

## SmartMoney/Enigma Research Note

October 19, 2021

# dYdX (\$DYDX)



- TYPE: Derivatives Exchange
- CHAIN: Eth Layer 2 ZK Rollup, Starkware
- CIRCULATING SUPPLY: 56.7M
- MAX SUPPLY: 1B
- TVL: \$828.6M
- MARKET CAP: \$1.39B
- CONTRACT ADDRESS:  
[0x6b3595068778dd592e39a122f4f5a5cf09c90fe2]

## Product Overview/Summary

Next month, dYdX will abandon spot margin trading to exclusively operate perpetual swap markets for a variety of digital assets. This transition marks the third iteration of the decentralized exchange, and the only among DEXs to transition away from spot trading altogether. dYdX uses a central-limit order book and matching engine to facilitate trades on a decentralized smart contract protocol. The protocol was designed for the efficiency of a centralized exchange with the security and transparency of a decentralized exchange. To prevent non-compliant trading, dYdX prohibits IP addresses from jurisdictions, like the US, that restrict derivatives markets.

Over the last six months, dYdX rapidly grew exchange volume and revenue. Three fundraising rounds, including a \$10M Series A in 2020 and \$75M Series B and C, demonstrated significant interest to sustain the platform's long-term growth. As the second-most used perpetual swap protocol on Ethereum, dYdX will determine whether the AMM or central-limit order book models will compete or coexist in the digital asset industry's most popular financial market.

## Why it's interesting

### *Product*

The dYdX team iterated several versions since 2019 to arrive at today's perpetual swap market. Today's dYdX V3 was developed from several months of user testing and research. Before that, the decentralized exchange launched as a leverage-enabled central-limit order book on Ethereum. At its core, dYdX has always enabled users to leverage long and short positions to express market convictions beyond the spot market.

As a perpetual swap market, dYdX V3 lets users cross-margin asset portfolios to gain leverage or earn yield. Users can open long and short positions leveraged up to 25x their collateral value. The assets in each of the 26 perpetual markets have different initial and maintenance margin ratios according to their underlying price volatility. More volatile markets require larger collateral deposits and may require larger ongoing maintenance margin.

Users can trade using order types familiar to most traditional financial market participants, but unique to DEX-first users. Until recently, most Automated Market Makers, or AMMs, did not offer various order types. Uniswap V3, for example, launched limit order functions to prevent price slippage risk for volatile asset pairs. Before Uniswap's limit order debut in June 2021, AMMs allowed only market orders. On the other hand, dYdX used the central-order-book model to enable market, stop, and other order types so leveraged traders could more effectively manage risk in spot and perpetual markets.

### *Governance*

While notable DeFi projects began with decentralized governance, many founders, like the dYdX team, aim to transform to community governance over time. A gradual governance transition enables fast product delivery and iteration when its most needed, at the start. Once the project is proven, governance can develop from dedicated users, rather than speculators.

After two years, dYdX Trading, Inc. operates the trading client while the dYdX Foundation operates the community governance interface that enables DYDX holders and platform users to participate. Holders stake the DYDX governance token in the Safety Module smart contract to propose and vote on governance measures in proportion to their holdings. The Snapshot application records user balances at the time of a vote to prevent malicious participants from borrowing or even stealing DYDX to gain outsized voting power.

