



DeFi in 2020

A review and analysis of the Decentralized Finance ecosystem and its performance in 2020

by **Lex Sokolin**, CMO and Global Fintech Co-head at ConsenSys

Agenda

Intro to DeFi

DeFi Manufacturing

DeFi as an Asset Class

DeFi in 2021

DeFi Products by ConsenSys

Q&A



Lex Sokolin

CMO and Global Fintech Co-head

Intro

Human economic needs are timeless: 20% of GDP today

PAY



TRADE



SAVE



INVEST



What did we get after \$400 billion in global Fintech investment?



Distribution

Democratizing access to traditional financial services



**Middle Office /
Enabling Software**

Increasing industry efficiency and driving down price



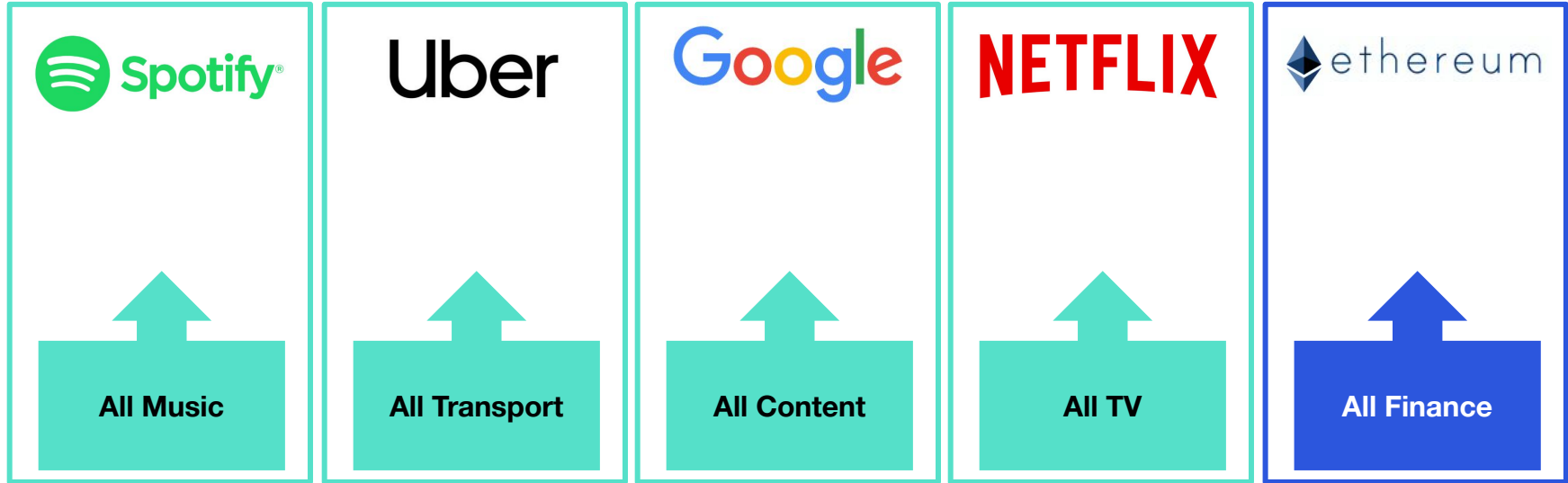
Manufacturing

?

**Open source blockchains have achieved something
half a trillion of VC funding didn't**

You cannot build a Spotify of CD-ROMs

You cannot build the future of Finance on legacy infrastructure



Common stock issued by B&O Railroad Co. in 1903



Common stock issued by Pennsylvania Railroad Co. in 1959



Promissory note issued by the 2nd Bank of the United States in 1840



Certificate of deposit issued by the U.S. Postal Savings System in 1932



Federal reserve note issued by the U.S. Government in 2009

Programmable blockchain networks deliver digital authenticity, scarcity, a property rights system, and value settlement

Blockchain-Based Financial Product Manufacturing



Superior Digital Architecture

- By design, assets have both Authenticity and Scarcity
- Enables asset provenance and full transaction history in a single shared source of truth



Security and Standards

- Mutualized standards, protocols and shared processes via smart contracts
- Code is tamper-resistant and guaranteed to run as written



Community Participation and Incentives

- Governance, identity, data privacy, and system incentives designed into networks
- Stakeholder participation, like voting, is part of the asset itself



Financial Industry attributes

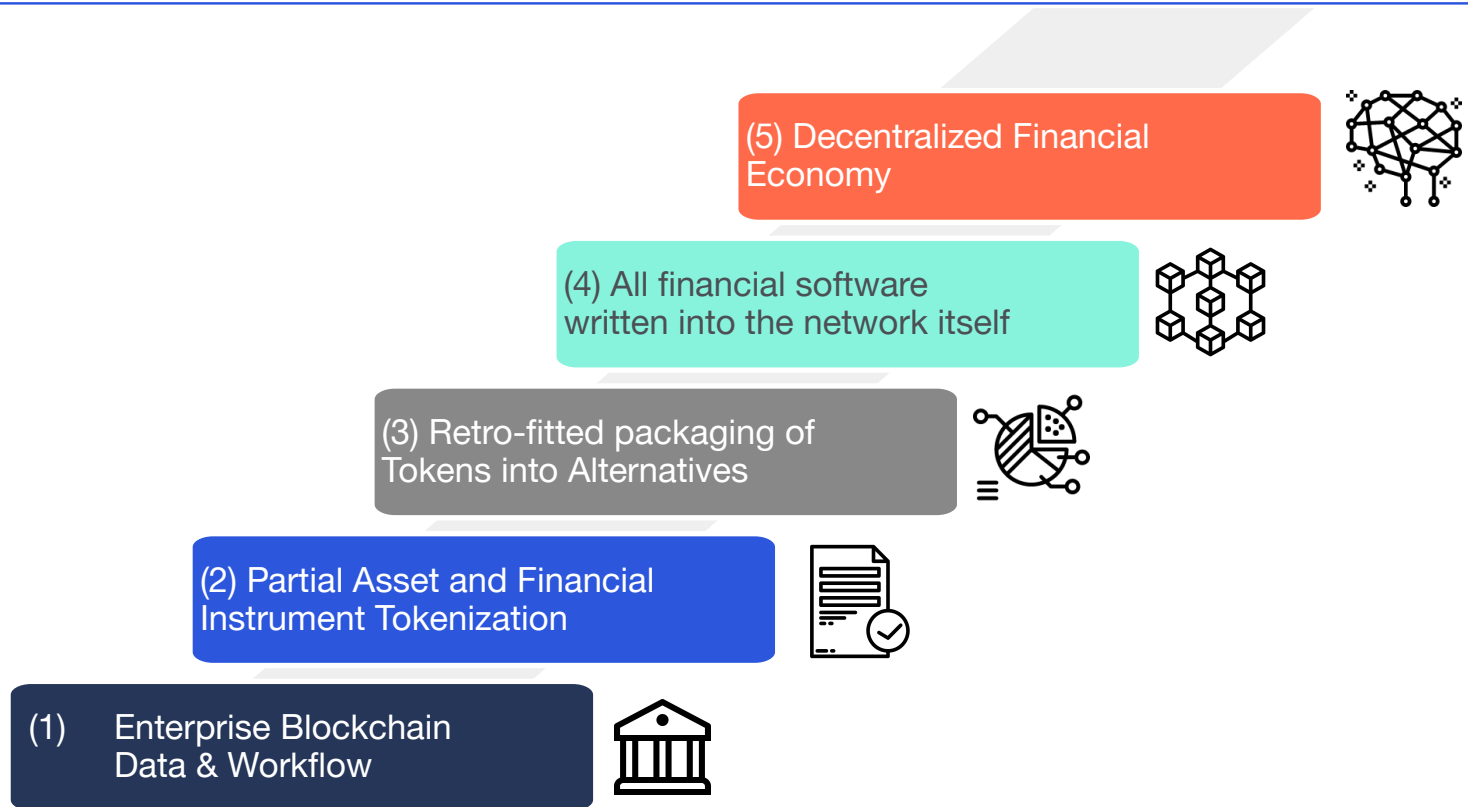
- Out-of-the-box features dramatically reduce transaction and operational costs, settlement, capital requirements and counterparty risks
- Single rail and market structure across asset classes for network participants



Composability and Smart Primitives

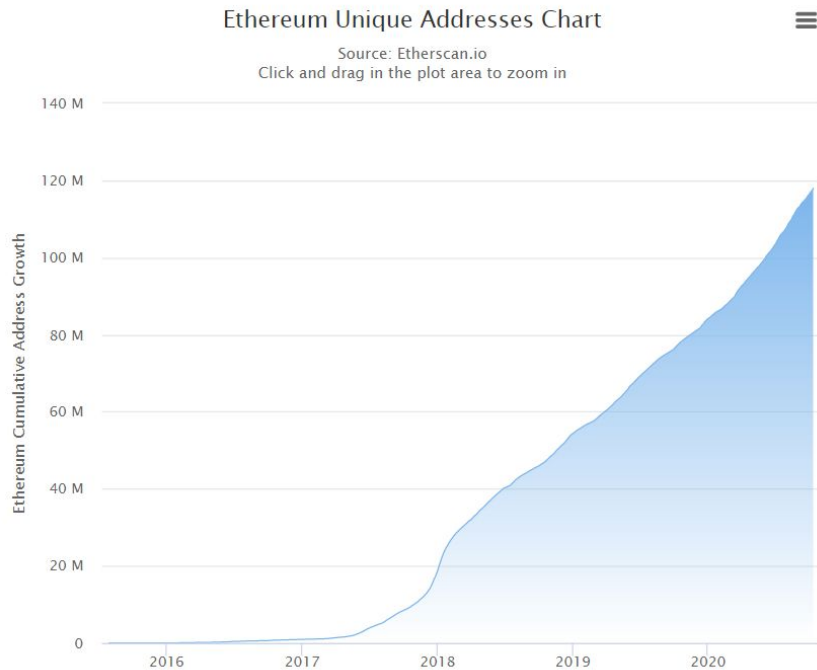
- Allows for creation, management and exchange of new products and markets that previously were not feasible or cost-effective
- Back office software and related business workflows built into the assets

