Syscoin focuses on simple value transfers on-chain with off-chain solutions for things like DEX's, payments and other simple smart contracts using the mainchain as a court repudiation system as it is the only way to scale globally whilst remaining decentralized as Bitcoin.

Olympus Gold Ecosystem

Staking:

Staking is the primary value accrual strategy of Olympus Gold DAO. Stakers stake their OHMG tokens on the Olympus Gold DAO Website to earn rebase rewards. The rebase rewards come from the proceeds from bond sales, and can vary based on the number of OHMG staked in the protocol and the reward rate set by monetary policy.
Staking is a passive, long-term strategy. The increase in your stake of OHMG translates into a constantly falling cost basis converging on zero. This means even if the market price of OHMG drops below your initial purchase price, given a long enough staking period, the increase in your staked OHMG balance should eventually outpace the fall in price.

When you stake, you lock OHMG and receive an equal amount of sOHMG. Your sOHMG balance rebases up automatically at the end of every epoch (increment is based on the protocol's APY).
When you unstake, you burn sOHMG and receive an equal amount of OHMG tokens. Unstaking means the user will forfeit the upcoming rebase reward. Note that the forfeited reward is only applicable to the unstaked amount; the remaining staked OHMG (if any) will continue to receive rebase rewards.

Minting:

Initial bonds we will offer?

- **PAXG Bond**
- **AGX Bond**
- **DAI Bond**
- **PAX - USDT LP Position Bond**

Minting is the secondary value accrual strategy of Olympus Gold DAO. When users mint OHMG tokens, they are actually selling their assets in order to buy a bond from the protocol. Minting Actions are a cross between a fixed income product, a futures contract, and an option.

The protocol quotes the minter with terms for a trade at a future date. These terms include a predefined amount of OHMG the minter will mint and the time when vesting is complete. The bond becomes redeemable as it vests. I.e. in a 5-day term, after 2 days into the term 40% of the rewards can be claimed.

Minting is an active, short-term strategy. The price discovery mechanism of the secondary bond market renders mints discounts more or less unpredictable. Therefore minting is considered a more active investment strategy that has to be monitored constantly in order to be more profitable as compared to staking.

Rebasing:

Rebase is a mechanism by which your staked OHMG token balance increases automatically. When new OHMG tokens are minted by the protocol, a large portion of it goes to the stakers. Once OHMG tokens have been staked, only sOHMG (staked OHMG) will be visible, instead of OHMG tokens. The protocol utilizes the rebase mechanism to increase the sOHMG token balance to match OHMG balance, so that 1 sOHMG is always redeemable for 1 OHMG token. The staker will be able to receive APY rewards via the rebasing mechanism.

APY Maintenance

The APY is calculated from the reward yield (a.k.a rebase rate) using the following equation:

APY = (1+ reward yield)*1095

It raises to the power of 1095 because a rebase happens 3 times daily.

Consider there are 365 days in a year, this would give a rebase frequency of 365 * 3 = 1095.
Reward yield is determined by the following equation:

Reward yield = OHMG distributed / OHMG total staked.

The number of OHMG distributed to the staking contract is calculated from OHMG total supply using the following equation:

OHMG distributed = OHMG total supply x reward rate

Note that the reward rate is subject to change by the protocol.

The difference in yield is negligible at the start of the staking period, however the difference grows exponentially in a longer time frame.

Importance of LP position

LP represents the size of the trading market for OHMG tokens.

Market crashes usually start when big investors withdraw their LP position and sell the token back to the market.

OHMG DAO aims for long-term price stability, therefore having the largest LP position for the DAO would be vital to prevent massive sell offs in the market, and give the investor confidence there will always be liquidity to exist (prevent panic selling).

Having a larger position in the LP will also generate extra fee/profit for the treasury.

Bank runs on Olympus Gold DAO

As the protocol controls the funds in its treasury, OHMG can only be minted or burned by the protocol. This also guarantees that the protocol can always back 1 OHMG token with 1 Mili ounce GOLD token. You can easily define the risk of your investment because you can be confident that the protocol will indefinitely buy OHMG below 1 Mili ounce GOLD with the treasury assets until no one is left to sell.

