



PerpDEX

A tokenizable DEX for perpetual future



What is Perpetual DEX?

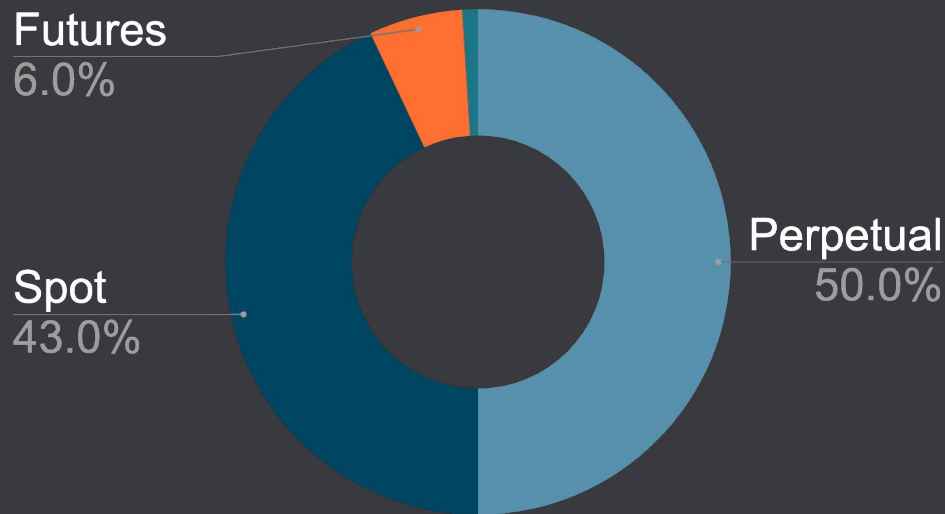
Perpetual future implementation on DeFi

e.g. dYdX, Perpetual Protocol



Perpetual is mainstream in crypto

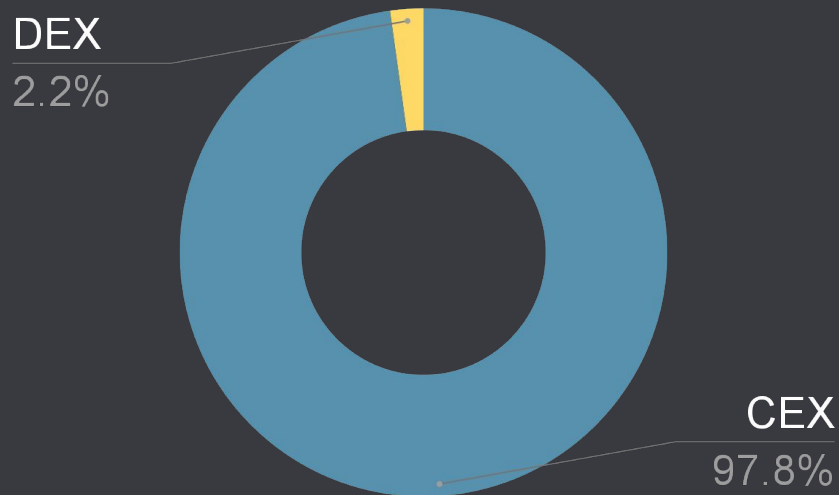
Total Crypto Trading Volume 2021





Perpetual is underrated in DeFi

Perpetual future market share 2021 4Q

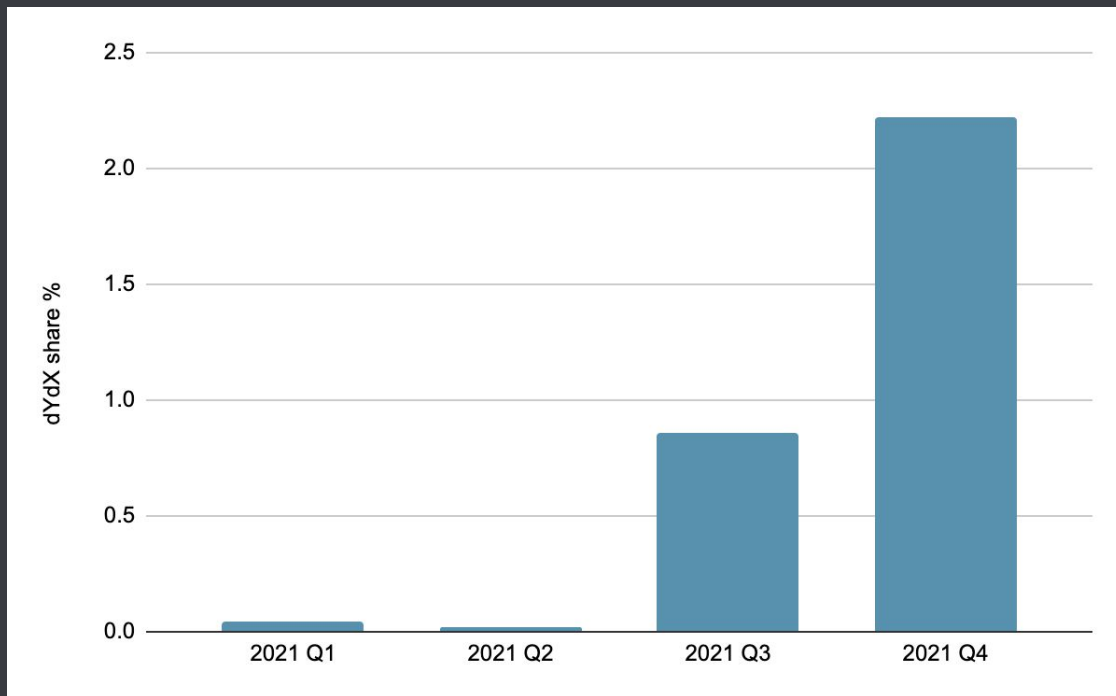


Source: https://image.tokeninsight.com/levelPdf/TokenInsight_2021_Yearly_Crypto_Trading_Industry_Report_compressed.pdf



Perpetual DEX is growing

Share of the top perpetual DEX (dYdX)





What happens next?

Perpetual DEX will grow explosively



Problem in existing perpetual DEXs

Composability is the biggest problem.

see whitepaper for other problems (security and decentralization)