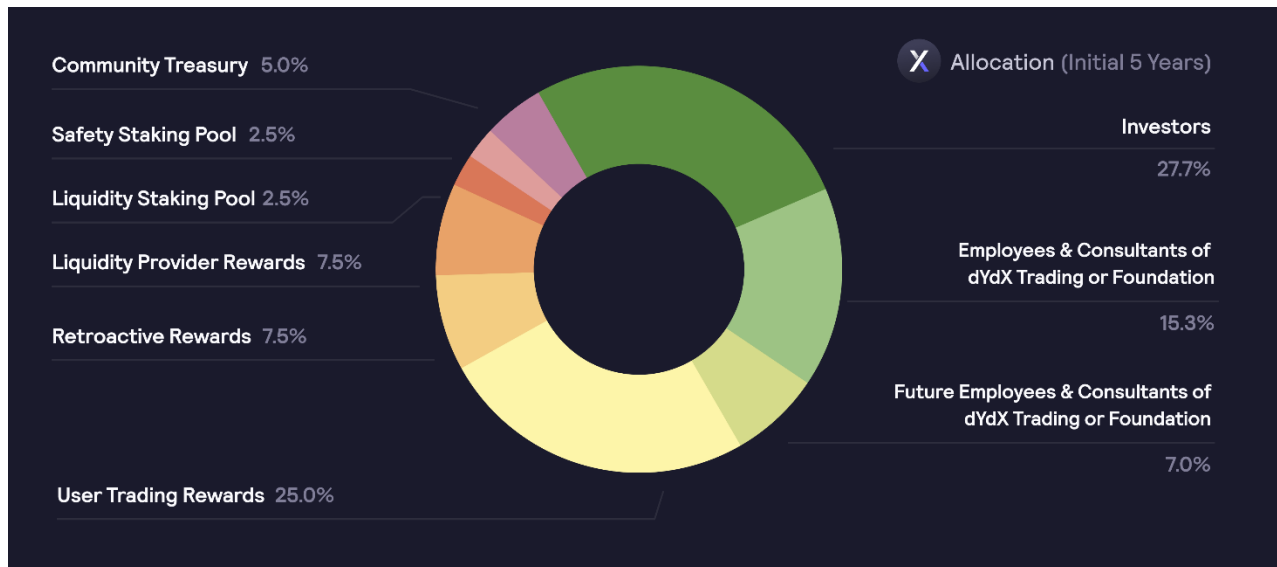
Governance participants also control incentives to maintain community and protocol alignment over time. For example, through governance, DYDX holders can vote to limit trading rewards or

change trading discounts for specific asset markets to mitigate risk, solicit liquidity, or make any other change.

## TOKENOMICS

### Monetary Policy and Airdrop

At launch, 1B DYDX tokens were minted to be allocated over five years. Half of the maximum supply is allocated for the dYdX community. Existing investors will receive 28% of the max supply. The dYdX founding team, at both the dYdX Trading, Inc. and dYdX Foundation organizations will receive 15.3% of the supply. Lastly, 7% of DYDX supply is allocated to future employees, consultants, and contributors to dYdX Trading, Inc. and dYdX Foundation.



Source: dYdX Governance, <https://docs.dydx.community/dydx-governance/start-here/dydx-allocations>

The dYdX Foundation also allows for future inflation to keep up with platform and community growth. The protocol's governance could vote to inflate DYDX supply by 2% annually if governance participation grows beyond current levels. Additionally, governance could change DYDX supply allocation, like many other digital asset governance frameworks.

A popular mechanism for bootstrapping community in addition to liquidity mining programs, airdrops (retroactive token rewards) have become another tool for protocols to reward and incentivize their most loyal early users. On August 4th, dYdX announced that they too would be giving a retroactive airdrop back to their users in the form of their native governance token, DYDX. Out of a supply of 1,000,000,000 tokens, the team chose to give half to the community, dividing

up the airdrop amongst traders who used the protocol before July 26th, stakers of USDC and DYDX after the airdrop and liquidity providers.

The team allocated additional tokens to users who have traded higher notional values which allowed some of DYDX's most loyal users to claim rewards of upward of \$50k or more at the initial value of the airdrop. Those who have held the airdrop since have been heavily rewarded for their patience. While transfers were temporarily delayed due to a bug in the security module that put no user funds at risk, the airdrop went well, though U.S. users were prevented from claiming any airdrop rewards, leading to an outcry on twitter questioning what exactly the SEC was "protecting" users from.

Airdrops of this size also call into question whether this is the most efficient use of token incentives and whether this will incentivize long term usage. As sophisticated DeFi users set up multiple wallets and conduct trades across wallets to "mine" future airdrops, organic trading usage and liquidity provisioning can be difficult to separate from more mercenary capital. As go to market strategies mature over the next few years, we expect to see additional experimentation in targeted liquidity mining and airdrop programs.

## ***Value Accrual & Valuation***

Because the exchange earns revenue from trading volume. Users pay maker and taker fees according to their traded volume over the previous 30 days. The platform's fee structure helps level the field among users. Fees decrease with volume, but users receive discounts by holding the DYDX governance token. As traders increase their DYDX holdings, their fees decrease to a minimum of 0.05%. This incentivizes individual and small-volume users to hold DYDX and participate in protocol governance. By rewarding users for participation in governance and trading, the protocol can perpetuate participation beyond the first airdrop or fee discount received.

