

Breaking the banks - an introduction to DeFi

University of Adelaide, MBA Alumni Webinar

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Today's webinar

1. What if DeFi
2. Products & Services
3. Architecture
4. Risks
5. Learn More

Keep in contact!

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What is DeFi

- Financial services and products being built on public blockchains
- Powered by smart contracts and not banks
 - Open and transparent
 - Decentralised
 - Trust-minimised
 - Non-custodial
 - Borderless and accessible
 - Composable & programmable architecture

What is DeFi?

DeFi is having a **transparent, auditable, autonomous** series of financial contracts and activities. And I think that's extremely powerful because it really challenges existing financial instruments.

A lot of traditional financial activity is opposite—it's opaque, it's manual, it's complex, it's closed. What I love about DeFi is that's it's all the positive virtues that financial markets should have. **No one can argue with financial markets being more transparent, more auditable, more efficient.**

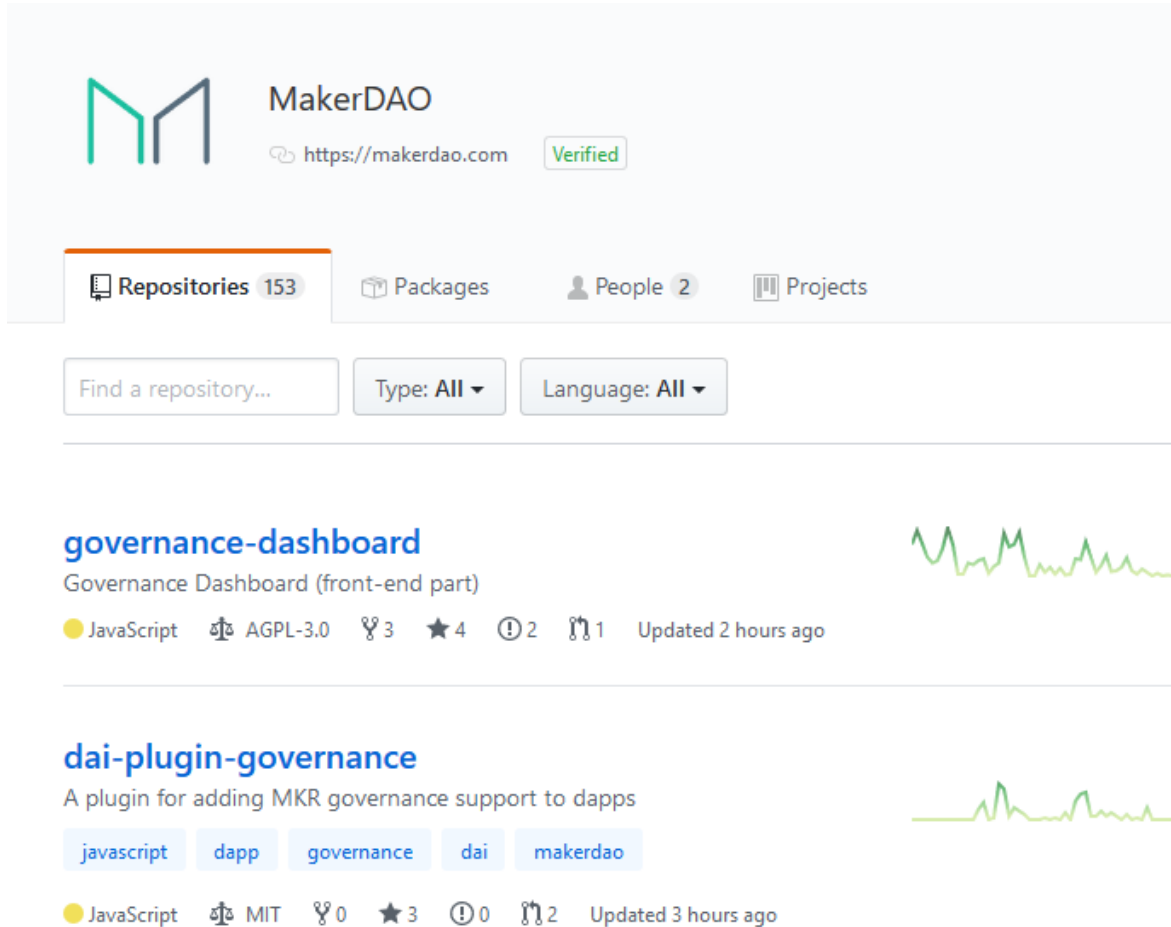
*“Decentralized finance (#defi) is the movement that leverages **open source software and decentralized networks** to transform traditional financial products into **trustless and transparent** protocols that operate **without unnecessary intermediaries**”*

DeFi stands for Decentralized Finance. It describes the idea of **not needing a trusted third-party to execute financial services**, but with a blockchain in its place to enable people, and in the future, machines to become their own bank for these services, **removing counterparty risks.**

