

Summary

- On August 5, 2024, dYdX Trading [published](#) an overview of the MegaVault. MegaVault is a user-facing feature that enables dYdX Chain users to deposit USDC to provide liquidity to markets and receive yield in return.
- Greave received a [grant](#) from the DEP to potentially become the Megavault Operator on dYdX Chain, subject to a dYdX Chain community governance proposal.
- Greave, an affiliate of Gauntlet, is an end-to-end solution provider for on-chain strategy execution. We will use the real-time data and analytics platform of our affiliate, Gauntlet to provide active monitoring of on-chain positions and liquidity to help us identify parameter adjustments to keep MegaVault optimized to current market conditions.
- Greave is submitting this proposal to serve as operator of the dYdX [MegaVault](#) on dYdX chain.
- Scope will include regular parameter recommendations for sub-vaults, allocations to the sub-vaults, a public dashboard with key metrics, monthly vault performance reporting, and real time monitoring of the protocol and market conditions.
- Greave will conduct ongoing research and iterate on the methodology throughout the engagement in pursuit of maximal impact on dYdX volumes, open interest, MegaVault depositor returns, and trader experience.

Abstract

For the MegaVault to work effectively, it needs a dedicated parameter operator to continuously configure and optimize settings across all sub-vaults. This includes spread parameters, skew factors, and liquidity allocation weights that determine how capital is deployed across markets. The operator must both monitor market & vault activity, and maintain these settings in real-time to ensure optimal market efficiency while protecting vault depositor returns.

This proposal would give Greave on-chain permissions to serve as MegaVault operator, granting the ability to update key parameters as described below.

Motivation

To properly grow activity on trading venues, liquidity management on CLOB exchanges is the main lever for managing risk and maintaining a competitive position in the market. The relationship between volume and liquidity exists irrespective of the venue. In the case of dYdX, MegaVault provides functionality to increase volumes and activity via strengthening liquidity on markets, as well as routing liquidity to markets that are displaying increased demand via trading volumes.

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The MegaVault is a key innovation and vital liquidity management tool for the dYdX Chain, designed to enhance market depth and leverage the volume-liquidity flywheel, a key driver of efficient and liquid markets.

As such, the dYdX Chain community would benefit from MegaVault TVL being as high as possible. We want to flag that there is currently an [active proposal](#) on the dYdX Forum discussing the potential to route 50% of protocol fees to the MegaVault. We are not planning to participate in the discussion because our proposal to become the MegaVault Operator clearly biases our position.

How MegaVault Works

USDC will accrue in the MegaVault from user deposits and [potentially](#) a percentage of protocol revenue, subject to dYdX Chain governance.

Users will be able deposit USDC into MegaVault at any time and start earning yield immediately. At a high-level, depositors can think of deposits as owning a percentage of the vault's net equity (i.e. vault's USDC and position values). Yield (or loss) is distributed pro-rata among MegaVault depositors and can come from various sources: PnL on vault positions, trading fee revenue shares, and other potential incentives devised by the dYdX community.

An increase in PnL from vault positions or trading fee revenue shares will boost MegaVault's total TVL, thereby proportionately increasing each depositor's share of the vault's holdings based on the total amount of USDC a user has deposited. As such, yield (or loss) is only realized upon withdrawal from the MegaVault.

In the initial version of MegaVault, users will be able to withdraw from MegaVault at any time after depositing, though users may experience "slippage" based on MegaVault's status and positions as well as market conditions.

By allowing users to deposit USDC and deploying it across various markets through sub-vaults, the MegaVault simultaneously generates yield for depositors and ensures appropriate liquidity across markets, improving trading conditions for all participants.

Volume-Liquidity Flywheel

The concept of the volume-liquidity flywheel underscores the mutually reinforcing relationship between trading volume and liquidity. Deep liquidity enables tighter spreads, lower slippage, and reduced trading costs, which encourages higher trading volume. This, in turn, attracts more liquidity providers, reinforcing the cycle. The MegaVault's ability to dynamically allocate liquidity is essential to sustaining this feedback loop. In particular, allocating more weight to sub-vaults that are experiencing greater trading volume is critical to optimizing liquidity provisioning. Markets with higher volume demand deeper liquidity to maintain tight spreads and absorb large orders without significant price impact.