How will it happen? Follow the crypto maturity curve

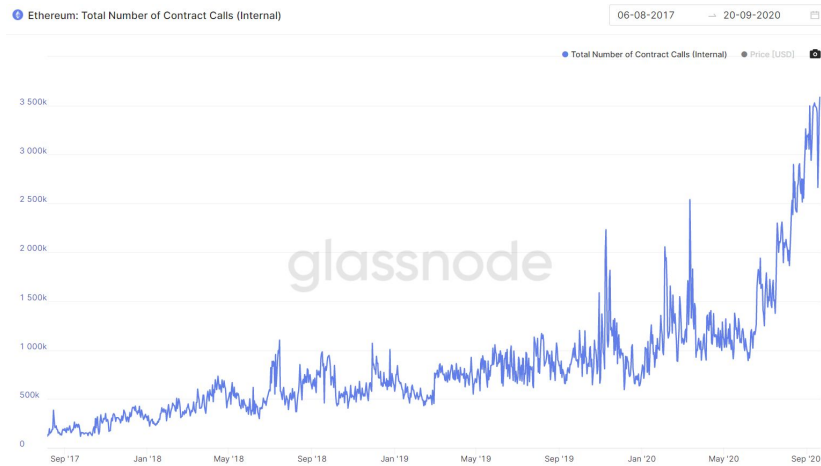


100MM addresses and 3MM contract calls a day

Addresses

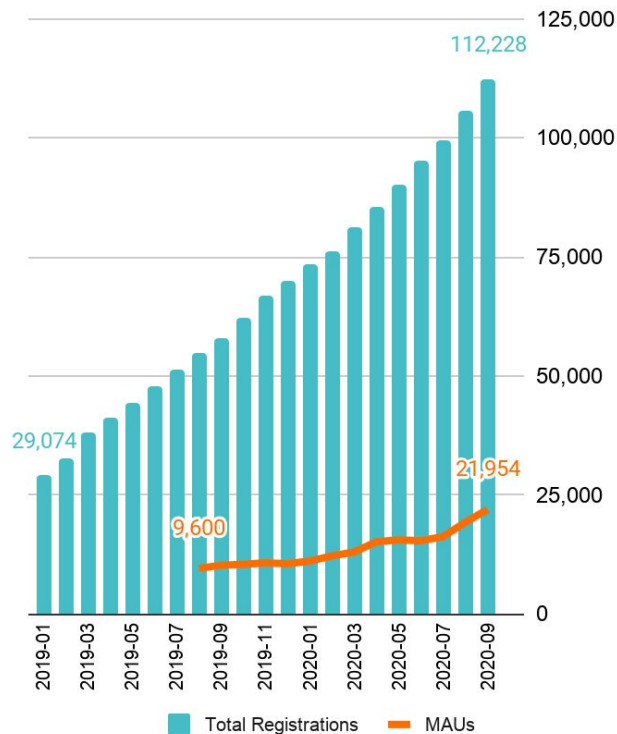


Software Executing on Network

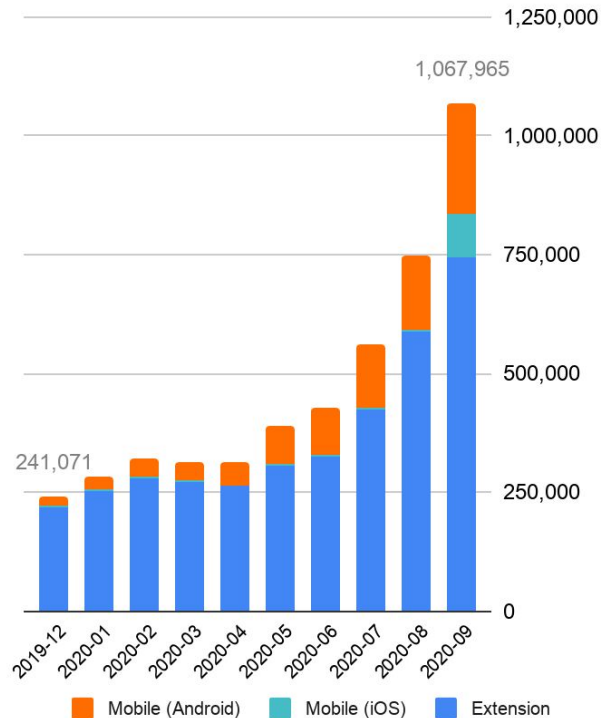


ConsenSys Products scaling along with public ecosystem

Infura: Developers



MetaMask: Users

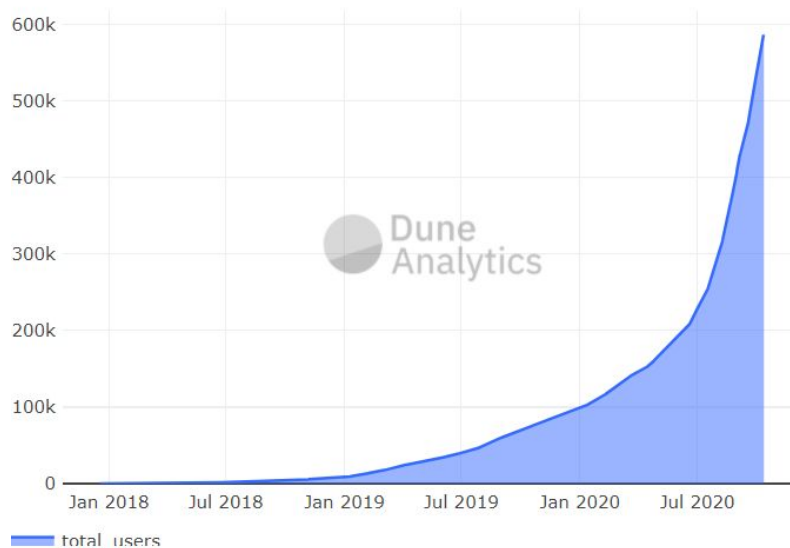


Almost 1MM DeFi users with \$15B+ in assets

DeFi Users

Total DeFi users over time

Users = unique addresses. Since a user can have multiple addresses the numbers below are overestimates. Source: Richard Chen @richardchen39



Collateral Deployed

Total Value Locked (USD) in DeFi

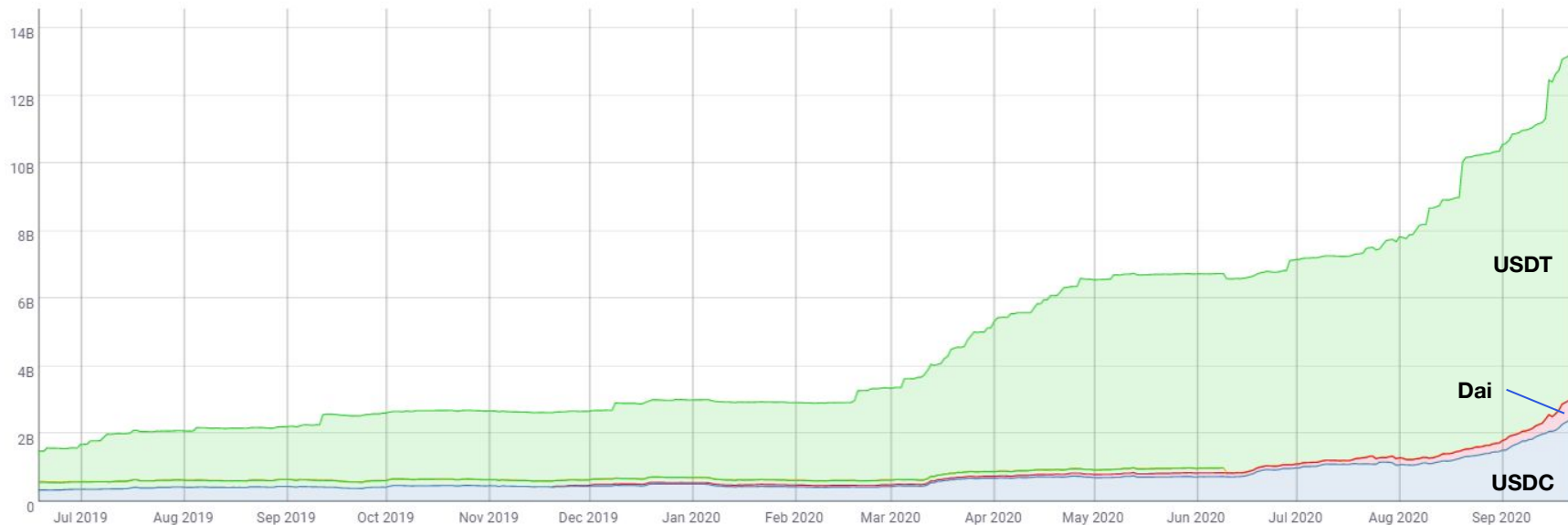
TVL (USD) | ETH | BTC

All | 1 Year | 90 Day | 30 Day



Ethereum is USD denominated -- \$15B in Stablecoins

Ethereum-based Stablecoin Capitalization Over Time (\$B)



- More stablecoins, driven by USDT's shift from Omni to Ethereum (ERC20), USDC's increased popularity, and Dai's increased use in liquidity mining and yield farming schemes. USDC can also now be used as collateral for Dai issuance.
- The increase from \$2B to \$10B took just over 1 year.

Source: CoinMetrics

DeFi Manufacturing

In the middle office alone, more than \$250 billion of Enterprise Value on a path to disappear

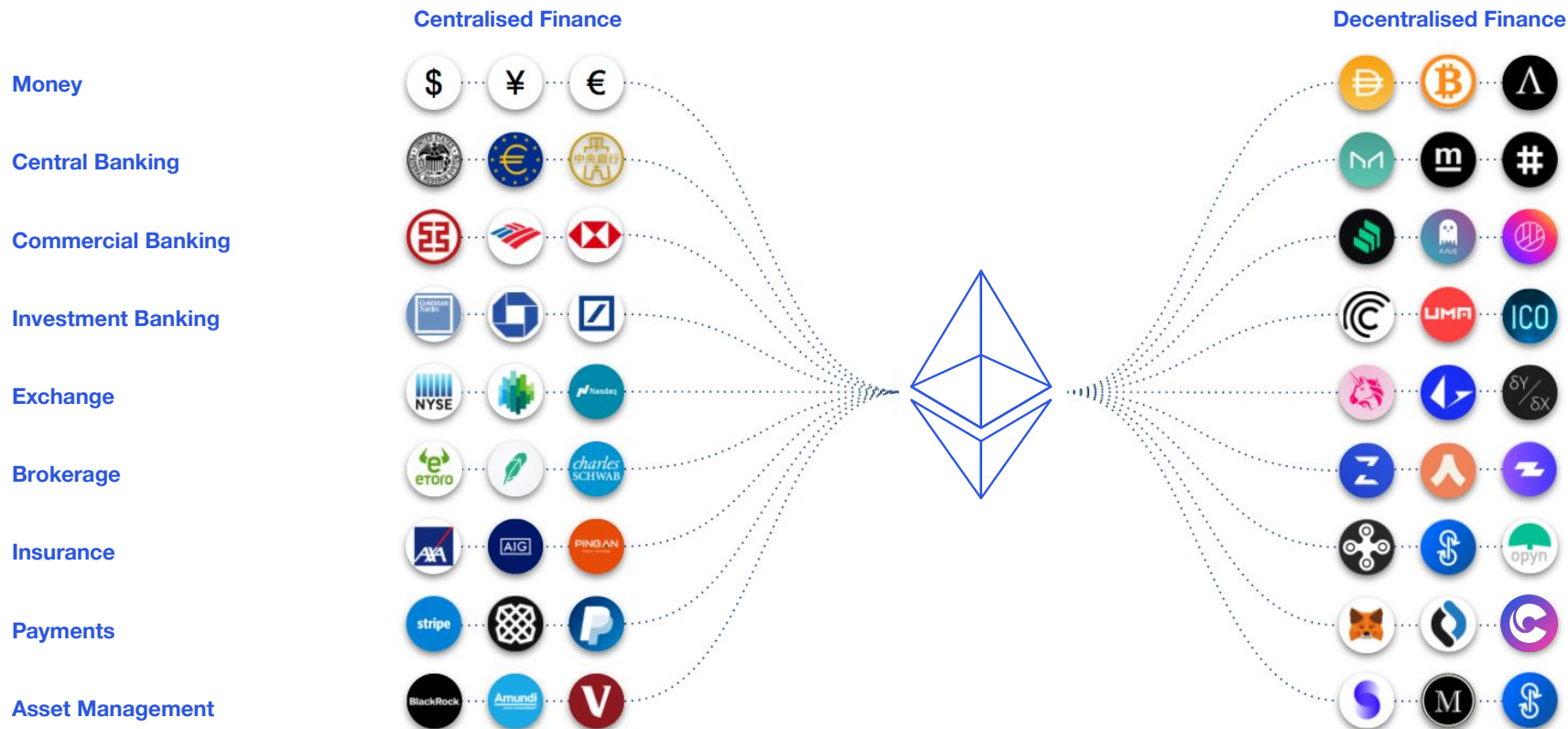


Say hello to your permissionless robot finance vending machine

- Decentralized Exchange / Automated Market Makers allow for one-sided trading against a pool, fees go to liquidity providers
- Lending protocols function as capital markets margin desks, clearing interest rates for leverage in markets