DeFi Products & Services

1. **Stablecoins** seek to maintain a constant value of a token relative to some asset, most commonly the U.S. dollar or other major fiat currency. *Non-custodial* stablecoins function as DeFi services themselves. *Custodial* stablecoins are centralized but may be incorporated into DeFi services.
2. **Exchanges** allow users to trade one digital asset for another. DeFi exchanges avoid taking custody of user assets, either through a decentralized order book or by matching orders and setting prices algorithmically.
3. **Credit**¹¹ involves the creation of time-limited interest-bearing instruments, which must be repaid at maturity, and the matching of lenders and borrowers to issue those instruments.
4. **Derivatives** are synthetic financial instruments whose value is based on a function of an underlying asset or group of assets. Common examples are futures and options, which reference the value of an asset at some time in the future.
5. **Insurance** provides protection against risks by trading the payment of a guaranteed small premium for the possibility of collecting a large payout in the event of a covered scenario.
6. **Asset management** seeks to maximize the value of an asset portfolio based on risk preferences, time horizons, diversification, or other conditions.

Open Finance



The screenshot shows the GitHub profile page for MakerDAO. At the top, the MakerDAO logo is displayed next to the name 'MakerDAO' and the website 'https://makerdao.com'. A 'Verified' badge is also present. Below this, navigation tabs for 'Repositories' (153), 'Packages', 'People' (2), and 'Projects' are shown. A search bar and filters for 'Type' and 'Language' are available. Two repositories are listed: 'governance-dashboard' and 'dai-plugin-governance'. Each repository entry includes its name, description, language (JavaScript), license (AGPL-3.0 and MIT), star count, issue count, fork count, and update time. A green line graph is visible to the right of each repository entry.

MakerDAO
https://makerdao.com Verified

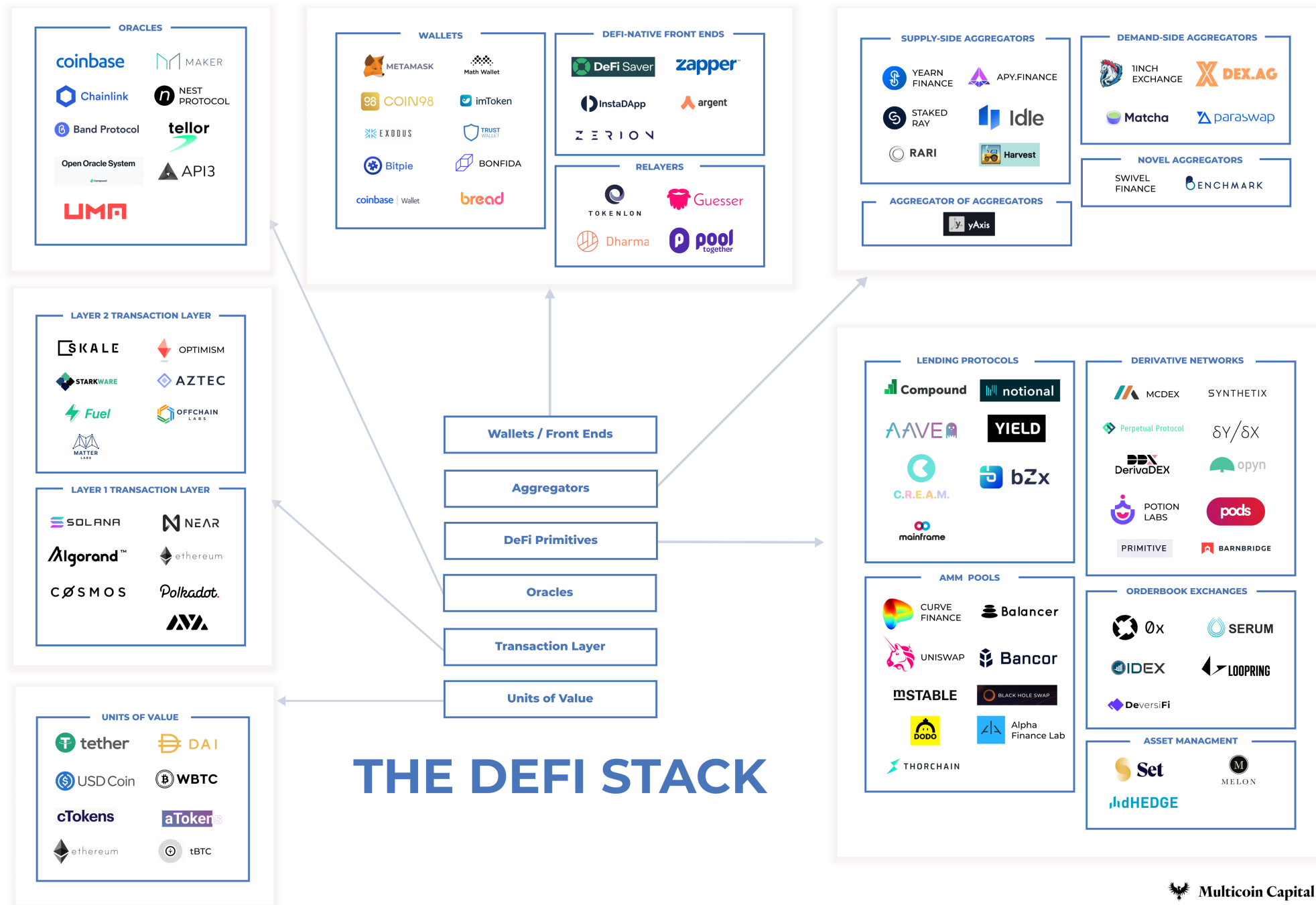
Repositories 153 Packages People 2 Projects