Why is composability important?

- Composability strengthens **network effects**.
- The more protocols depend on a protocol, the harder it is to be replaced.
- This makes a **moat**.



What causes low composability?

- The cause is the **liquidation risk**.
- All positions can be liquidated in existing perpetual DEXs.
- This makes **position tokenization hard** and leads to **low composability**.



PerpDEX overview

- **vAMM** based perpetual DEX (like Perpetual Protocol)
- **Composability** improvements
- Other improvements (security, decentralization)



Composability improvements

- Liquidation free funding (LFF)
- Tokenization of perpetual positions (ERC4626)



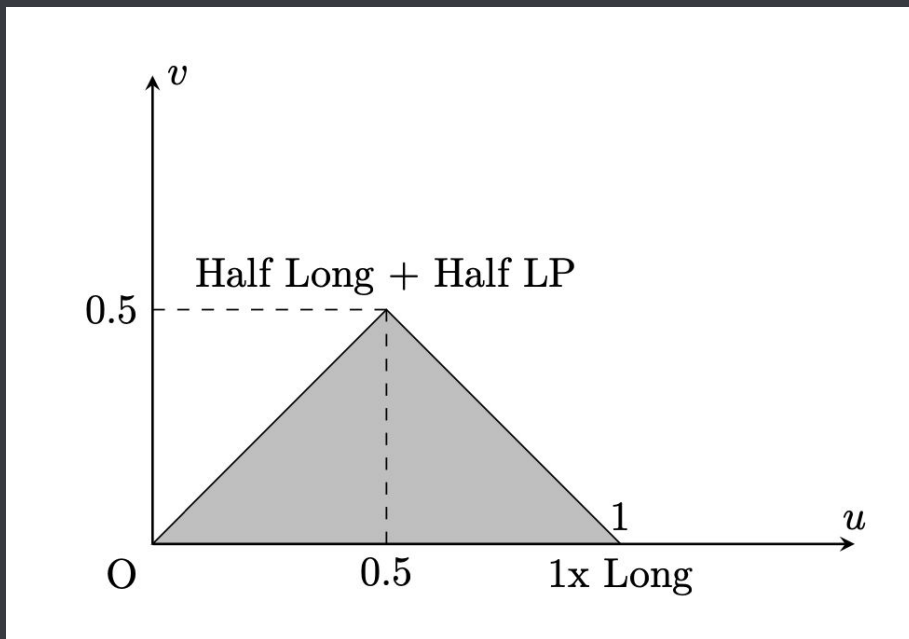
Liquidation Free Funding (LFF)