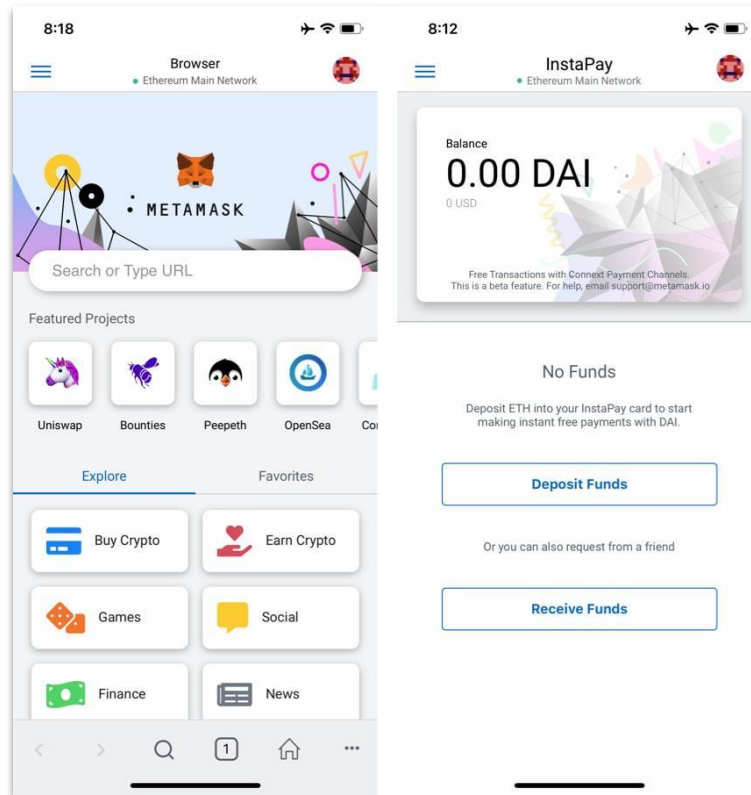


Protocols for every financial instrument and function



Payments processing – tech for making a payment

Worldpay - \$35 Billion



Core Banking – tech for deposits and savings

Jack Henry - \$15 Billion

The screenshot displays a web-based banking interface for 'Collette Sundell'. The main section shows account details for 'Checking 100262475'. It includes fields for Account Name and Address, Balances (Available, Collected, Current, Hold, Closing), Previous Balances, and Average Balances. There are also sections for 'Insufficient Funds', 'Dates', 'Interest', 'Service Charge', and 'Special Information Codes'. The interface is complex with many tabs and sub-sections, typical of a legacy banking system.

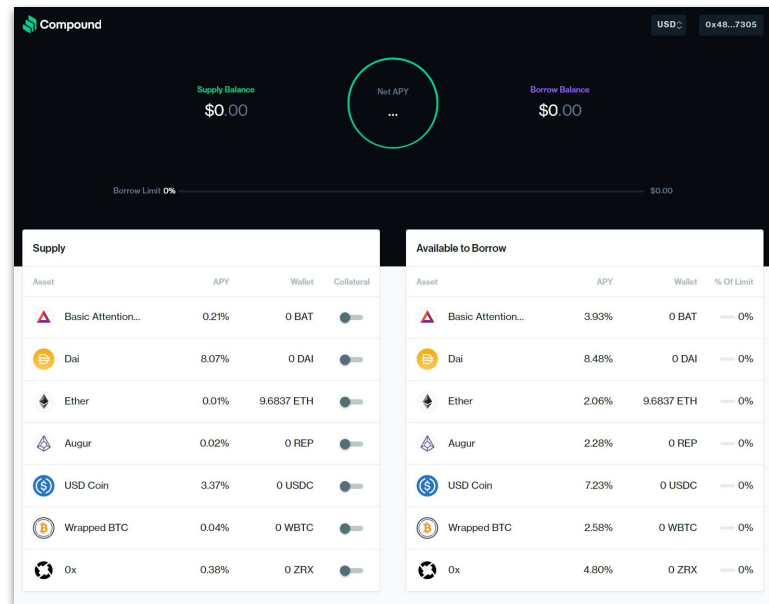
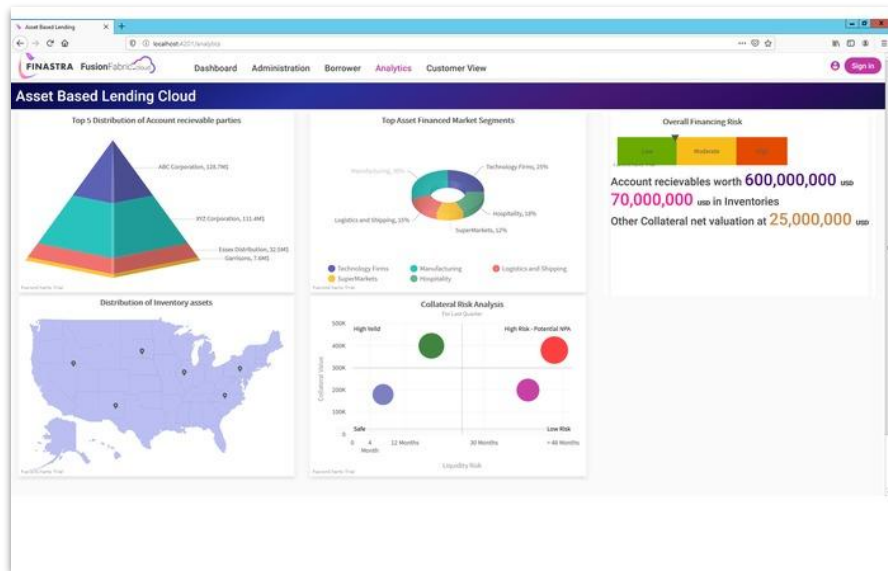


The screenshot shows the MakerDAO interface. On the left, it displays the 'Balance' of 100.05 DAI at \$100.05 USD, with a 'Dai Savings rate' of 5.00%. In the center, there are buttons for 'Deposit' and 'Withdraw', and a 'Deposit Dai' button. On the right, the 'Wallet balances' section shows various assets and their balances. Below this, there is a 'Save Details' section. At the bottom, there is a table listing various cryptocurrencies and their market data.

Asset	Price	Reward	Adj. Reward	Market Cap	24h Volume	Total Staked	7d Price Change	Score
Tezos XTZ	\$ 2.68 (-12.13%)	5.63%	0.66%	\$1,896,708,188	\$241,176,011	79.46%		★★★★☆
Cosmos ATOM	\$ 3.18 (-13.11%)	8.25%	1.84%	\$601,311,549	\$171,567,895	71.85%		★★★★☆
Livepeer LPT	\$ 1.31 (-13.82%)	53.72%	15.10%	\$8,361,517	\$21,655	64.71%		★★★★☆
Decred DCR	\$ 16.8 (-9.98%)	8.33%	3.93%	\$188,098,419	\$30,121,548	49.35%		★★★★☆

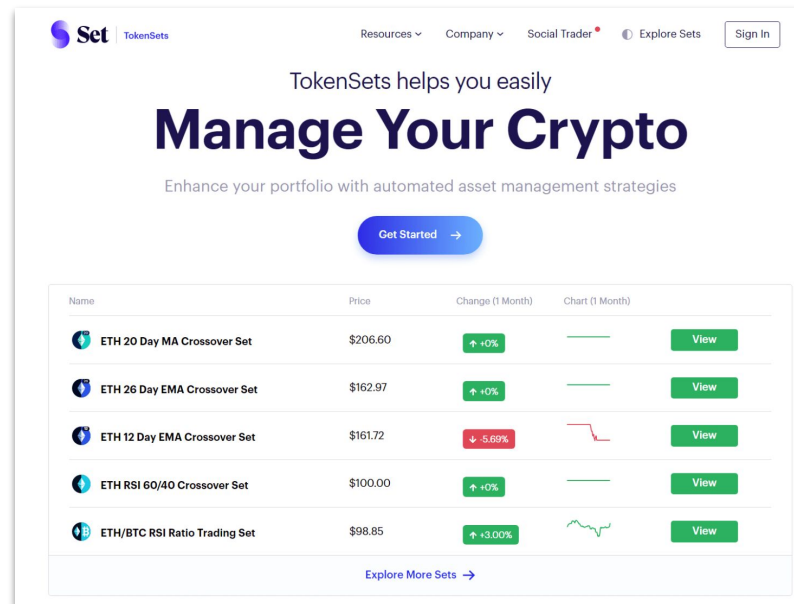
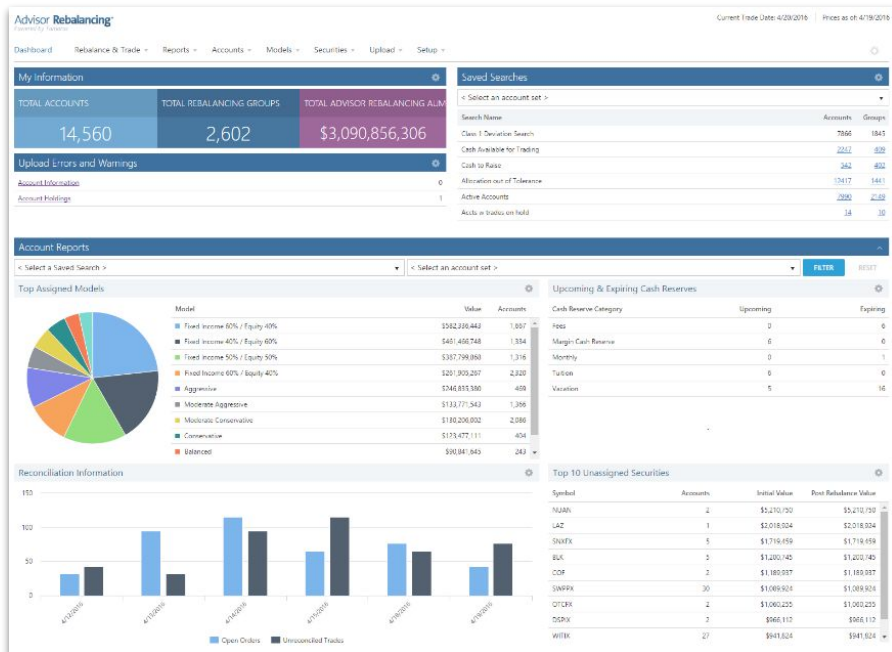
Lending / underwriting – tech for managing loan books