Find a repository... Type: All Language: All

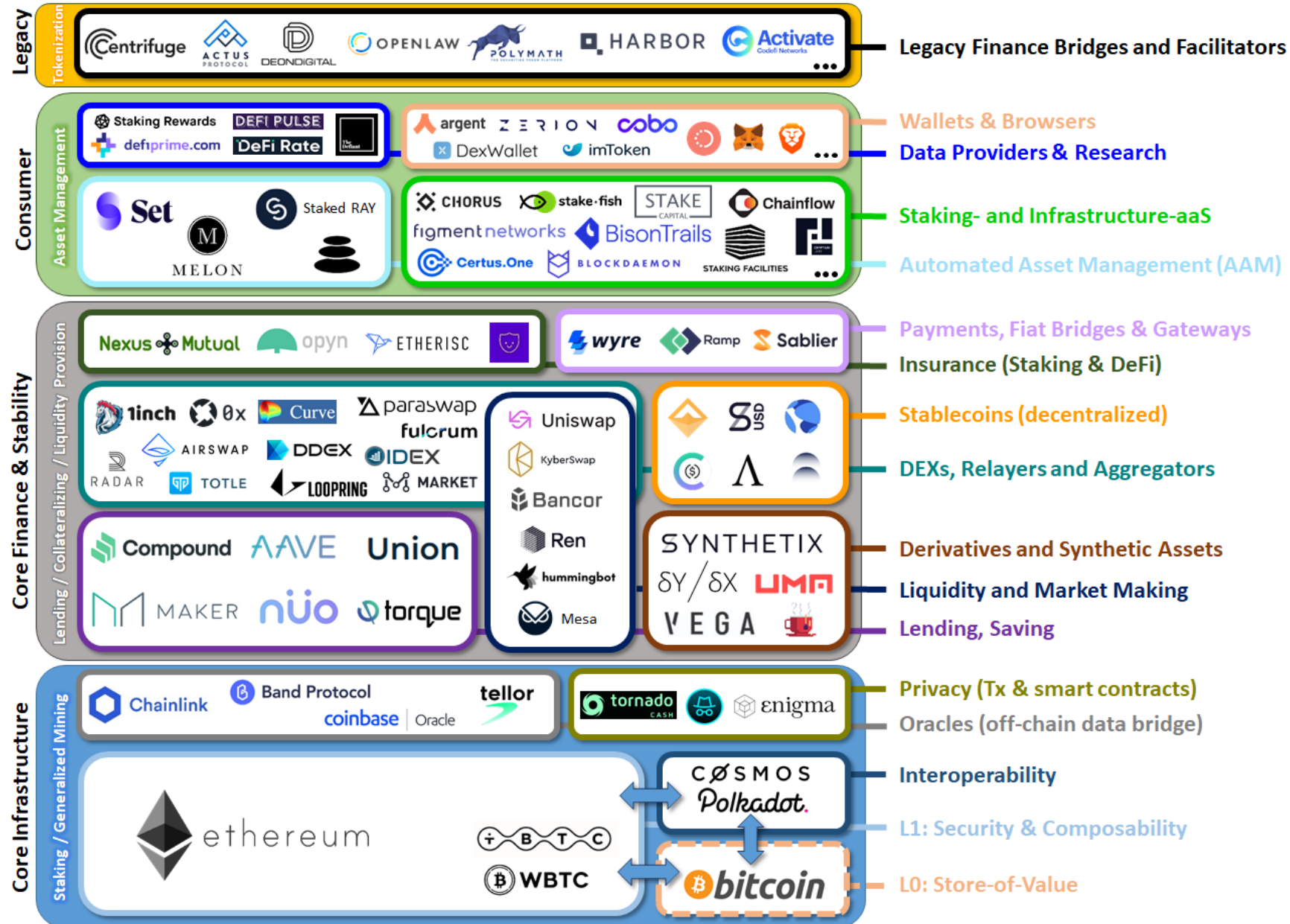
governance-dashboard
Governance Dashboard (front-end part)
JavaScript AGPL-3.0 3 ★ 4 ! 2 1 Updated 2 hours ago

dai-plugin-governance
A plugin for adding MKR governance support to dapps
javascript dapp governance dai makerdao
JavaScript MIT 0 ★ 3 ! 0 2 Updated 3 hours ago

Open source financial infrastructure matters because it lowers the barrier to entry for financial technology entrepreneurship.