DYDX Current Balance	0	100	1,000	5,000	10,000	50,000	100,000	200,000	500,000	1,000,000	2,500,000	5,000,000
Fee Discount	0%	3%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%

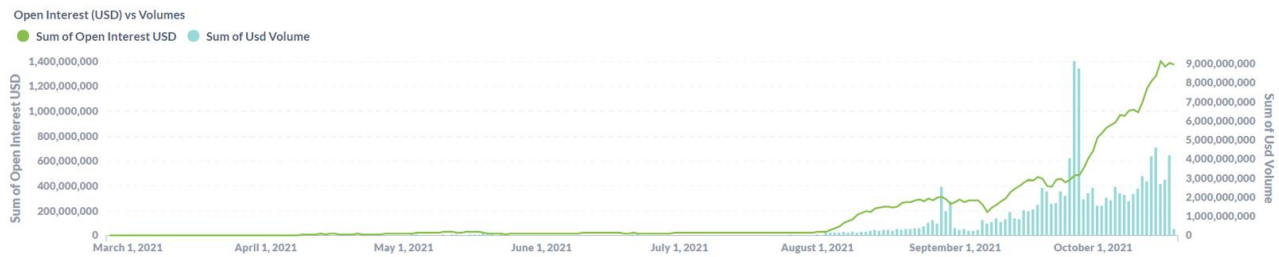
Level	From (30D Volume in USD)	To (30D Volume in USD)	Maker Fees (Including Fee Discount)											
1	\$0	\$1,000,000	0.0500%	0.0485%	0.0475%	0.0450%	0.0425%	0.0400%	0.0375%	0.0350%	0.0325%	0.0300%	0.0275%	0.0250%
2	\$1,000,000	\$5,000,000	0.0400%	0.0388%	0.0380%	0.0360%	0.0340%	0.0320%	0.0300%	0.0280%	0.0260%	0.0240%	0.0220%	0.0200%
3	\$5,000,000	\$10,000,000	0.0300%	0.0291%	0.0285%	0.0270%	0.0255%	0.0240%	0.0225%	0.0210%	0.0195%	0.0180%	0.0165%	0.0150%
4	\$10,000,000	\$50,000,000	0.0150%	0.0146%	0.0143%	0.0135%	0.0128%	0.0120%	0.0113%	0.0105%	0.0098%	0.0090%	0.0083%	0.0075%
5	\$50,000,000	\$200,000,000	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
VIP	\$200,000,000+	-	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%

Level	From (30D Volume in USD)	To (30D Volume in USD)	Taker Fees (Including Fee Discount)											
1	\$0	\$1,000,000	0.1000%	0.0970%	0.0950%	0.0900%	0.0850%	0.0800%	0.0750%	0.0700%	0.0650%	0.0600%	0.0550%	0.0500%
2	\$1,000,000	\$5,000,000	0.0900%	0.0873%	0.0855%	0.0810%	0.0765%	0.0720%	0.0675%	0.0630%	0.0585%	0.0540%	0.0500%	0.0500%
3	\$5,000,000	\$10,000,000	0.0800%	0.0776%	0.0760%	0.0720%	0.0680%	0.0640%	0.0600%	0.0560%	0.0520%	0.0500%	0.0500%	0.0500%
4	\$10,000,000	\$50,000,000	0.0750%	0.0728%	0.0713%	0.0675%	0.0638%	0.0600%	0.0563%	0.0525%	0.0500%	0.0500%	0.0500%	0.0500%
5	\$50,000,000	\$200,000,000	0.0700%	0.0679%	0.0665%	0.0630%	0.0595%	0.0560%	0.0525%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
VIP	\$200,000,000+	-	0.0600%	0.0582%	0.0570%	0.0540%	0.0510%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%