Finastra - \$5 Billion



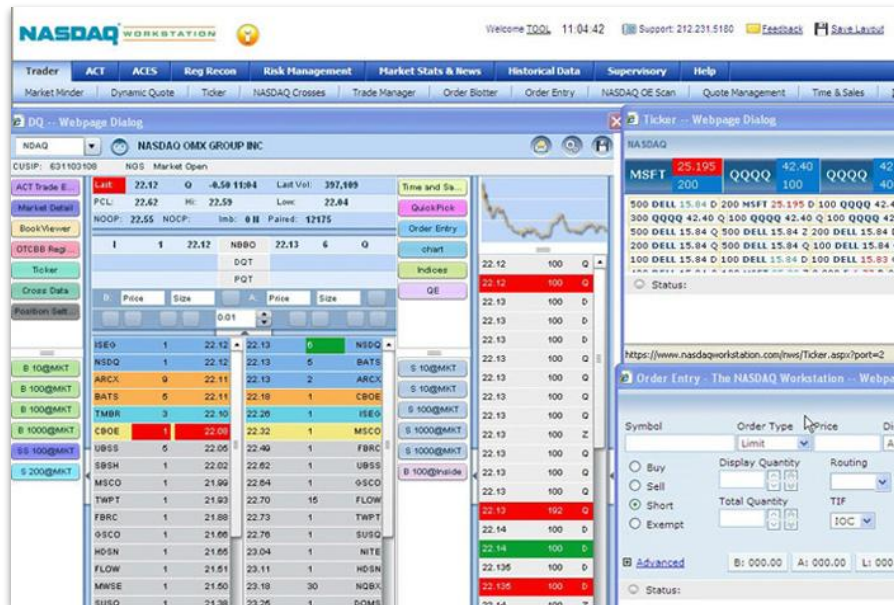
Wealth Management – tech for trading and rebalancing

Investnet – \$4 billion



Exchange & Clearing - tech and markets for asset exchange

Nasdaq – \$20 billion



Swap Pool UNI Vote Charts² 400 UNI 3.193 ETH

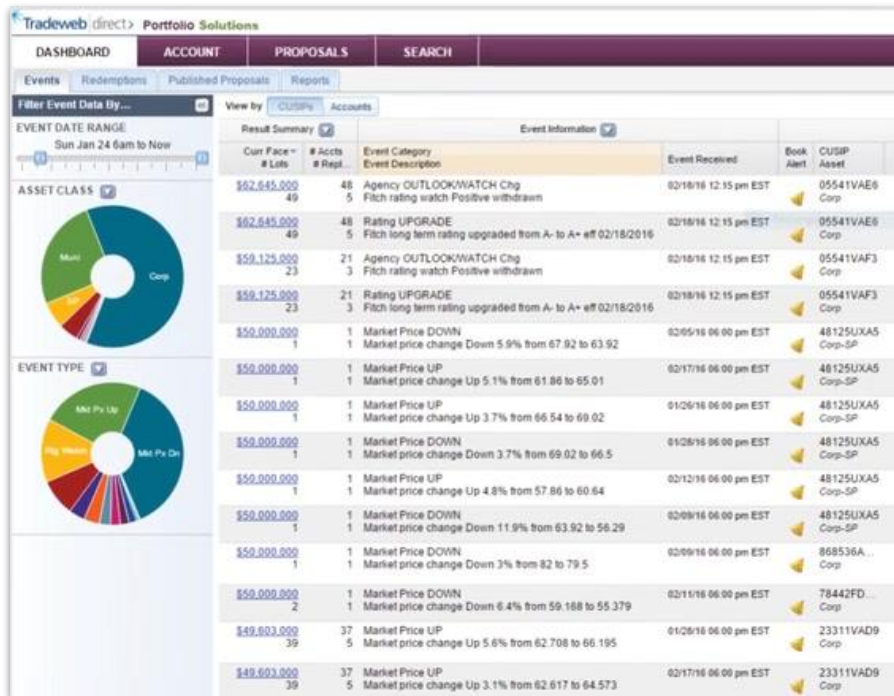
From Balance: 3.19382
0.0 MAX ⚡ ETH ▾

↓

To -
0.0 Select a token ▾

Enter an amount

Tradeweb – \$12 billion



UMA

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Tokens and Derivatives to Trade Anything

UMA is a decentralized financial contracts platform built to enable Universal Market Access. Use UMA's self-enforcing contract design patterns and provably honest oracle mechanism to create your own financial products using standards like ERC20. [Read Our Whitepaper.](#)

SYNTHETIX

Decentralised synthetic assets

NEW TRADE CRYPTO, COMMODITIES, AND FOREX ON SYNTHETIX EXCHANGE!

Fiat currency stablecoins

Cryptocurrencies (long & short)

Commodities

And coming soon:

Introducing Synths

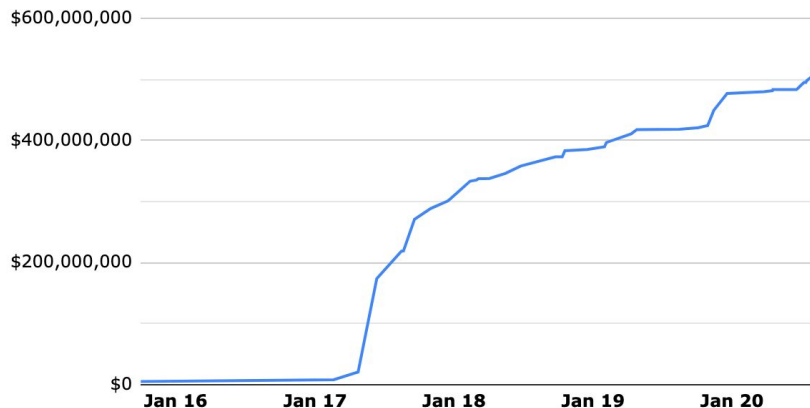
Synths are tokens that provide exposure to assets such as gold, Bitcoin, U.S. Dollars, TESLA, and AAPL within the Ethereum blockchain.

DeFi as an Asset Class

Growth from \$500MM+ in VC ...

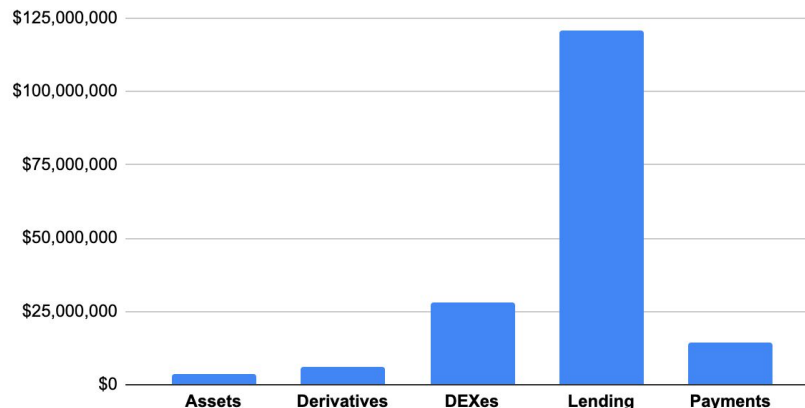
Total Capital Raised by DeFi Companies

DeFi Companies listed on DeFi Pulse | Source: Simone Conti for The Defiant



Capital Raised by Category (no token sales)

Source: Simone Conti for The Defiant



- Defi projects continue to raise money in 2020, dominated by Lending.
- Many of the 2017-2018 projects were funded via token sales, accounting for the large investment bump during that time. The funding mechanism has shifted towards VC-style equity raises.
- Note the left hand side includes token sales.

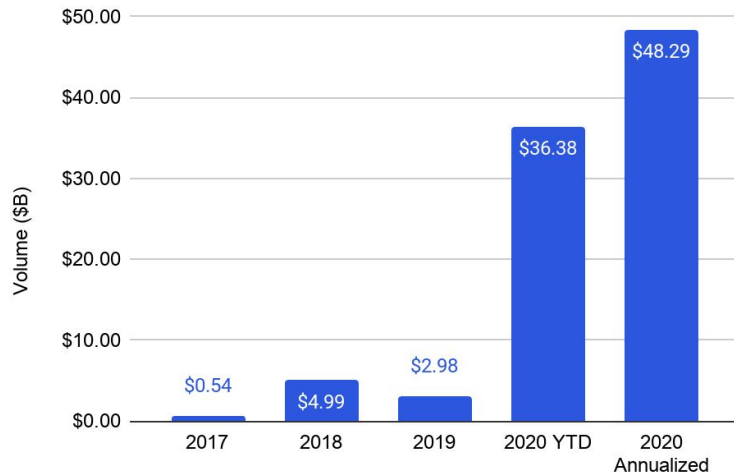
... and a bit of Yield Farming motivation...

- Lending (or providing liquidity) earns a yield
- Borrowing has an interest cost
- You earn 20% because someone wants to borrow it and pays 25%
- They borrow likely because they think capital appreciation will be 25%+
- Liquidity mining provides an additional incentive in the form of a protocol governance token
- This reduces the borrowing cost (25% less token reward)
- Depending on price action, borrowing cost could be negative



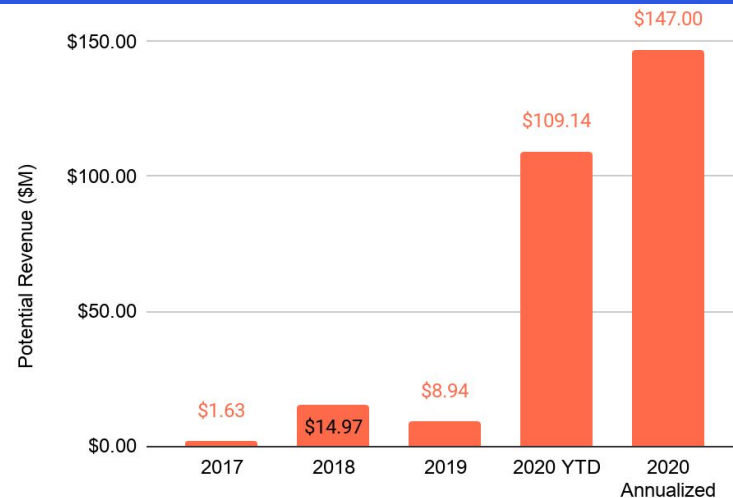
... resulting in DEX volume growing over 1,000%

DEX Trading Volume (USD)



YoY Growth	-	817.3%	-40.3%	1121.1%	1569.3%
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DEX Potential Revenues

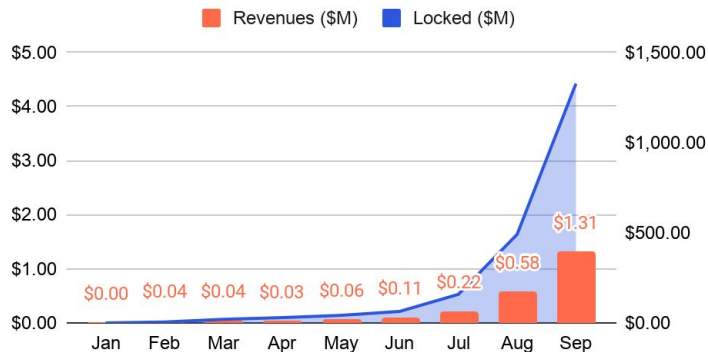


CAGR	349.9%
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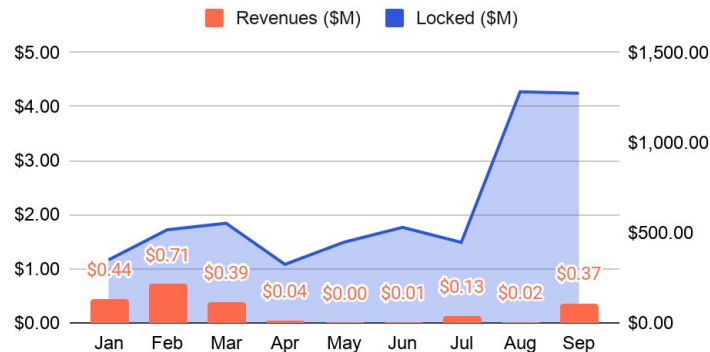
- 2020 has massive growth in DEX volume, with an annualized ~16x growth from 2019 to 2020.
- The numbers are still quite small relative to centralized exchanges. Uniswap recently overtook Coinbase in daily volume, but that is only one exchange.
- Revenue pool is split between exchanges and Liquidity Providers, with most of this revenue going to the latter.