Decentralized Finance (DeFi) Stack: Product & Application View



Source: StakingRewards

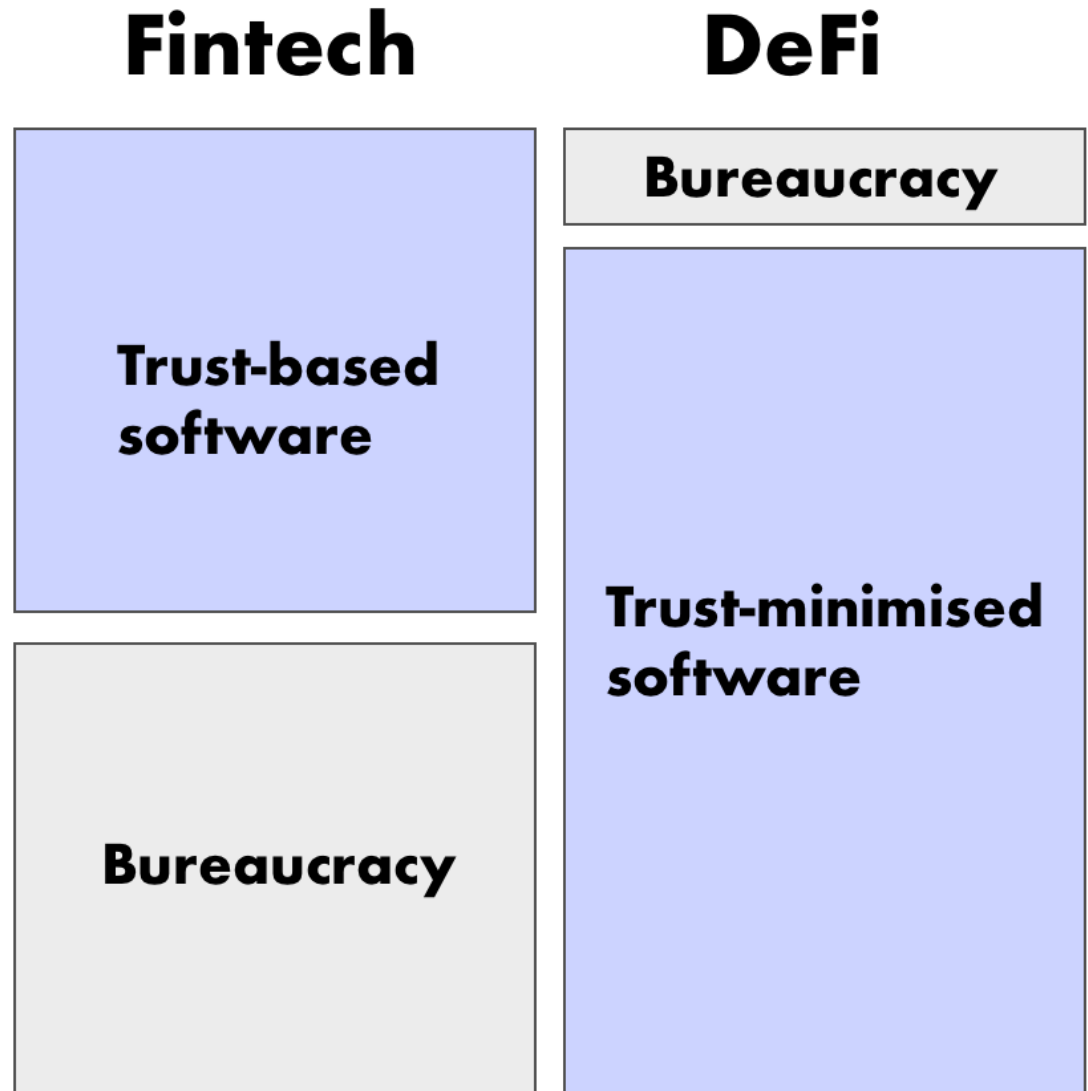
Traditional / Fintech / DeFi comparison

	Traditional	Fintech	DeFi
Issuing money	The State	-	Proof of Work and Proof of Stake rewards
Transferring money	Cash	Revolut, Transferwise	Cryptocurrency and token transactions
Lending / borrowing money	Banks	Lending Club	Tokenized P2P debt
Exchanging assets	Exchanges & Brokers, like Nasdaq	-	Decentralized exchanges
Investing money	Stocks, Bonds, etc., accessible through banks and exchanges	Robinhood	Tokenized financial products (ICOs, STOs and token baskets)

DeFi vs Fintech

- Fintech is about building proprietary software
- DeFi is about building open source software.

No gatekeepers between the builder and their idea in DeFi— and this is why builders are compounding towards DeFi.