You can't trust the FED but you can trust the code.

As the protocol accumulates more PCV (Protocol Controlled Value), more runway is guaranteed for the stakers. This means the stakers can be confident that the current staking APY can be sustained for a longer term because more funds are available in the treasury.

Underlying Dynamics

The default state of the network and OHMG is also at intrinsic value. After some long period of inactivity, price will always return to the intrinsic level. Contractions are conceivably only triggered by short-term liquidity crises. OHMG holders have a guarantee that price will come back above intrinsic value eventually, so the only sellers below should be those who need a short term exit and are willing to take the extra loss.

Expansions can be triggered by an increase in staking or bonding.
An increase in staking will generally be preceded by purchases of OHMG from the market. That increases the price of OHMG, which allows the protocol to sell at a higher price and increases yield (in OHMG) for stakers. That should serve to bring in more stakers and continue the cycle.
Meanwhile, the rising price of OHMG increases the bond discount and creates capacity for new bonds (and new OHMG to be minted). This will create new liquidity, which improves the protocol's ability to carry out sales and increases available exit liquidity.

This positive price-liquidity feedback loop should serve to create sustainable expansionary periods. However, it works both ways. Falling demand decreases staking rewards and bond capacity, causing demand to fall further.

This is an unavoidable fact of systems like this; even the most established (i.e. Bitcoin) are no stranger to significant declines after periods of expansion. But we can work to mitigate busts.

Firstly, the anticipated growth in demand for gold is expected to ensure that there is demand for OHMG and the intrinsic value will trend upwards. OHMG holders have a guarantee that price will come back above intrinsic value.

In the case that demand stagnates, the protocol's reserves can step in to catch the market when velocity turns too far to the downside. It does so through forward guidance (the fact that the protocol will buy lower risk, the lower we go, which can mean we don't have to buy) and by buying perpetually below intrinsic value. The treasury ensures that, although bear markets and contractions can and will occur, the protocol can never die.

Mechanics (Maths)

(Part Three : Math that makes it work?)

Every epoch the protocol calculates the increase in the intrinsic value of reserves.

If today the reserves are $100 and there are 50 OHMG (Olympus Gold token). This would mean that intrinsic value is $100 / 50 = $2 per token.

Later if reserves increase by $30, this means that intrinsic value will have increased to $130 / 50 = $2.60 per token.

Intrinsic value has increased by $0.60.

If we mint new tokens, this will decrease the intrinsic value from $2.60 down to .. something less.

If we do some math, we can figure out exactly how many tokens we would need to mint to bring the intrinsic value from $2.60 down to $2.00 again.

In this example, that number is 15 tokens.

Because $130 / (50 + 15 = 65) = $2.00 per token.

In this case, if reserves increased by $30 we could increase token supply by 15 tokens and intrinsic value would remain flat.

So 15 tokens is the upper limit of OHMG (Olympus Gold token) rewards that we are able to share with the community without diluting the intrinsic value of OHMG (Olympus Gold token).

We do not want to dilute intrinsic value, so our OHMG (Olympus Gold token) rewards are constrained by growth in reserves, so the staker will not be diluted. This protects and ensures the long-term value for OHMG (Olympus Gold token) holders even though we are minting and providing rewards.

This will mean stakeholders won’t get 100K% APY inflation yield tokens that are about to get mass sell off.

You are getting a safer yield, backed by real growth in intrinsic value.

Mechanics

(Part Four : Dev notes: Technical deployment, System structure)

The complete decentralized application is made of the following layers:

- **Website:**

  Two websites used for OHMG DAO (Olympus Gold Decentralized Autonomous Organization).

  Welcome Layer: This website is used to display important information about OHMG (Olympus Gold token) DAO. It also provides a link to the DAPP (Decentralized App) Layer.

  Dapp (Decentralized App) Layer:

- **Graph - subgraph:**

  The Graph analyzes and gathers blockchain data before storing it into various indices, called Subgraphs, allowing any application to send a query to its protocol and receive an immediate response.

- **Tokens / Smart contracts:**

  - **Treasury contract**
  - **I Treasury Allocation**
  - **Staking contract**
  - **ERC-20 Token**
  - **Exit Queue**