... and Lending protocol explosive growth in Q3

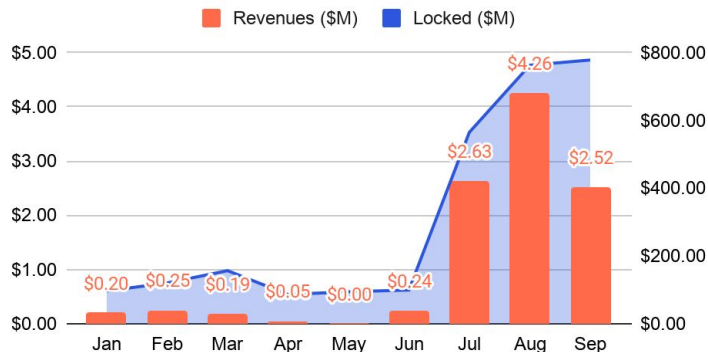
Aave



Maker



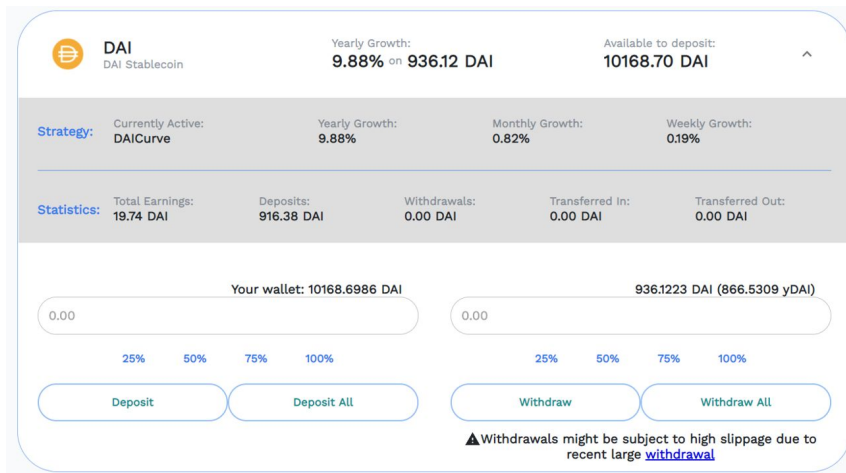
Compound



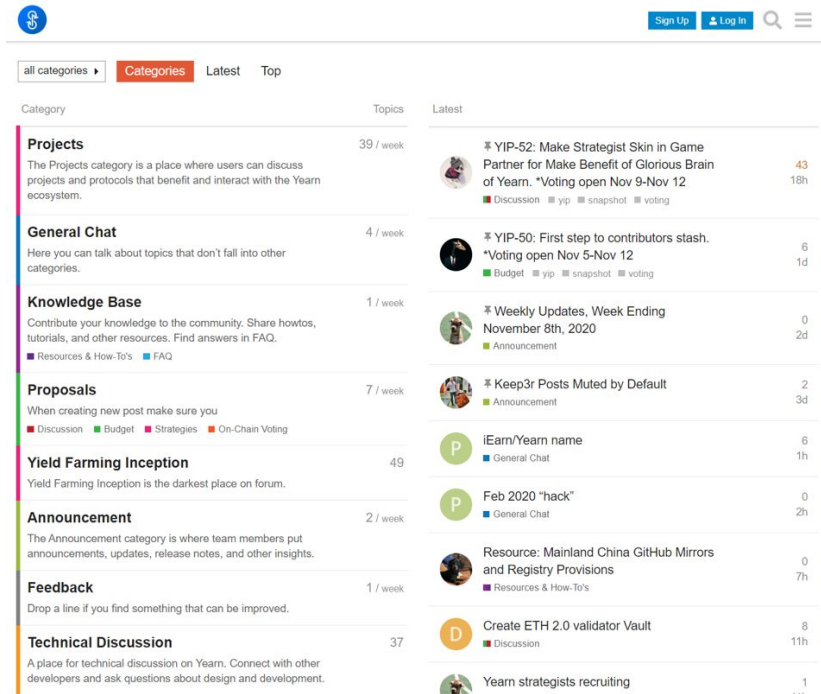
- Lending (esp. money market) protocols account for 38% of the TVL in Ethereum.
- 98% of Lending TVL is concentrated in the top 5 protocols, of which 87% is in the top 3 - Aave, Maker, Compound.
- TVL has grown ~650% since January this year.
- Total estimated revenues in 2020 (annualized) of ~\$23M

Packaged Financial Instruments (e.g., active fixed income funds)

Fund Interface


















Governance



Important distinction between the protocol and the asset class

Asset

#	Name	Market Cap
1	 Compound Dai Compound	\$1,016,466,965
2	 Dai MakerDAO	\$901,705,006
3	 Wrapped BTC Bitcoin	\$836,099,140
4	 Yearn.finance Yearn.finance • Vaults	\$715,432,873
5	 Curve Y Pool Curve	\$627,026,100
6	 EthLend Token Aave	\$613,021,811
7	 UMA Voting Token v1 ERC20	\$556,873,183
8	 Synthetix Network Token Synthetix	\$530,002,960
9	 Maker MakerDAO	\$443,963,538
10	 Compound Compound	\$436,049,032
11	 Uniswap WBTC/ETH Pool Uniswap V2	\$418,801,032
12	 Uniswap ETH/USDT Pool Uniswap V2	\$397,558,769
13	 Uniswap USDC/ETH Pool Uniswap V2	\$358,022,379
14	 Compound Ether Compound	\$340,874,767
15	 Uniswap Uniswap V2	\$328,713,420

Protocol

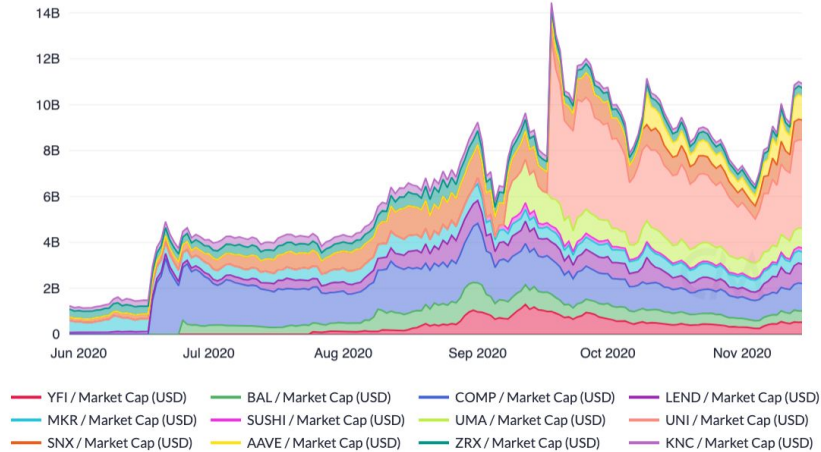
DEFI PULSE	Name	Chain	Category	Locked (USD) ▼	1 Day %
1.	Maker	Ethereum	Lending	\$1.89B	1.46%
2.	Uniswap	Ethereum	DEXes	\$1.87B	5.55%
3.	Aave	Ethereum	Lending	\$1.36B	1.97%
4.	Curve Finance	Ethereum	DEXes	\$1.29B	1.35%
5.	WBTC	Ethereum	Assets	\$889.8M	9.09%
6.	yearn.finance	Ethereum	Assets	\$837.4M	3.31%
7.	Compound	Ethereum	Lending	\$761.9M	6.68%
8.	Synthetix	Ethereum	Derivatives	\$598.8M	-0.87%
9.	Balancer	Ethereum	DEXes	\$435.5M	5.74%
10.	SushiSwap	Ethereum	DEXes	\$434.5M	-0.85%
11.	RenVM	Ethereum	Assets	\$247.7M	3.78%
12.	C.R.E.A.M. Finance	Ethereum	Lending	\$215.5M	3.44%
13.	InstaDApp	Ethereum	Lending	\$164.4M	0.94%
14.	Flexa	Ethereum	Payments	\$149.1M	-5.61%
15.	Nexus Mutual	Ethereum	Derivatives	\$68.6M	3.96%