- A new funding payment method to **remove liquidation risks**
- Funding by **rebasing virtual token** in vAMM
- Can be viewed as extension of **normalization factor** in Squeeth



Liquidation Free Region

- Positions in liquidation free region are **never liquidated**
- u : taker leverage
- v : maker leverage





Tokenization of perpetual positions

- Long token
- LP token

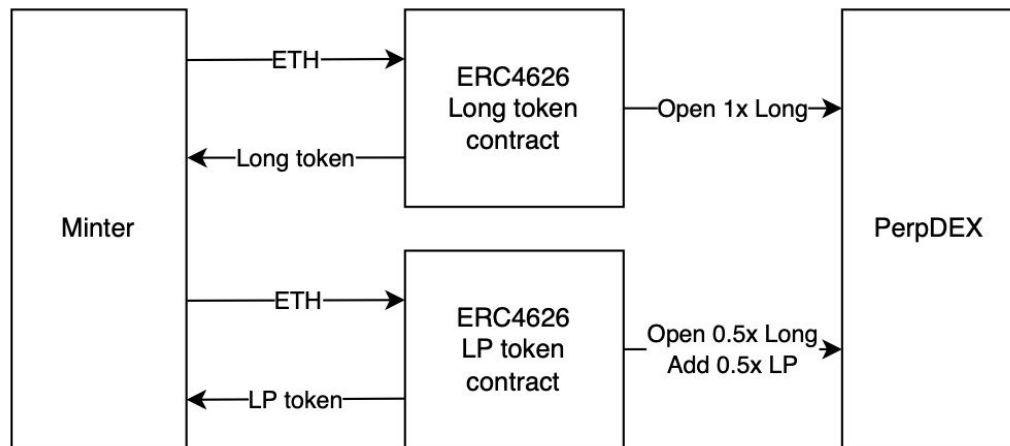


Figure 3: ERC4626 tokenization of PerpDEX positions when quote token is ETH



Applications of tokenization

- Stablecoin (like UXD protocol and Lemma Finance)
 - Liquidation free can only be achieved with PerpDEX
- Synthetic assets (like Synthetix)
 - 100% capital efficiency
- Power perpetual token (like Squeeth)
 - Not only long but also LP can be tokenized and liquidation free