MegaVault & Sub-Vault Management

The operator plays an important role in overseeing this dynamic allocation process. While the MegaVault's structure automates many market-making functions, continuous evaluation of the performance of individual sub-vaults and adjusting the distribution is vital. This process is iterative and responsive, requiring frequent rebalancing of liquidity to sub-vaults that are receiving higher trading volume & higher marginal returns/performance, and ensuring these markets remain well-capitalized. This dynamic allocation helps reinforce the volume-liquidity flywheel by ensuring that liquidity is directed to where it is needed most, sustaining market efficiency and supporting trading activity.

The operator complements the automated infrastructure by providing flexibility and judgment in fine-tuning liquidity strategies. Adjustments to quoting parameters, such as aggressiveness and quote size, allow the operator to balance risk with liquidity provision, ensuring that the general risk and volatility profile of an asset aligns with the demanded edge via strategy quoting parameters. While not formally embedded in the protocol, the operators recommendations should follow an automated, algorithmic, & data-driven approach. This continuous, hands-on engagement helps optimize the performance of the MegaVault, even as the platform evolves toward greater automation.

Continued Research & Development

A key aspect of the operator's ongoing role will be the continual research and development of algorithms and models to better inform liquidity allocation decisions and quoting strategies. By leveraging data-driven approaches, including but not limited to global price, liquidity & volume data across leading centralized and decentralized exchanges, the operator can refine models that anticipate market demand, thereby optimizing both weight allocations across sub-vaults and quoting parameters such as size and aggressiveness. These models will evolve with market conditions and enable the MegaVault to not only react to trading volumes but also anticipate shifts in liquidity needs, further enhancing market resilience and efficiency.

Specification

This section outlines the parameters the MegaVault operator will be able to change, their purpose, as well as the expected frequency of changes.

There are two ways a new market can get listed on dYdX Unlimited.

1. Via the governance proposal - in this case Greave, as MegaVault operator, will help initialize the sub-vault and begin allocating to it.
2. Permissionless—anyone can deploy a new market by depositing a certain amount of USDC for a minimum period. The parameters will be determined by governance. Greave, as MegaVault operator, will decide whether to allocate to these markets based on trading activity.

Parameters Under Management

1. Sub-vault Parameters
2. Half Spread: Distance in oracle price for bid/ask quotes at 0 inventory
3. Skew Factor: Aggressiveness of quote adjustments based on inventory
4. Layers: Number of order book levels quoted
5. Order Size: Percentage of vault equity per order
6. Close Only: Parameter for market delistings or events
7. MegaVault Allocation Parameters

8. Target Weight: Ideal liquidity allocation per sub-vault
9. Min Weight: Minimum required liquidity per sub-vault
10. Max Weight: Maximum allowed liquidity per sub-vault

Parameter Update SLAs and Success Criteria

Sub-vault Parameter Recommendations

Parameters*

Description

Minimum Update Frequency

Sub-Vault Weight

Percentage amount of MegaVault capital allocated to a specific sub-vault

Weekly

Half Spread

Distance in oracle price that the sub-vault quotes its bid/ask at 0 inventory; denominated in bps;

Weekly

Skew Factor

Determines how aggressively the vault adjusts its quotes based on inventory; a measure of risk aversion

Weekly

Layers

Number of order book levels the strategy is quoting

As needed

Order Size Pct

Percentage of vault equity each child order is sized at

As needed

Close Only

Parameter for delisting markets or dealing with significant market events that make a given sub-vault no longer viable

As needed

MegaVault Allocations

These parameters are per sub-vault targeting individual markets

Parameters*

Description

Minimum Update Frequency

Target Weight

Defines the ideal weight of liquidity the MegaVault will supply to a given sub-vault based on a defined risk-aware methodology incorporating returns, marketshare, volume and current weights

Weekly

Min Weight

Defines the minimum liquidity the MegaVault will supply at all times to the given sub-vault

As Needed

Max Weight

Defines the maximum liquidity the MegaVault will supply at all times to the given sub-vault

As Needed

*** Market conditions will determine the frequency of updates. This Proposal represents the expected minimum frequency of scheduled recommendations. It should be noted that sometimes no parameter updates will be necessary.*

Success Criteria

We will measure success via the following metrics and will adjust our methodology accordingly as an iterative process in pursuit of stated goals.