Over \$10B in DeFi token value and \$1B+ in Bitcoin on Ethereum

DeFi Token Valuations

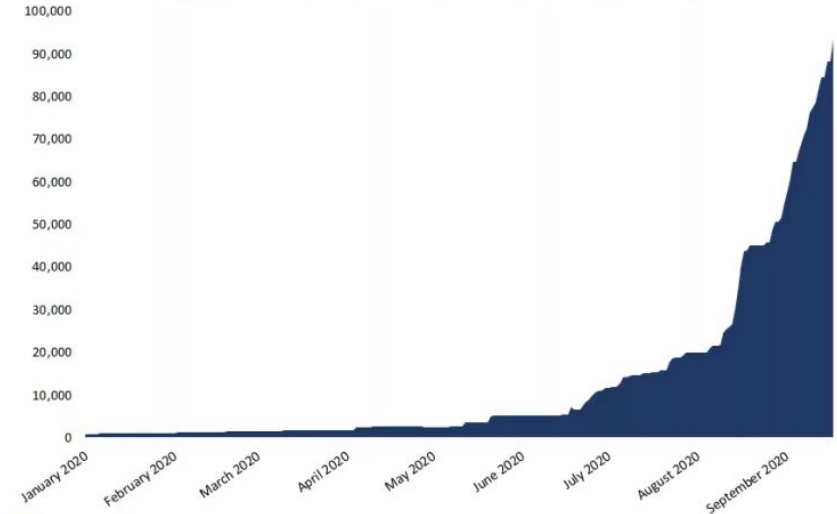
DEFI MARKET CAP

COINMETRICS



Bitcoin Tokenized on Ethereum

Supply of Bitcoins Tokenized on Ethereum Year to Date

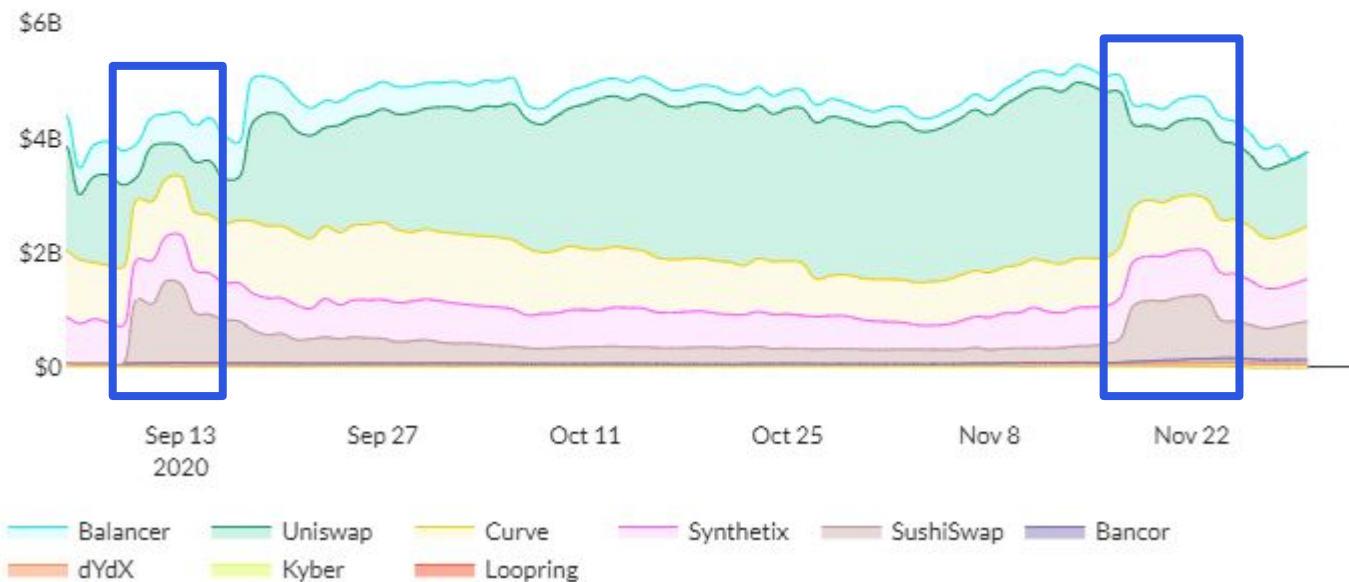


coindesk Source: Dune Analytics, CoinDesk Research


New vectors of competition: forks for liquidity transitions

Top exchanges | Total value locked (TVL)

Daily average



New vectors of competition: Swerve/Curve on Governance



Swerve Finance

A fork that's 100% community owned and governed.

[SWERVE FINANCE APP](#)

[HTTPS](#) via IPFS Directly


Total Value Locked in Swerve:

\$535,885,962.24

Why We Built Swerve

[SnapShot Voting](#) | [Uniswap](#) | [Community Forum](#)

[GitHub](#) | [Contracts](#) | [Risks](#)

 **Curve**

Total pool deposits and daily volume


Deposits: 1,100,621,912.00\$

Daily volume: 183,490,286\$

compound.curve.fi

Average liquidity provider profit [5.96% APY [?]]

Zoom 1m 3m 6m YTD 1y All From Jun 10, 2020 To Sep 10, 2020



Profit [%]

15. Jun 29. Jun 13. Jul 27. Jul 10. Aug 24. Aug 7. Sep

Mar '20 May '20 Jul '20 Sep '20

— Virtual growth of liquidity share — Real growth of liquidity share

Highcharts.com

Recent daily APY: 5.08%

Daily trading volume: 4,457,441\$

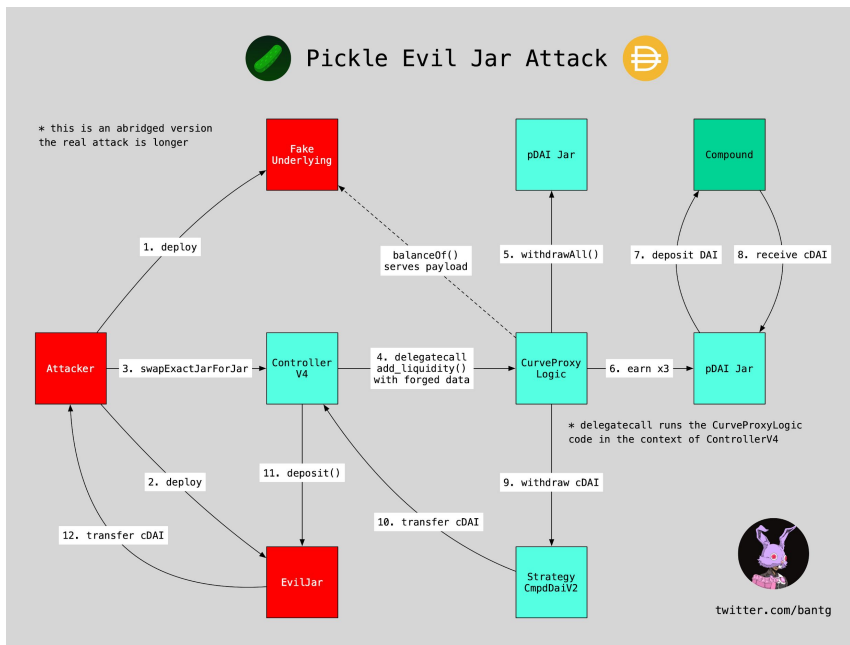
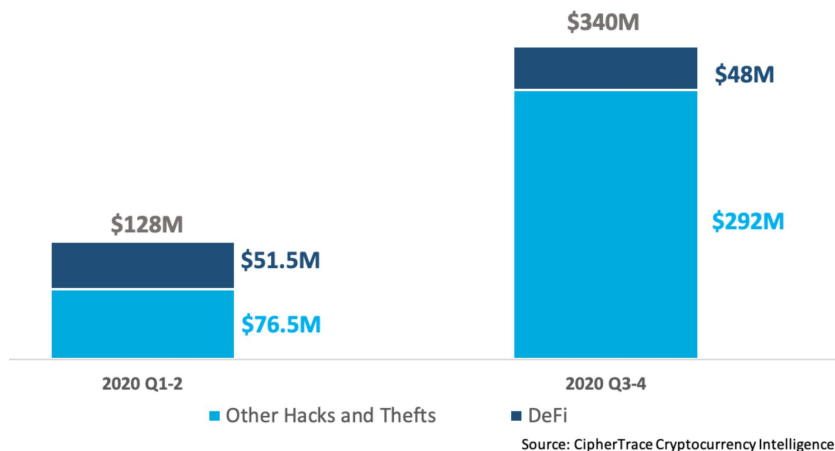
Recent weekly APY: 7.82%

Recent monthly APY: 8.65%

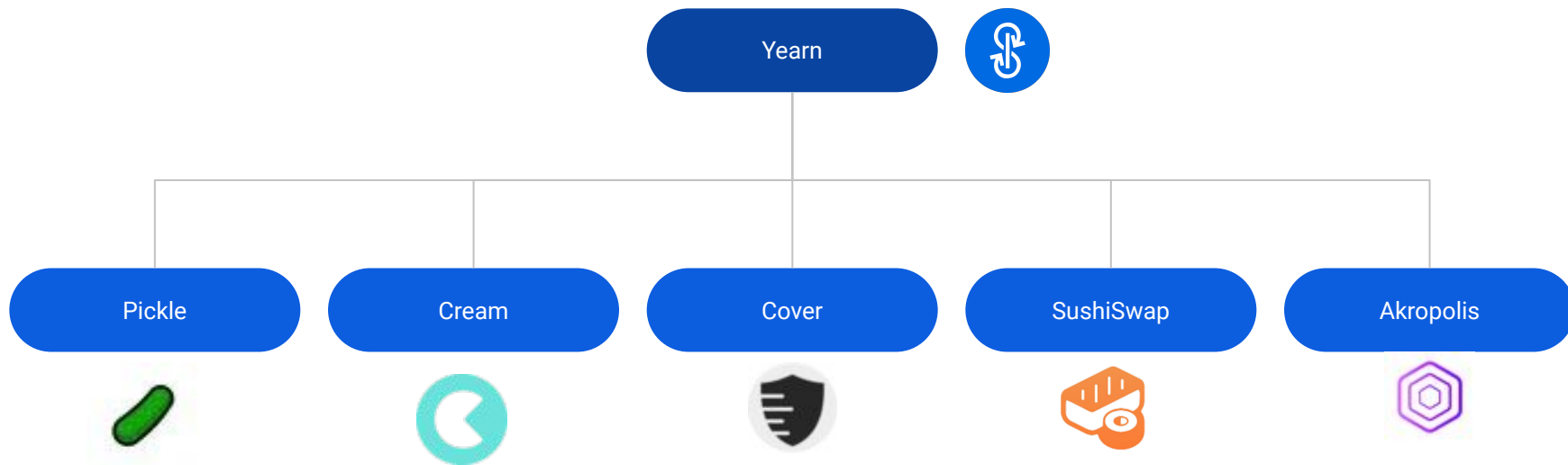
Total APY: 5.96% [?]

New vectors of competition: flash loan exploits

DeFi Adds \$100 Million to 2020 Thefts



New vectors of competition: DeFi “Mergers”



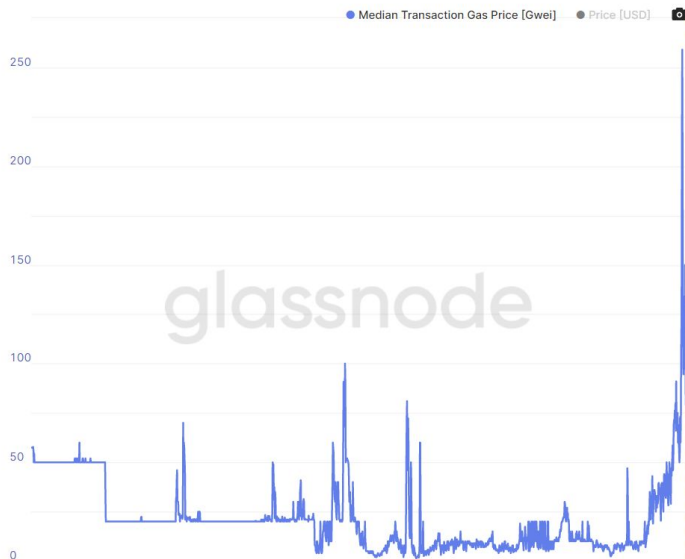
DeFi in 2021

What does 2021 look like?