Level	From (30D Volume in USD)	To (30D Volume in USD)	Total Fees (Including Fee Discount)											
1	\$0	\$1,000,000	0.1500%	0.1455%	0.1425%	0.1350%	0.1275%	0.1200%	0.1125%	0.1050%	0.0975%	0.0900%	0.0825%	0.0750%
2	\$1,000,000	\$5,000,000	0.1300%	0.1261%	0.1235%	0.1170%	0.1105%	0.1040%	0.0975%	0.0910%	0.0845%	0.0780%	0.0720%	0.0700%
3	\$5,000,000	\$10,000,000	0.1100%	0.1067%	0.1045%	0.0990%	0.0935%	0.0880%	0.0825%	0.0770%	0.0715%	0.0680%	0.0665%	0.0650%
4	\$10,000,000	\$50,000,000	0.0900%	0.0873%	0.0855%	0.0810%	0.0765%	0.0720%	0.0675%	0.0630%	0.0598%	0.0590%	0.0583%	0.0575%
5	\$50,000,000	\$200,000,000	0.0700%	0.0679%	0.0665%	0.0630%	0.0595%	0.0560%	0.0525%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
VIP	\$200,000,000+	-	0.0600%	0.0582%	0.0570%	0.0540%	0.0510%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%

Source: dYdX, <https://help.dydx.exchange/en/articles/4798040-perpetual-trade-fees>

By any measure, trading activity exploded on dYdX over the past 90 days. Open Interest on dYdX reflects all active long and short positions, while volume represents the total net USD trading value on the exchange. Both show rapid growth following the DYDX airdrop in September 2021.



### Trading Volume Growth on dYdX, USD M

Date	Cumulative Volume	Monthly Growth	Protocol Revenue	Pct of Volume
10/17/21	114,758.0	60.60%	90.6	0.08%
9/30/21	71,454.4	308.40%	60.1	0.08%
8/31/21	17,496.1	414.78%	19.5	0.11%
7/31/21	3,398.8	23.75%	7.9	0.23%
6/30/21	2,746.4	37.89%	6.5	0.24%
5/31/21	1,991.7		5.0	0.25%

Source: dYdX <https://metabase.dydx.exchange/public/dashboard/5fa0ea31-27f7-4cd2-8bb0-bc24473ccaa3>

With the DYDX token launch, trader rewards could sustain a high level of exchange growth. With 25% of DYDX allocated to trading rewards, each month traders will receive a proportion of 3.8M DYDX based on their trading volume. The dYdX Foundation applied the Cobb-Douglas function to maintain an incremental distribution across the entire range of liquidity.

Despite trading incentives, the DYDX token does not currently earn a dividend or share of trading fees. While protocol governance could implement a reward to DYDX holders in the future, it is not included in the current incentive model. Until then, governance and potential trading fee discounts provide the DYDX token value.

## Competitive Landscape

Perpetual futures are the most used financial instrument in digital asset markets. According to a Messari report, by May 2021, centralized exchange futures on digital assets reached \$2.6T total volume. Derivatives surpassed centralized spot markets that fulfilled \$2.3T in volume over the same time. Decentralized spot exchanges reached \$160B while futures, including perpetual swaps, reached only \$10.7B of traded volume.

Decentralized derivatives exchanges compete on volume and revenue. By May 2021, dYdX perpetual futures volume reached \$1.4B, or nearly 25% of the market leader, Perpetual Protocol. Since then, dYdX's V3 launch and DYDX airdrop propelled the platform beyond Perpetual as measured by revenue.

Valuation Multiples						
	DYDX					Comparables
	High	Low	Med	Avg	10/18/21	PERP
MC/Fees	1,001.98x	142.82x	647.75x	614.62x	643.24x	13,449.27x

Source: Token Terminal, accessed 10/18/21: <https://www.tokenterminal.com/terminal/projects/dydx>

Perpetual takes a smaller share of platform fees, as their AMM model rewards liquidity providers rather than the protocol. However, dYdX captures a higher revenue share of volume. As a result, the DYDX token may exhibit a low valuation multiple compared to PERP.

## Recommendation

The dYdX project will continue to innovate the decentralized derivatives category of DeFi for the foreseeable future. Until then, comparable valuations show that competition is in its earliest stages. While DYDX may look undervalued relative to PERP, key risks have yet to be addressed for



*Authored by Enigma and SmartMoney, Distributed in cooperation with the Makor Group*

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digital asset derivatives. Regulatory risk in the US, and other restricted jurisdictions, excludes users from those countries. International entities, on the other hand, drove volume growth across both platforms. Perpetual swaps provide leverage and risk management for all types of users and trading volume.

Due to dYdX's position atop the perpetuals market, DYDX holders can help determine the market's direction through governance. Users less interested in running the protocol can still earn sizable inflation and trading rewards in the DYDX token. Beyond dYdX traders and participants, DYDX holders do not receive platform fees or rewards. Instead, DYDX offers price exposure to a burgeoning international derivatives market.

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