DeFi Protocols

Protocol	Sector	Revenue Mechanism
Ox	Liquidity	Market fees on trades. Fees are distributed to ZRX stakers and liquidity providers.
Aave	Liquidity	Total interest paid to suppliers
Augur	Derivatives	Fees from prediction markets are distributed to REP token holders
Bancor	Derivatives	Trading fees are distributed to BNT holders
Compound	Lending	Interest accrued to suppliers plus the amount directed to the protocol reserve
Curve	Liquidity	Trading fee distributed to liquidity providers
Gnosis	Liquidity	Trading fees from Gnosis DEX
Kyber	Liquidity	Trading fees distributed to KNC holders and reserve operators
Maker	Lending	Interest accrued from outstanding Dai distributed
Synthetix	Derivatives	Trading fees distributed to SNX stakers
Ren	Liquidity	Cross chain swap fees are distributed to Dark Node operators
Loopring	Liquidity	A portion of trading fees are distributed to LRC holders

Source: Q3 Token Report, *The Rise of the Ownership Economy*. Bankless.

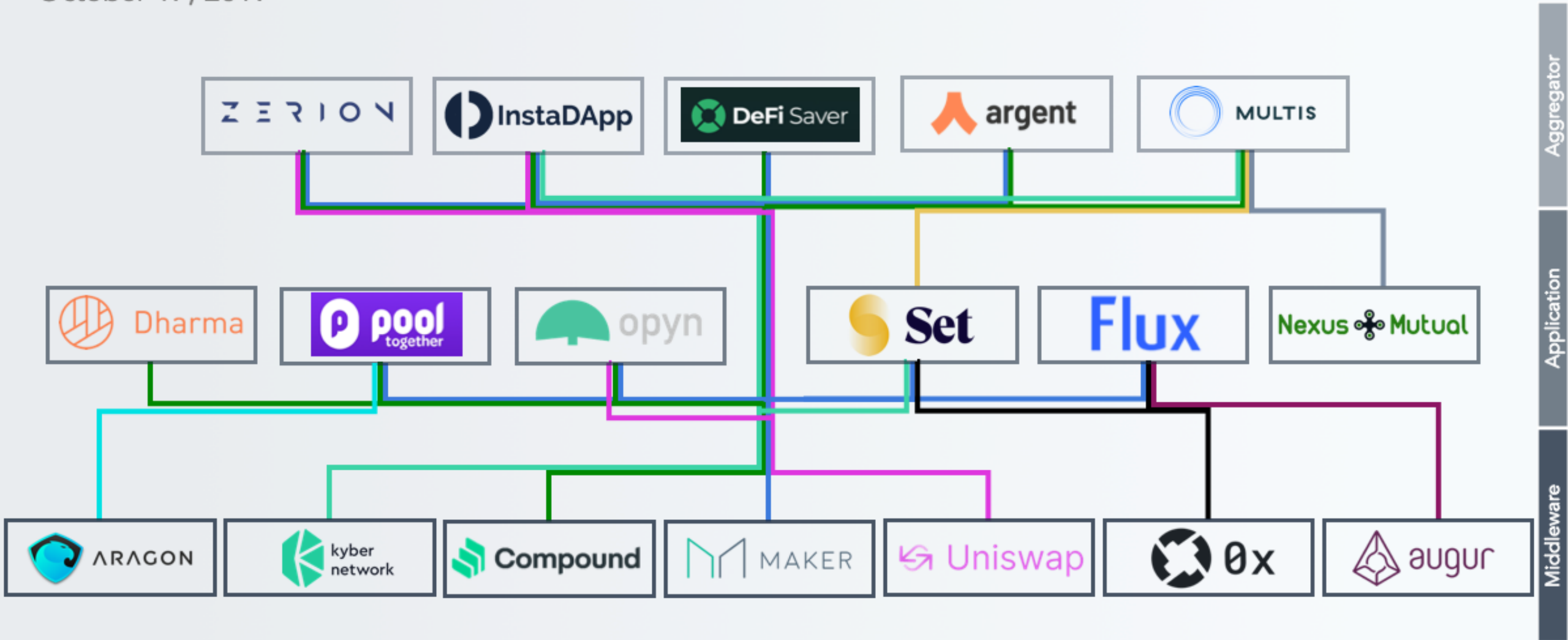
The composable tech stack

October 17, 2019

Layer		Traits	Examples
Aggregators		A portal that provides a way for users to interact with underlying protocols and/or apps	InstaDApp Argent Dapper
Applications		Combine elements from lower levels to create new consumer products	PoolTogether Flux
Middleware		Protocol calls connect apps to the base layer while providing essential services	MakerDAO Compound OpenSea
Base		Layer 1 blockchain that serves as the digital economy powering the layers above	Ethereum EOS

Mapping DeFi composability

October 17, 2019



Don't get rekt!

Attack, exploit or arbitrage. The dark web of DeFi

Watch out for:

'Rug pulls' - sudden loss of liquidity. Usually a malicious team, 'exit scam'.

Economic exploit – usually through a flash loan, manipulating the token price using a large amount of capital.