1) Eth2 and Scalability of Layer 2

Transaction Cost

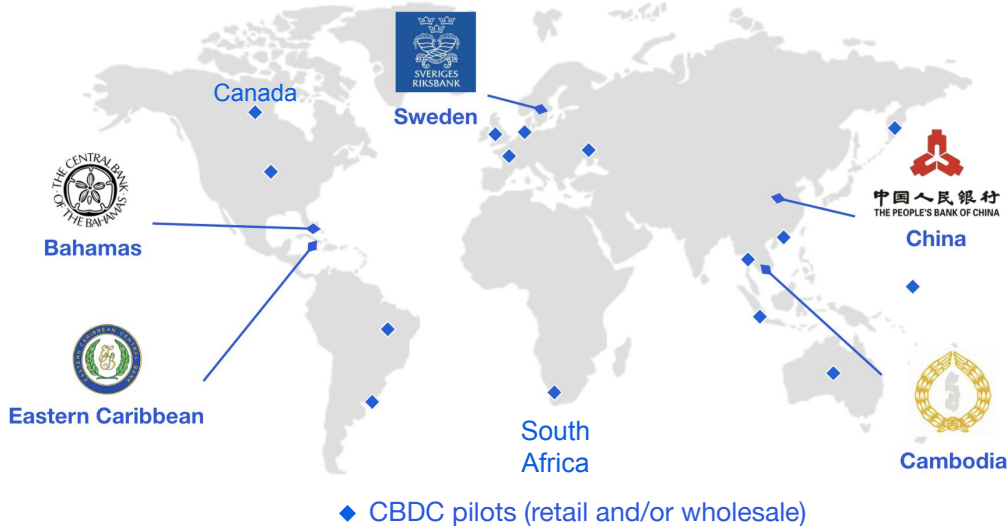


- Usage has led to cost by design
- Secondary L2 solutions built
- Eth2 launched, economic implications

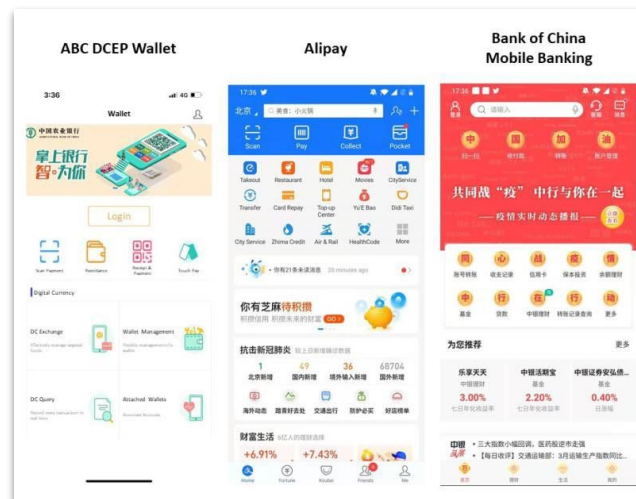
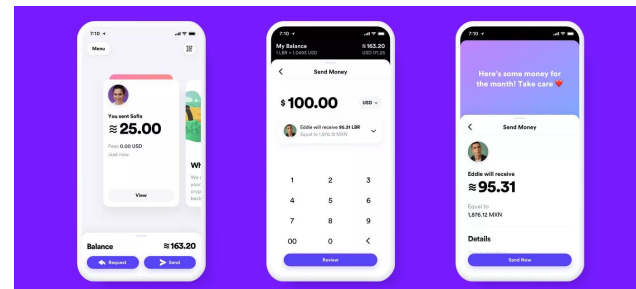
The screenshot shows the Loopring website with a blue header and navigation links: HOME, ABOUT, LOOPRING 3.0, LRC, TEAM, BLOG, and TRADE. The main content area features a large blue banner with the text "LOW SETTLEMENT COST" and a digital display showing "0.0002". Below this is the "Eth2 Launch Pad" section with a light blue background and a rainbow gradient bar. It includes the text "Become a validator and help secure eth2." and "Earn continuous rewards for providing a public good to the community." A "GET STARTED" button is at the bottom. To the right, a "Mainnet" button is visible. A list of "Reasons to Use the xDai Stable Chain:" is shown, including fast transaction times, digital cash, single token, on-chain decentralized Random Number Generator, permissionless delegated Proof-Of-Stake based consensus, STAKE token, wide-ranging community support, outstanding energy efficiency, extreme usability, growing ecosystem, and smart contract compatibility. A cartoon rhino character is also present. In the background, a screenshot of a web interface with various data points and buttons is visible.

2) Central Bank Digital Currency & BSN geo political competition

80% of central banks are engaged in some work on CBDC



- Bahamas sand dollars launch
- China \$300MM volume
- ConsenSys Australia, Hong Kong, Thailand, France projects



3) Onchain, private, regulated DeFi outpaces STOs

Pool	Status ▼	Asset Type	Total Financed (DAI)	DROP APR
Kickfurther Series 1	Upcoming	Inventory Finance	0	10.00%
ConsolFreight Series 4	Active	Invoice & Cargo	276,298	10.00%
1754 Factory (Bling Series 1)	Active	Payment Advances	175,157	10.00%
ConsolFreight Series 3	Deployed	Invoice & Cargo	357,735	10.00%
New Silver 1	Deployed	Real estate bridge lo...	1,046,523	10.00%
Paperchain Series 2	Deployed	Invoice	6,590	10.00%
ConsolFreight Series 1	Closed	Invoice	280,930	10.00%
ConsolFreight Series 2	Closed	Invoice	337,495	10.00%
Harbor Trade Credit Series 1	Closed	Trade Receivables	810,734	11.00%
Paperchain Pilot	Closed	Invoice	99,434	10.00%

EXCLUSIVE DEFI

Aave has been granted an Electronic Money Institution license by the U.K. Financial Conduct Authority



by Michael McSweeney

Download PDF / Print

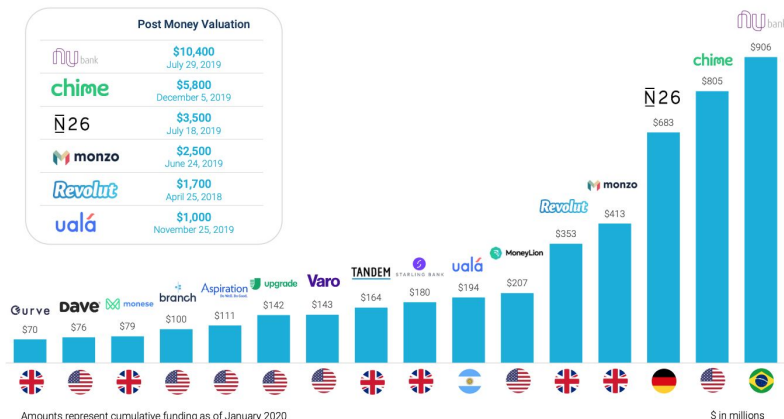
August 24, 2020, 12:00PM EDT · 2 min read

- STOs have moved slowly given regulatory hurdles
- Market venues (SDX, Archax, various ATS) lacking demand side liquidity
- DeFi mechanisms are likely to be adapted to non-native assets, and a number of protocols (Aave, Maker) have gotten financial licenses

4) Fintech and high-tech audience footprint

Western Fintech

12 Challenger Banks have raised \$100 million or more in equity financing, and 6 of them are valued at \$1 billion or more ⁽¹⁾



Source: FT Partners' Proprietary Transaction Database, Pitchbook
(1) Note: Only includes consumer-focused challenger banks

FT PARTNERS RESEARCH | 30

Eastern Fintech

Our Size and Scale



1,000+ million

Alipay app
Annual Active Users⁽¹⁾



80+ million

Alipay app
Monthly Active Merchants⁽²⁾



711 million

Alipay app
Monthly Active Users⁽²⁾



729 million

Alipay app
Digital Finance Annual Active Users⁽²⁾



2,000+

Partner Financial Institutions⁽⁴⁾



200+

Countries and Regions with Online
Payment Services⁽⁵⁾



RMB118 trillion

Digital Payments
Total Payment Volume in Mainland
China⁽⁶⁾



RMB1.7 / 0.4 trillion

CreditTech
Consumer / SMB Credit Balance⁽⁷⁾



RMB4.1 trillion

InvestmentTech
AUM⁽⁸⁾



RMB52 billion

InsureTech
Insurance Premiums and Contributions⁽⁹⁾

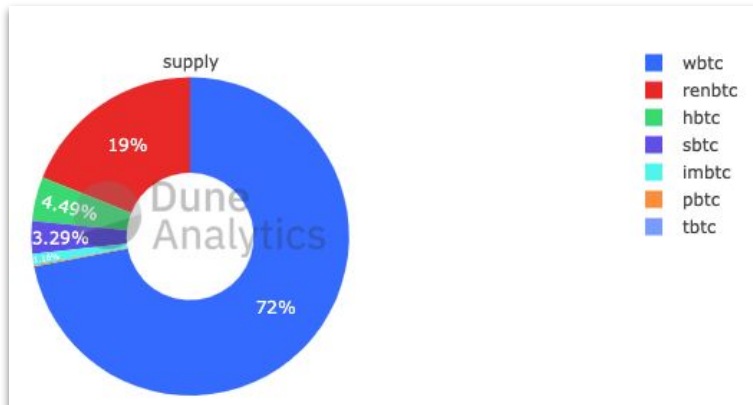
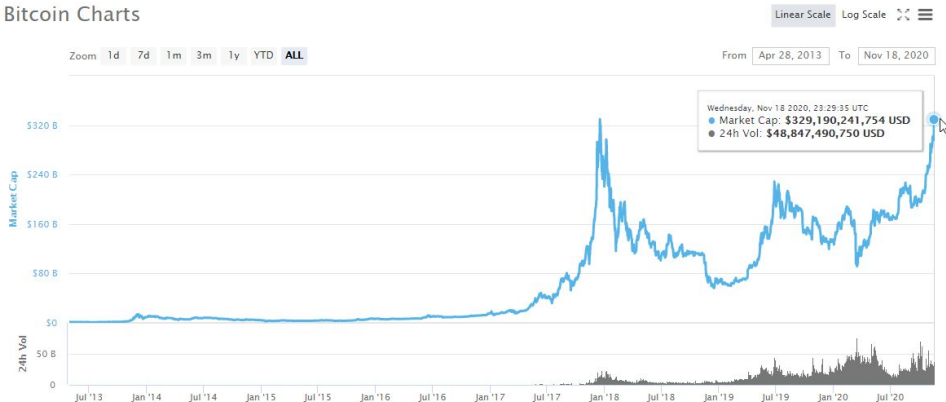
- Fintech companies, looking to generate returns, deploy deeper crypto assets to their large audiences
- High tech firms like Facebook/Whatsapp, Ant Financial, Google end up engaging with digital assets in non-Western markets at scale

5) Continued Bitcoin integration

\$300MM+ of MarketCap

... in Tokenized Form

Bitcoin Charts



- Bitcoin is the pathway into the crypto ecosystem, and continued price growth will push 10-20% of its market cap into Ethereum's ecosystem as both exchange and staked assets per diversification
- Akin to going from Web1 static sites (BTC) to interactive Web2 software sites (ETH)
- Cross chain integrations may happen on layer 2

Extra Credit

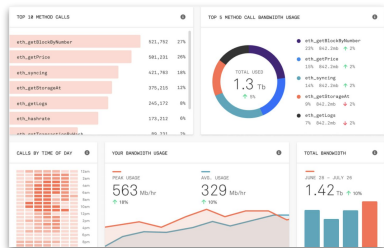
- **Governance in DAOs - New vectors of financial and cyber attack**
 - Recapitalization of existing holders
 - Liquidity rewards to change venue
 - Flash loans to break code
 - Coordination by owners to collude
- **Interoperability - Winner take all dynamics hard to change**
 - Protocols will try to capture cross-chain assets
 - Developers will default to most popular dev tools
 - Cross chain integration is too early, but new geographies (e.g., BSN) up for competition
- **Enterprise to mainnet - cost of consortia and network maintenance**
 - Public chains are secured by mining industry, fixed cost already covered
 - Increasing interest in mainnet, as privacy and scalability are improved