- Vault APR
- Target a positive return (> 0) for vault depositors
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- Liquidity
- Sub-vault liquidity remains within 50% with respect to leading centralized and decentralized exchanges for a defined notional trade size
- Venues: Binance, OKX, ByBit, Hyperliquid
- Min Notional - \$1000
- Ie for a \$1000 trade on other venues, is the slippage with respect to the vault within 50%
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- Ie for a \$1000 trade on other venues, is the slippage with respect to the vault within 50%
- Sub-vault liquidity share $> 50\%$ of total dydx order book liquidity for a defined spread tolerance and notional trade size
- Spread - 1% / Min Notional - \$1000
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Note: these metrics serve as a guide for our methodology and do not constitute a guarantee.

Compensation

- Greave received a [grant](#) from the DEP to potentially become the Megavault Operator for 6 months on dYdX Chain, subject to a dYdX Chain community governance proposal.

- The grant involves a variable fee structure compensated from the DEP based on realized trading volumes generated and realized assets under management holdings through MegaVault denominated in USD.
- For the entire engagement period, the variable fee shall be subject to an annualized cap of \$400,000
- Variable Fee Structure -

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Implementation & Timeline

If the proposal passes:

1. Greave will become the MegaVault operator on dYdX chain mainnet.
2. Greave will begin submitting parameter updates immediately following public launch and completion of integration testing.
3. The proposed engagement is for 6 months, starting from the date MegaVault launches on the mainnet. If needed, it can be extended or modified via governance after this period.

If the proposal fails:

Market risk changes dynamically. Without a MegaVault operator, MegaVault parameters cannot be updated, which could delay the launch of MegaVault.

Who We Are

Greave is an end-to-end solution provider for on-chain strategy execution. Based in the Cayman Islands, it draws upon a wealth of experience in actively monitoring and managing positions throughout market cycles and black swan risk events. Gauntlet was contracted to build a real-time data and analytics platform similar to what their team built for [Jupiter](#). We will use the real-time data and analytics platform of our affiliate, [Gauntlet](#) to provide active monitoring of on-chain positions and liquidity to help us identify parameter adjustments to keep MegaVault optimized to current market conditions.

Disclaimers / Notices

- Parameter targets serve as guidelines and are not guarantees
- The Megavault operator role can be modified or replaced via governance

Agreement and Disclaimer - Please Read All of This

By using the MegaVault, you acknowledge and agree that:

Greave's (also "we" and "us") provision of MegaVault Operator services is not investment, tax, legal, or technological advice. None of MegaVault's vaults are depository or custodial products, and none of your digital assets are guaranteed by Greave or any other person. We are not a fiduciary for any MegaVault user, nor will we act as a broker, custodian, investment adviser, or asset manager through our provision of the MegaVault services. MegaVault users will always deploy their assets at their own risk, with full understanding that (i) their digital assets may lose some or all of their market value; (ii) their digital asset positions may be liquidated partially or entirely as a result of parameters that they cannot control or change; (iii) that their digital assets may be compromised or stolen by malicious software attacks; and that (iv) their only recourse to prevent such risks after deploying to a vault is to fully withdraw their digital assets from such vault.

Any performance fees paid to Greave from a MegaVault vault cannot be reclaimed after the vault pays them. Greave's only contractual obligations arising under this protocol are those that we have to the dydx Grants Trust. We have no contractual obligation to you, any MegaVault user, or any other third-party arising from providing MegaVault vault services.

You further acknowledge and agree that our interests as a separate entity may at times conflict with our interests as an MegaVault service provider. In such cases, we will not be required to give priority to anyone else's best interests. Your only rights and remedies as a vault user will be those included in MegaVault's Terms of Use.

While we exert our best efforts to select strategies and markets that we think will optimize vault performance; we do not guarantee the accuracy or reliability of our modeling and analysis, and in no event does our modeling and analysis reliably predict or guarantee expected performance or yield. It further does not provide assurance against risk of loss. Make your own risk-reward decisions based on your own sophisticated market perspectives. Finally, remember that you bear full responsibility for lawful possession, custody, and security of your digital assets when you transact with MegaVault. In short, we set parameters and identify market strategies. The rest is up to you.

That being said, as a result of using Greave's MegaVault Vault; you agree to release Greave, its officers, directors, employees, contractors, and affiliates ("Greave Parties") from any claims or causes of action resulting from your use of the MegaVault vault; including, but not limited to, any financial losses, data breaches, or inaccuracies in information or reporting used by the MegaVault services. Said more plainly; if you use this vault service, your legal recourse is very limited, and you give up any claims that you may have against any Greave Parties, to the fullest extent possible under applicable law.