Decentralized Finance (DeFi)

Presented by

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What is DeFi?

Decentralized Finance protocols implement essential services such as **borrowing, lending, and trading** utilizing blockchain technology.

Web2 Centralized Finance

- Federal Reserve
- Banks
- Investment Firms
- Money-market Funds
- Bonds
- Real-estate

Web3 Decentralized Finance

- Cryptocurrencies & Stable Coins
- Decentralized Exchanges
- Automated Market Makers (AMMs)
- Decentralized Borrowing/Lending
- Real-estate via Metaverse

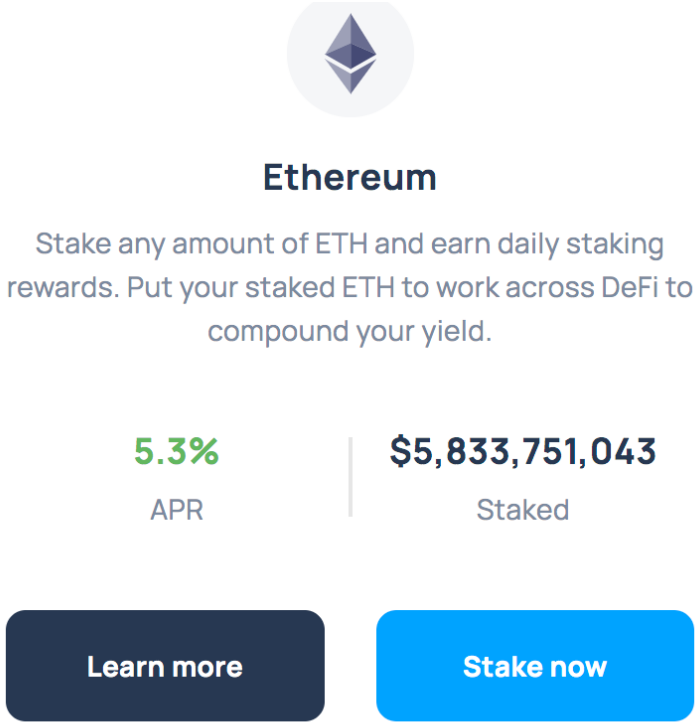
Staking ETH with Lido.Finance

‘Solo-Staking’ Limiting Factors

- +32 ETH
- Technical abilities needed to set-up and maintain an ETH 2.0 ‘node’

Potential Risks to Network?

- Centralization of Staking with one protocol

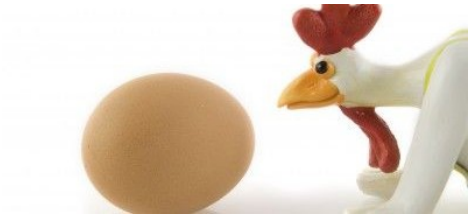


Stable Coin Implementations

Custodial_ A central entity maintains custody over fiat assets backing up the protocol's stable coin 1-to-1.

Algorithmic_ 'Peg' to stable asset is maintained algorithmically, usually utilizing a network token as collateral.

Collateralized-Algorithmic_ Algorithms are utilized to enforce collateral requirements on borrowing and trigger p2p margin calls.



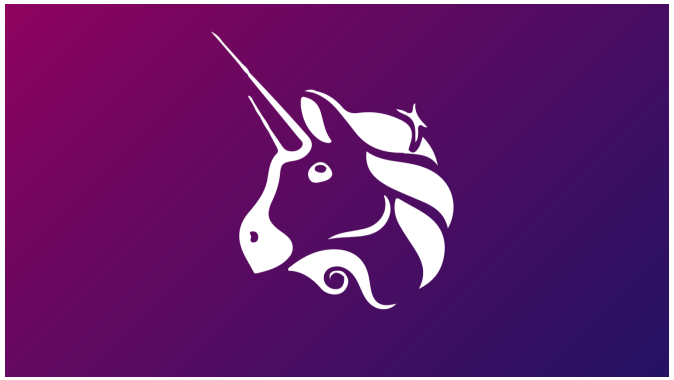
Custodial Stable Coins?

NOT ALL STABLE COINS ARE CREATED EQUAL!