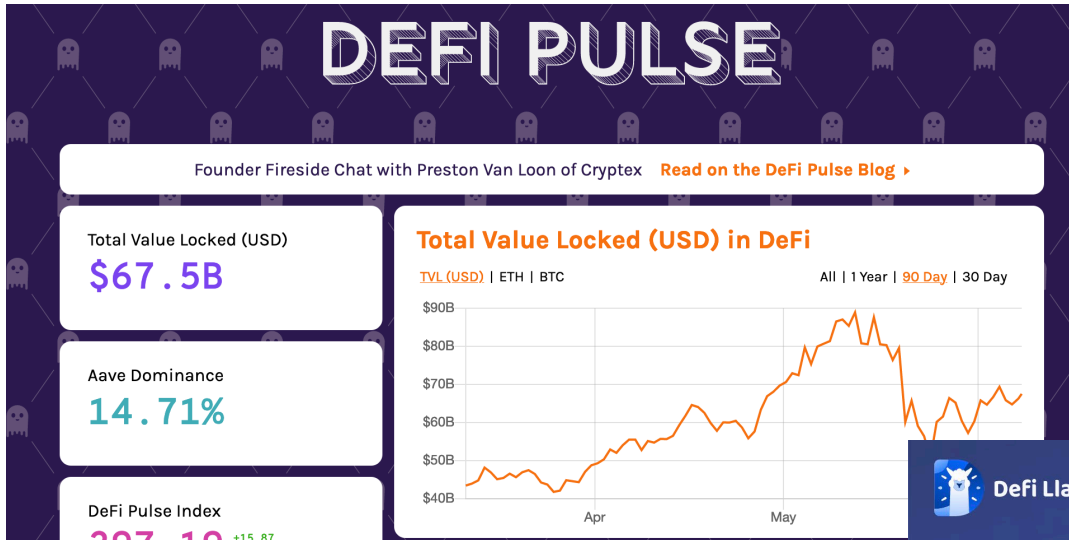
Arbitrage - taking advantage of price differences between different markets in order to generate a profit.



-
1. **EasyFi** - REKT *Unaudited*
\$59,000,000 | 19 Apr 2021
 2. **Uranium Finance** - REKT *Unaudited*
\$57,200,000 | 28 Apr 2021
 3. **PancakeBunny** - REKT *Haechi*
\$45,000,000 | 19 May 2021
 4. **Kucoin** - REKT *Internal audit*
\$45,000,000 | 29 Sep 2020
 5. **Alpha Finance** - REKT *Quantstamp, Peckshield*
\$37,500,000 | 13 Feb 2021
 6. **Meerkat Finance** - BSC - REKT *Unaudited*
\$32,000,000 | 04 Mar 2021
 7. **Spartan Protocol** - REKT *Certik*
\$30,500,000 | 02 May 2021
 8. **Paid Network** - REKT *Unaudited*
\$27,000,000 | 05 Mar 2021
 9. **Harvest Finance** - REKT *Haechi, Peckshield*
\$25,000,000 | 26 Oct 2020
 10. **XToken** - REKT *Peckshield*
\$24,000,000 | 12 May 2021

Source: Rekt News

Total Value Locked (TVL) in DeFi




Source: [DeFi Pulse](#)

DeFi Llama, same metric, but covers broader number of networks.

Total balance of Ether (ETH) and ERC-20 tokens held by these smart contracts.
TVL(USD) is calculated by taking these balances and multiplying them by their price in USD













Source: [DeFi Llama](#)

#	WATCH	ASSET 	PRICE (USD)	CHANGE VS USD (24H)	7 DAY TREND	REPORTED MARKETCAP	REAL VOLUME (24H)	CHANGE VS USD (7D)	CHANGE VS USD (30D)	CHANGE VS USD (YTD)
1		Uniswap · UNI	\$26.84	+3.89%		\$15.26B	\$197M	-3.56%	-32.80%	+474.33%
2		Aave · AAVE	\$380.96	+5.00%		\$4.91B	\$136M	+0.71%	-17.59%	+324.03%
3		Maker · MKR	\$3,725.53	+3.23%		\$3.74B	\$46.19M	+5.46%	-32.90%	+551.60%
4		PancakeSwap · CAKE	\$19.74	+5.01%		\$3.53B	\$182M	+11.37%	-46.11%	+3362.33%
5		THORChain · RUNE	\$10.90	+1.75%		\$2.63B	\$55.63M	-12.35%	-42.52%	+758.65%
6		Terra · LUNA	\$6.48	+3.65%		\$2.56B	\$122M	+0.98%	-61.14%	+918.76%
7		Compound · COMP	\$401.81	+2.65%		\$2.11B	\$44.68M	-5.97%	-47.69%	+181.15%
8		Fei Protocol · FEI	\$0.999	+0.07%		\$2.04B	\$44.66M	-0.10%	-1.21%	+3.31%
9		yearn.finance · YFI	\$43,414.85	+2.08%		\$1.60B	\$119M	-6.31%	-18.75%	+101.23%
10		SushiSwap · SUSHI	\$11.56	-0.85%		\$1.49B	\$101M	-5.56%	-27.84%	+252.87%
11		Synthetix · SNX	\$12.02	+1.49%		\$1.39B	\$25.68M	-8.03%	-33.50%	+47.03%
12		DeFiChain · DFI	\$3.83	+12.57%		\$1.16B	\$0.33M	+9.87%	-15.33%	+135.04%
13		UMA · UMA	\$15.14	+0.57%		\$919M	\$14.37M	+11.93%	-42.55%	+95.68%
14		Curve · CRV	\$2.42	-2.38%		\$873M	\$130M	+26.28%	-30.85%	+297.09%
15		0x · ZRX	\$1.06	-0.92%		\$812M	\$21.39M	+5.78%	-44.81%	+187.68%
-- Total: 141 assets			--	+3.34%	--	\$54.91B	\$1.87B	+2.16%	-33.94%	+566.34%