DeFi Products

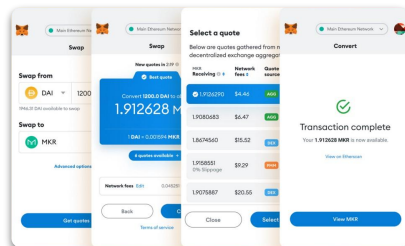
ConsenSys' DeFi Products



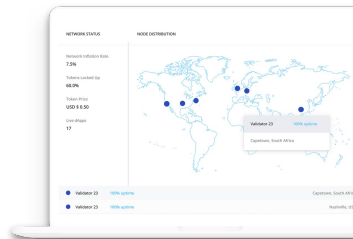
INFURA



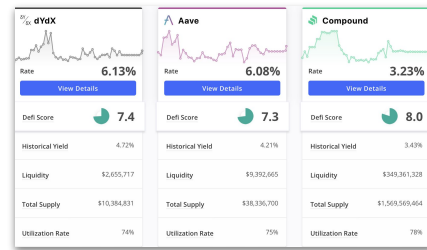
METAMASK



CODEFI
Activate



CODEFI
Data



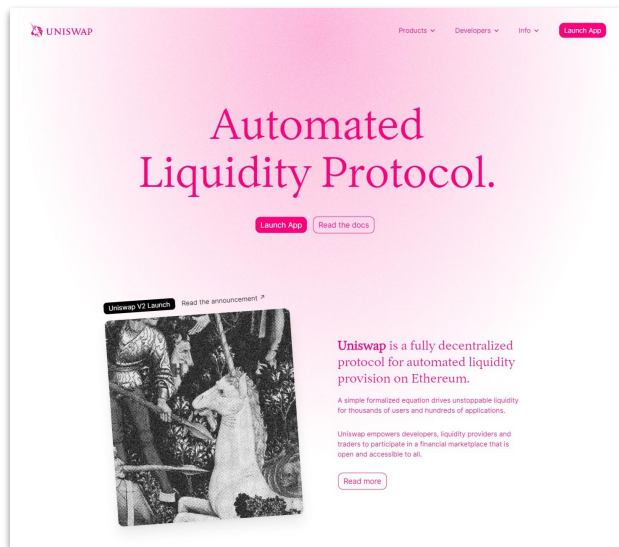
Instant, scalable API access to the Ethereum and IPFS networks

Infura provides world-class infrastructure for developers to ensure their decentralized application scales to meet user demand.

Features

- Instant connection to Ethereum and IPFS
- Request response times up to 20x faster than other services and self-hosted solutions
- API suite always up to date with the latest network updates, maintaining service availability during all network changes (99.9% uptime)

Featured Customer:



Since Uniswap's launch to mainnet in 2018, the team has used the Infura API suite to meet the data demands of the exchange's interface. Uniswap uses Infura as **the go-to provider for connecting to MetaMask** and also for querying information when a user has not connected a wallet to the Uniswap exchange. Infura's easy integration and ability to handle Uniswap's high volume of requests have made it the ideal infrastructure solution for Uniswap's increasingly popular DeFi protocol.

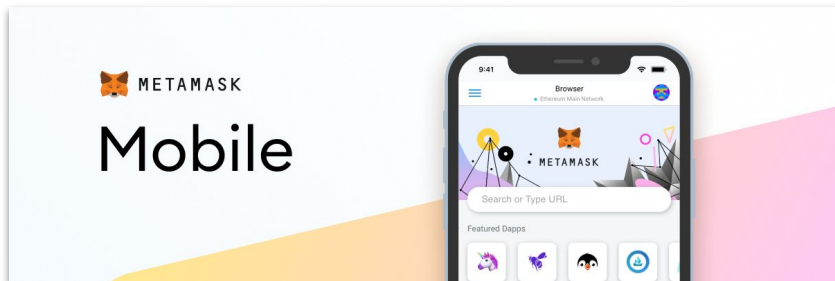
MetaMask: Providing Easy Access to DeFi



Compare Prices and Swap Directly From MetaMask

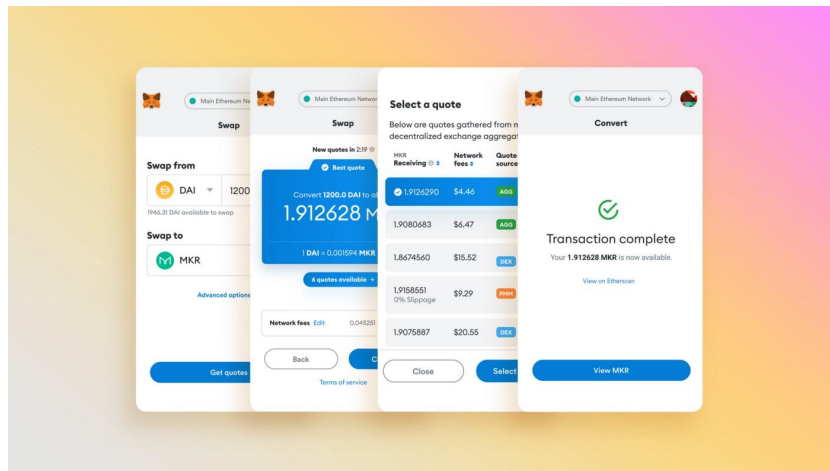
MetaMask Mobile

MetaMask provides an essential utility for blockchain newcomers, token traders, crypto gamers, and developers. Over a million downloads and counting!



MetaMask Swaps

MetaMask users can now swap tokens directly from their wallet. Swaps combines multiple decentralized exchange aggregators, professional market makers, and individual DEXs.





Tools for Launching and Participating in Decentralized Networks and Protocols

Benefits

- **For Token Holders:** Participate in token launches and earn attractive rewards
- **For Decentralized Networks:** Build high-performing networks with active and well-educated communities
- **For Staking-as-a-Service Providers:** Access a global pool of token holders

Features

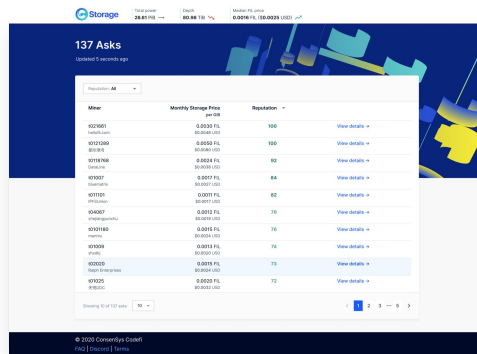
- **Unified Network Dashboard**
- **Efficient Token Staking**
- **Facilitated Launch and Distribution**

Featured Customer:



Introducing Filecoin Storage

View the storage marketplace for Filecoin (FIL) where miners post services and clients can find the best price to store the data and content that matches their needs.



Codefi Activate supported Filecoin's Mainnet launch in October 2020 with two new offerings: Filecoin Storage and Filecoin Defi Bridge.

The Activate dashboard provides users with a macro-economic overview of the particular network. This dashboard distinguishes and presents live network information so a user can understand what next action to take with their tokens.

Codefi Data: Compare Lending Platforms with DeFiScore



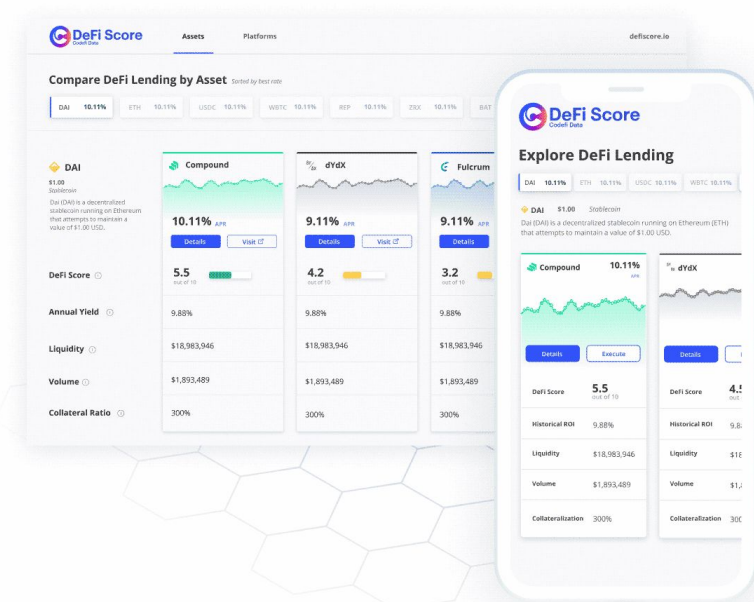
Data and Risk Analytics for Digital Assets and DeFi Protocols

Benefits

- Easily quantify yield opportunities aggregated across DeFi platforms.
- Inspect public audits, key admin details, oracle dependency, and on-chain activity.
- Promote protocol transparency, user adoption, increased participation, and liquidity across DeFi with trusted real-time, actionable data.

Features

- Compare Interest Rates
- Understand the Risks
- Dig into the Data



Upcoming DeFi Webinar - 12/09

WEBINAR

DeFi by ConsenSys

An AMA with the products leads of ConsenSys' DeFi solutions:
MetaMask, Codefi, and AirSwap

09 December 2020, 10:00-11:00am EST

 CONSENSYS

[Register Here](#)



Q&A

Questions From the Audience



Maresh s.

DeFi will threaten the long-term viability of a lot of these (currently) very large, wealthy companies. How do you see these companies rising up to this challenge (or not?)



Large companies will provide capital, which others may implement in the DeFi markets. Frontier markets are nothing new -- the get de-risked by pioneers and then create new economies. Think about Amazon and eCommerce as a comparison to Walmart.



Ben

Leveraged stablecoin trading could be an alternative to Forex markets, when do you see that transition from traditional markets happening? Does this require centralized UI/UX with decentralized backends to gain traction?



UI/UX can be decentralized using IPFS / Filecoin. Once we have multi-currency stablecoins of sufficient volumes, it is possible for Forex to use the DeFi infrastructure. However, Forex infrastructure is efficient today, so we would need additional value propositions like the other DeFi functions of multi-asset class interoperability.

Questions From the Audience



Ben

Liquidity provision will be key for further scaling up - do you see a lot of centralized companies (e.g. traditional market makers) transforming their model to say becoming a LP for UNI?



We definitely expect traditional money managers to come around to becoming liquidity providers in the future. They need a regulatory wrapper to do so. That may be an allocation to a crypto fund that can participate as an LP.



Pablo

What is expected in terms of new regulations for 2021? Specially in the US



The state of permissionless wallets and the crypto-custody powers of the banks is of particular interest. In Europe, CSDs and their DLT sandboxes.

Questions From the Audience



Emma C.

Can you elaborate on MetaMask Swaps? What does combining multiple exchange, market maker mean?



Swaps are profiled here: <https://medium.com/metamask/introducing-metamask-swaps-84318c643785>

Thank You