Hi Aave Community,

I'm Nick from Mellow. We're working on a platform for building automatic trustless DeFi strategies. The system is permissionless and open for builders to implement their strategies.

The protocol was launched mid November '22. The platform is audited by Chainsecurity and BlockSec.

Our strategies have already proved their sustainability for ALM (active liquidity management) forLido and zkBob on Ethereum, Polygon, Optimism and Arbitrum. Implementation of the strategies can work with almost any AMM with concentrated liquidity including Uniswap and Quickswap.

Links about Mellow

– dApp, Docs, Twitter

Reasoning

Deploying the strategies for GHO pairs may pursue the goal of creating and maintaining sustainable and deep liquidity on AMMs.

The strategies can be both working with protocol-owned liquidity and with incentivized pools bootstrapping using built-in rewards distribution mechanism.

For future development and increasing the liquidity volumes in the pools Mellow LP tokens can also be used as collateral on AAVE for the strategies working with correlated pairs.

We want to discuss the use of the deployment of our strategies with AAVE Community for GHO pairs.

Please find below the description of the strategies we propose to deploy for GHO:

Strategies

Detailed descriptions of the strategies can be found in thedocs .

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Screenshot 2023-05-04 at 15.00.05

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Pulse V2 strategy

The strategy maintains the interval within the pool of the corresponding AMM protocol in an active state.

When the price (spot tick) in the pool approaches the interval's boundary, the strategy does not mint a new position centered on the current tick. Instead, it expands the existing position uniformly in both directions. This approach reduces the amount of tokens to be swapped and significantly decreases the impact of Impermanent Loss (IL) on profitability.

As the position's width increases gradually, its depth decreases. This process results in reduced fees from pool swaps and increased slippage when swapping within this pool. To counteract these effects, the strategy introduces the concept of position limit width. If the width reaches this limit, it resets to the default width size, and a position centered on the spot tick is minted.

The strategy can be used for correlated and volatile pairs.

Proposed base strategy parameters:

- Initial pool – ETH <> GHO 0.05% UniV3 pool
- Default width of UniswapV3 position – 4200
- Width limit after which position will be minted – 10000
- The multiplier of the current interval width, showing the minimum required difference between the tick and the border of the current position to trigger – 15% of interval width

- The multiplier of the current tickNeigborhood, showing how much the position will be expanded in case of rebalance – 2 times the current tickNeighborhood

Tamper strategy

The strategy is designed for correlated asset pools. It maintains two positions within the pool, actively updating and rebalancing the liquidity between them based on the current market price.

The strategy utilizes Cowswap integration to get improved results for rebalancing swaps.

The strategy operates with three vaults, one ERC20 vault, and two UniV3 vaults. Each of those UniV3 vaults holds a Uniswap V3 position on the token pair.

One portion of capital (initially set to 5%) is supposed to be stored inside the ERC20 vault, whereas the remaining part is supposed to be distributed between UniV3 vaults based on formulas presented in the strategy documentation. The positions are maintained, so the current tick would be inside both positions, so the strategy normally earns fees from both.

When the price deviates significantly, and the current distribution of capital becomes irrelevant for the pool tick, the rebalance is performed as described in the documentation.

The strategies can be scaled to any pools on Uniswap, Quickswap and other AMMs. Mellow is deployed on Ethereum, Polygon, Arbitrum, and Optimism.

Liquidity bootstrapping

Volatile pairs

For volatile pairs, the IL can be pretty significant and for this case, there’re 2 possible approaches:

- Deployment of protocol-owned liquidity
- Pool incentivization – we utilize Synthetix contracts for incentivization for wstETH strategies and we can deploy the same contracts for GHO pairs

Correlated pairs

As the IL for correlated pairs is much less significant the fees can beat the IL, but still can be not very sustainable, in this case, we see these approaches possible:

- Deployment of protocol-owned liquidity
- Pool incentivization with fewer incentives than in the case with volatile pairs as the users will have fewer risks
- Strategy LP tokens listing on AAVE as collateral – this will enable the leverage for the strategy and will create the inflow of liquidity to the pool

Risks

There are several potential risks:

Smart-contract risk

This is the risk of hacking the vaults and strategies contracts. The Vaults system was audited by Chainsecurity and BlockSec. Also, the Vault system is used as a base layer of security as it’s designed to restrict and prevent potentially harmful actions of the strategies.

Pulse V2 strategy went through the internal audit and is already used in production to manage the liquidity of Lido and zkBob.

The audits are published in Mellow GitHub.

Price risk and IL

The strategy contains two underlying risks: price risk and impermanent loss risk. These risks stem from the fluctuations in the prices of wrapped staked ETH and wrapped ETH. The price risk, which is considered the first-order effect or “delta,” is relatively limited due to the stable nature of the price. On the other hand, the impermanent loss risk is considered the

second-order effect or “gamma” and is more substantial as the strategy’s liquidity is heavily concentrated in Uniswap v3.

These are rebalancing strategies, so every rebalance realizes some of the incurred IL from the volume of rebalance.

Conclusion and further discussion

We propose to consider using Mellow for active liquidity management for GHO pairs on Uniswap, Quickswap and Kyber on Ethereum, Polygon, Optimism and Arbitrum.

As GHO releases Mellow team will deploy the strategies to showcase the performance and real data.

We want to hear the feedback from contributors and the community and discuss the parameters of the strategies, pairs and deployments of the strategies.