Source: Messari, <https://messari.io/screener/defi-assets-7EE8EDB1>

Crypto Fees

Real projects, real revenue.

Name	1 Day Fees	▼ 7 Day Avg. Fees
 Uniswap V3	\$1,235,981.06	\$2,071,607.55 ▼
 Uniswap V2	\$969,058.51	\$1,677,093.55 ▼
 SushiSwap	\$470,876.66	\$1,086,489.71 ▼
 Aave	\$1,098,084.06	\$966,551.55 ▼
 Quickswap	\$373,673.15	\$493,067.12 ▼
 MakerDAO	\$327,327.36	\$327,858.77 ▼
 Compound	\$550,569.47	\$224,787.96 ▼
 Bancor	\$77,800.87	\$122,372.91 ▼
 Synthetix	\$69,755.34	\$96,427.70 ▼
 Balancer	\$58,991.53	\$87,222.31 ▼

Source: Crypto Fees, <https://cryptofees.info/>

More capital raises, more DeFi

Recent Fundraising Rounds

Hide fields

2 filters

Group

Sorted by 1 field

	Fundraising Round	Date	Amount	Investors	Project	Website
1	Ledn - Series A	5/26/2021	\$30,000,000	Kingsway Capital Coinbase	Ledn	https://ledn.io
2	Balancer - Treasury Diver...	5/27/2021	\$24,250,000	Blockchain Capital FinTech	Balancer	https://balancer.finance/
3	Zapper - Series A	5/17/2021	\$15,000,000	Framework Ventures Sound	Zapper	https://zapper.fi/
4	Set - Series A	5/28/2021	\$14,000,000	1kx Hashed Mechanism C	Set	https://www.tokensets.com/
5	Sienna Network - Unknown	5/10/2021	\$11,200,000	Lotus Capital NGC Venture	Sienna Network	https://sienna.network/
6	Panther Protocol - Seed	6/1/2021	\$8,000,000	Rarestone Capital Master V	Panther Protocol	https://www.pantherproto...
7	MCDEX - Unknown	5/21/2021	\$7,000,000	Delphi Ventures Alameda F	MCDEX	https://mcdex.io/
8	Composable - Seed	6/1/2021	\$7,000,000	Advanced Blockchain AG R	Composable	https://www.composable.fi...
9	Impossible Finance - Unk...	6/3/2021	\$7,000,000	True Ventures CMS Holdin	Impossible Finance	https://impossible.finance/
10	dTrade - Seed	5/13/2021	\$6,400,000	Three Arrows Capital DeFi	dTrade	https://dtrade.org/
11	PoolTogether - Treasury ...	5/20/2021	\$5,950,000	ParaFi Capital Galaxy Digit	PoolTogether	https://pooltogether.com/
12	Mintlayer - Seed	5/24/2021	\$5,200,000	Alphabit Digital Currency Fi	Mintlayer	https://www.mintlayer.org/
13	DeversiFi - Strategic	5/18/2021	\$5,000,000	ParaFi Capital Lightspeed V	DeversiFi	https://www.deversifi.com/
38 records			Sum \$194,945,000			