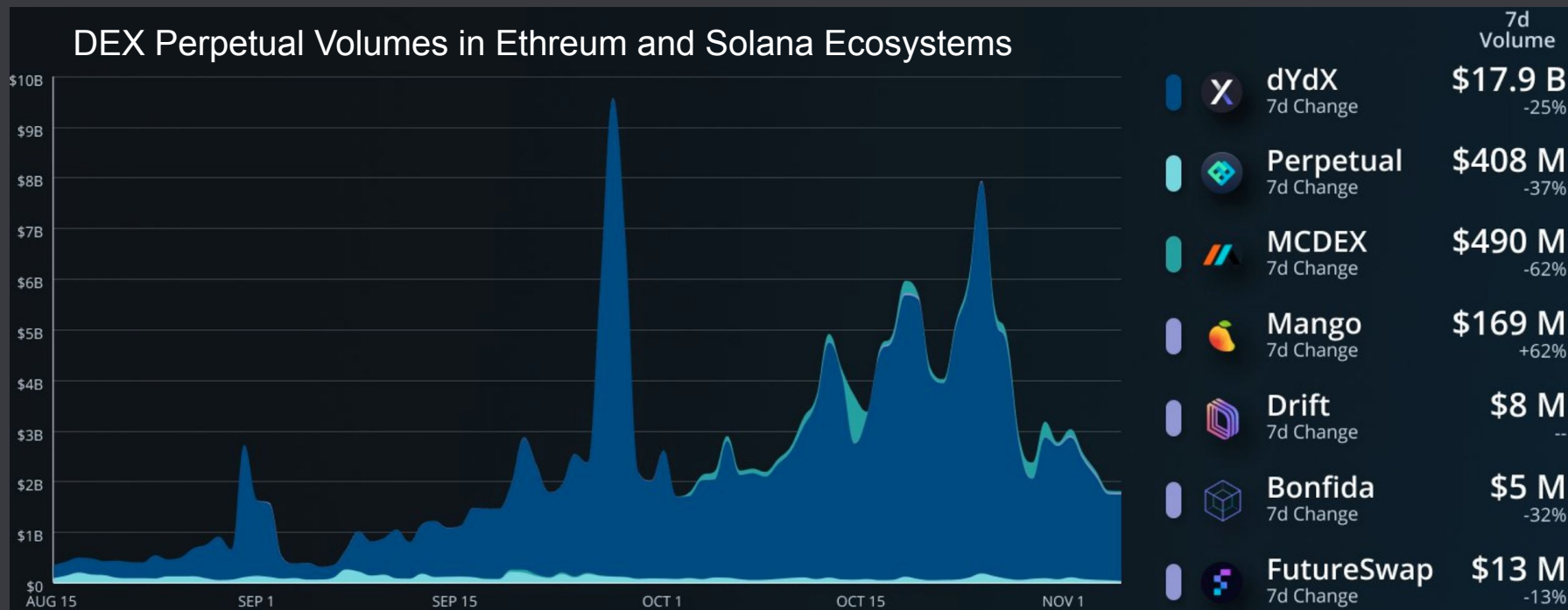
Other improvements

- Security improvements (TSPL, minimizing oracle usage)
- Decentralization improvements (permissionless liquidation)
- See whitepaper for details



Competitors

Perpetual DEX trend is dYdX, Perpetual protocol, MCDEX, Mango.








Date as of:11/7/2021

Source: Messari (https://messari.io/article/the-perpetual-sol-rise?utm_source=messaricrypto&utm_medium=tweet&utm_campaign=perpetual-sol-rise)

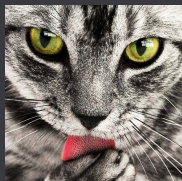


Competitors

	 PerpDEX		 Perpetual Protocol		 Mango
Architecture	AMM	Order book	AMM	AMM	Order book
Liquidation free	✓	✗	✗	✗	✗
ERC4626	✓	✗	✗	✗	✗
Low dependence on oracle	✓	✗	✗	✗	✗
Decentralization	✓	✗	✗	✗	✓
On-chain	✓	✗	✓	✓	✓
Multi-chain	✓	✗	✗	✗	✗



Team



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Shoma

Product

Manager

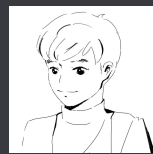
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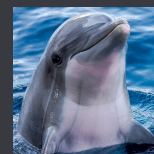
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Contact

If you have any questions, please feel free to contact us.

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- Website: <https://perpdex.com/>
- Whitepaper: <https://perpdex.com/pdfs/whitepaper.pdf>
- Source code: <https://github.com/perpdex>

Thank you for your attention!!