oasis.app

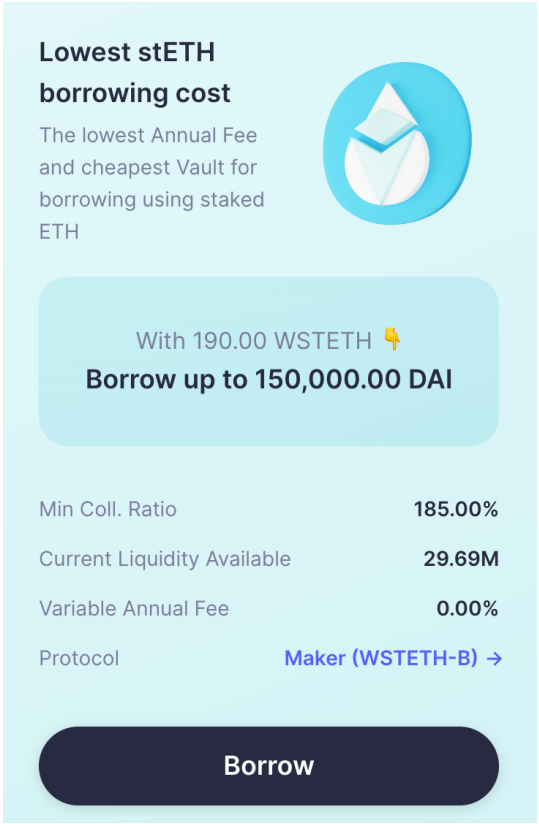
Uniswap V3

- Uniswap is a **decentralized exchange (DEX)** built on Ethereum which allows users to 'swap' ETH / any **ERC-20** tokens directly on-chain.
- Replicas of Uniswap exist on every blockchain, i.e PancakeSwap (CAKE) on 'binance smart chain (BSC)'
- 'Vampire attacked' by Sushiswap
- The LEARN / DAI pairing on Uniswap provides liquidity for the LEARNtoken and its community.



Maker DAO via Oasis.app

- Maker DAO smart contracts govern and control the creation of the DAI ‘stable coin’ via collateralized vaults.
- Any Ethereum user can create a **vault** and deposit collateral accepted by Maker DAO and ‘mint’ DAI against the value of collateral deposited.
- If **’collateralization percentage**’ drops below the Vault’s stated minimum, collateral is liquidated to pay off DAI until you are above the minimum.



Impermanent Gain (Loss)

- **Impermanent loss** is the unrealized effect of relative price movements between the two tokens you are providing liquidity for.
- We will analyze LEARN_DAI pairing, as it is simplest to consider the effect of one token's price movements versus a stable coin.

	LEARNtoken	
	Purchases **MORE THEN** Sales	Purchases **LESS THEN** Sales
LEARN Price	Price Up	Price Down
LEARN Qty	Less	More
DAI Qty	More	Less
Impermanent Gain (Loss)	Loss	Gain

Uniswap v3: LEARN_DAI
A Liquidity Provider (LP) Narrative

- The following slides demonstrate a **liquidity provider (LP)** contributing collateral to the LEARN_DAI Uniswap pairing
- Over the period documented, retail **$LEARN purchases outweighed sales**, resulting in the LPs **LEARN being sold to DAI** as the **LEARN_DAI price increased**. The result is an increase in DAI withdrawn
  - In this case, the LP can utilize DAI to fulfil their periodic LEARN purchase, which will be at an unrealized gain. THE ONLY WAY FOR LPs TO SELL $LEARN AND REALIZE THIS GAIN IS BY PROVIDING LIQUIDITY ON DEXs!
- Note, $LEARN sales could outweigh purchases in any given period. In such a case, the LPs DAI will be sold for LEARN as the LEARN price decreases.

Adding Liquidity_ 5k DAI / 442k LEARN

Transaction Hash:	0xa44d38fdbc3ff4255b6b0378d4c803c48776aa2364db4a944f8bfc4f691a1619
Status:	Success
Block:	14649482 386376 Block Confirmations
Timestamp:	63 days 22 hrs ago (Apr-24-2022 08:15:28 PM +UTC) | Confirmed within 1 sec
Transaction Action:	▸ Add 5,000 DAI And 441,466.390112316874707266 LEARN Liquidity To Uniswap V3 ▸ Mint of Uniswap V3: ... (UNI-V3...) To 0xf5b590daa789ab1a1d9ae2af10eff0aa28aa0aa9 ▸ 1 of Token ID [225322]
From:	1m2m3.eth

Withdrawing Liquidity: 9k DAI / 135k LEARN

Overview | Internal Txns | Logs (6) | State | Comments

Transaction Hash: 0xaa61b44c80476e959fc4de46f096cb5156f01a52a5889e6cf0100249a4e030d8

Status: Success

Block: 14790302 238875 Block Confirmations

Timestamp: 40 days 9 hrs ago (May-17-2022 04:02:22 AM +UTC) | Confirmed within 1 min:28 secs

Transaction Action:
- Remove 8,887.31635639685342775 DAI And 134,627.499494349770299148 LEARN Liquidity From Uniswap V3
- Collect 8,926.58217817863982601 DAI And 134,627.499494349770299148 LEARN From Uniswap V3

From: 1m2m3.eth

Interacted With (To): Contract 0xc36442b4a4522e871399cd717abdd847ab11fe88 (Uniswap V3: Positions NFT)

	LEARN QTY	LEARN Price	LEARN Value	DAI	Total
Original Liquidity	441,466	$ 0.0100	$ 4,415	5,000	$ 9,415
Withdrawn Liquidity	134,627	$ 0.0157	$ 2,114	8,927	$ 11,040
Original Liquidity @ New Price	441,466	$ 0.0157	$ 6,931	5,000	$ 11,931
				Impermanent Gain (Loss)	**$ (891)**