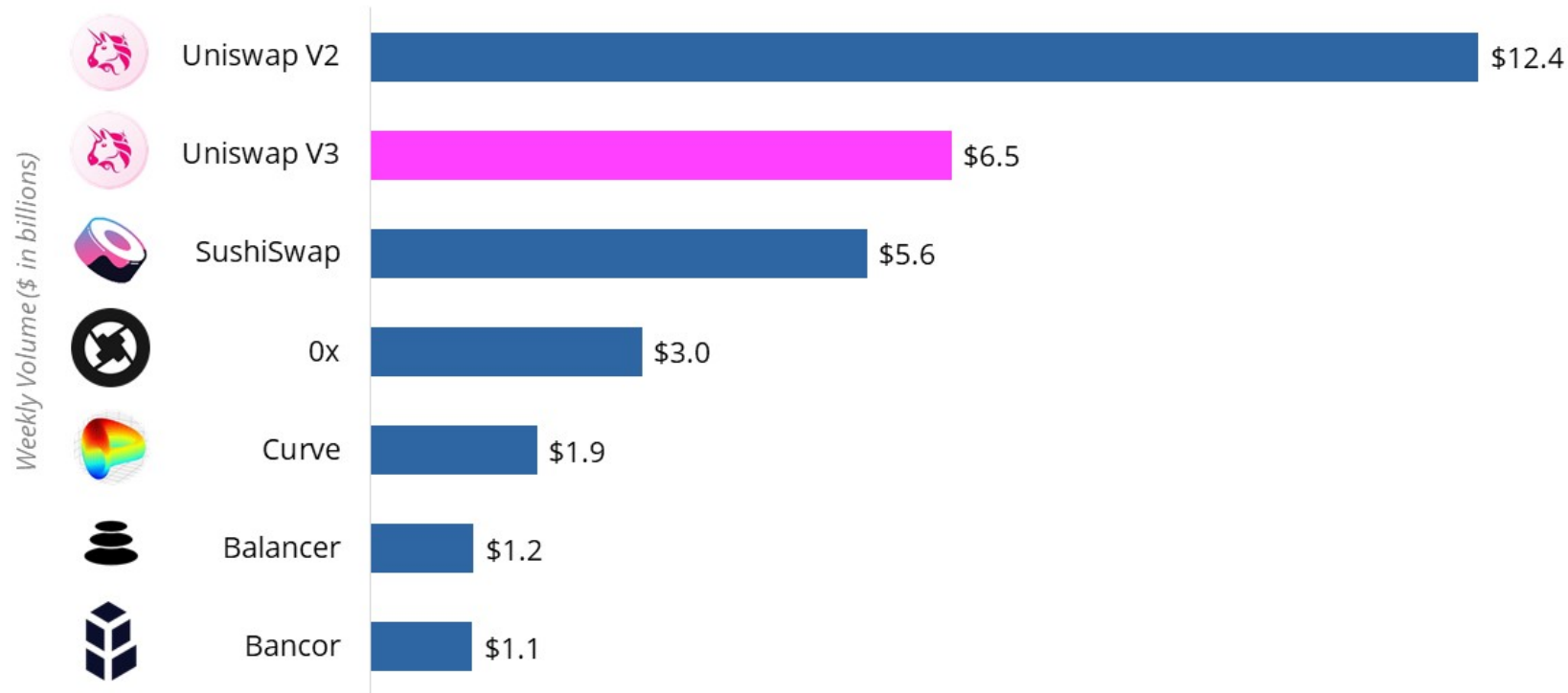
Airtable

DEX Volume on Ethereum



Uniswap V3 is Already the Second Largest DEX on Ethereum

In just weeks since launch Uniswap V3 is already the second largest DEX on Ethereum and quickly approaching Uniswap V2

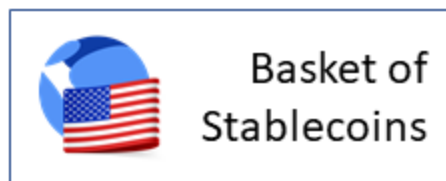


Data as of: May. 16 2021

Source: Messari, Dune Analytics

Terra Ecosystem

By modelling the features of a traditional bank, the Terra team has built decentralized protocols that adds and transfers value to its users, thus increasing the demand and stability of its stablecoins.



Basket of
Stablecoins



Algorithmically
pegged by
LUNA. As demand for
UST increases, price
of LUNA increases.

Terra generates
demand for its
stablecoins by making
useful apps modelling
a TradFi bank

Payments

- 2.3M Total Users (about 5% of Korea)
- Cheaper and faster than credit card settlements
- Users get discount "Boosts" when they pay with Terra

Investments

- 2B TVL in 4 Months
- 24/7 trading, fractional shares, no capital or geographical regulations
- Ease of liquidity between crypto and equities

Savings

- 1B TVL in deposits and collateral in a month since launch
- 20% Savings Account on stablecoin – massive change from traditional savings rate

Resources

Research & News:

The Defiant - <https://newsletter.thedefiant.io/>

Bankless - <https://newsletter.banklesshq.com/>

Ethereum Stats & Tools

DeFi Pulse - <https://defipulse.com/>

Ethgastation - <https://ethgasstation.info/index.php>

Gasnow - <https://www.gasnow.org/>

Risk Management

DeFi Score - <https://defiscore.io/>

DeFi Safety - <https://defisafety.com/>

Rekt - <https://www.rekt.news/>

Wallets

MetaMask - <https://metamask.io/>

TerraStation - <https://www.terra.money/>

Wallet Aggregators

Zerion - <https://app.zerion.io/>

Zapper - <https://zapper.fi/>

Ethereum

UniSwap - <https://app.uniswap.org/#/swap>

Aave - <https://app.aave.com/>

Synthetix - <https://staking.synthetix.io/>

Balancer - <https://app.balancer.fi>

Terra

Anchor - <https://anchorprotocol.com/>

Mirror - <https://mirror.finance/>

TerraSwap - <https://app.terraswap.io/#Swap>

Other Stats

DeFi Llama - <https://defillama.com/>