

## Summary

GLV (GMX Liquidity Vaults) offers a new way for users to easily provide liquidity to GMX, using a single vault instead of directly to individual GM Pools. Each vault is configured to include various GM pools that all have the same underlying long token and short token. Utilizing the recently introduced SHIFT function, GLV's dynamically allocate liquidity to their target GM pools based on factors including but not limited to pool utilization, fee generation, OI.

By consolidating multiple GM pools into a single GLV, liquidity providers (LPs) will benefit from enhanced rebalancing and improved liquidity management, which should deliver a more optimised return profile.

GLV helps GMX to:

- improve the overall capital efficiency of liquidity
- boost available liquidity for traders through periodic active rebalancing
- more easily bootstrap sufficient liquidity for newly launched trading pairs

The proposal recommends integrating GLV vaults alongside existing V2 GM pools.

## Motivation

The implementation of GLV is a natural evolution of GMX V2. It combines the more granular market parameters and safety gains that V2's isolated markets provide to LPs, with a more cohesive and accessible liquidity product like GLP introduced to the perp DEXs.

This combination can unlock more capital-efficient liquidity, and support for greater volumes / Open Interest across a broader set of markets.

## Rationale

Currently, liquidity providers (LPs) contribute to individual GM pools, each containing a specific long and short token pair. GLV introduces a unified mechanism for pooling liquidity across multiple GM pools with identical token pairs. This system enables:

### 1. Enhanced Capital Efficiency

: GLVs allow for aggregated liquidity, reducing fragmentation and increasing the overall efficiency of capital deployment.

### 1. Improved Liquidity for Traders

: Active rebalancing within GLVs helps maintain optimal liquidity levels, resulting in a better trading experience for traders.

### 1. Simplified LP Experience

: By consolidating liquidity into GLVs, LPs can manage their investments more effectively without tracking multiple individual pools.

### 1. Streamlining listing of new markets

: Markets determined to be safe can be directly integrated into an appropriate GLV, ensuring access to sufficient liquidity without needing to initially bootstrap these markets individually.

## Specifications

### Buying and Selling GLV:

Buy GLV: Users can select either Single or Pair options. GLV tokens will be purchased using long, short, or eligible GM tokens. The UI will capture which underlying pool the funds will go to.

Sell GLV: Users can only select Pair options. The UI will capture which underlying pool the funds will be withdrawn from.

### Fees and Price Impact:

Buy GLV: Fees and impacts will mirror those of buying GM tokens. No additional fees are incurred for using GM tokens.

Sell GLV: No price impact. Close fees apply for exiting the GM pools.

The DAO may subsequently add fees to GLV, as an independent action or potentially combined with reducing fees on underlying GM markets.

### Implementation Plan:

#### Design and Development:

Collaborate with developers and designers to implement changes to support GLV functionality.

#### Testing and QA:

Conduct thorough testing of the GLV features.

Address any issues or bugs before deployment.

#### Deployment:

The initial rollout of the GLV feature will use a phased approach to monitor performance and user feedback, including tight supply caps on GLV and the underlying target GMs. The first GLV proposed is WETH/USDC on Arbitrum, as this token pair includes the broadest set of markets available on GMX.

#### Monitoring and Support:

Continuously monitor the performance of GLV.

Provide user support and make necessary adjustments based on feedback.

#### Conclusion

The introduction of GLV is set to significantly advance the GMX protocol's liquidity management options for LPs. Integrating GLVs into the existing earn interface will provide a unified approach to liquidity provision, enhanced capital efficiency and the improved liquidity profile will improve the trading experience for users.

This proposal aims to streamline the LP experience, optimise liquidity deployment, and boost overall platform performance. It outlines the necessary steps for implementation and seeks approval from the DAO to move forward with the integration of GLV into the GMX protocol.