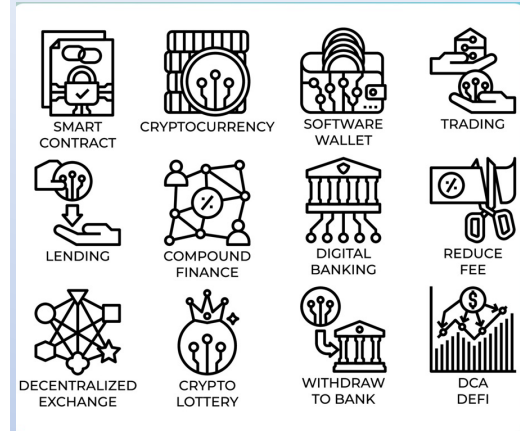# Headlines: Crypto Finance

## June 2023

# Recording Disclaimer

- To accommodate Quantic learners, this event is being <u>recorded (excluding breakout room discussions)</u>.

- By participating in this event, you consent to its video and audio recordings, transcription, and its/their release to be used for internal learning purposes.

- By entering the event premises, you agree not to record or share the recordings/transcriptions with anyone outside Quantic or for non-learning purposes.

- The event video recording and audio transcript will be made available.

- You have been fully informed of your consent or liability, and release before participating in the Quantic event.

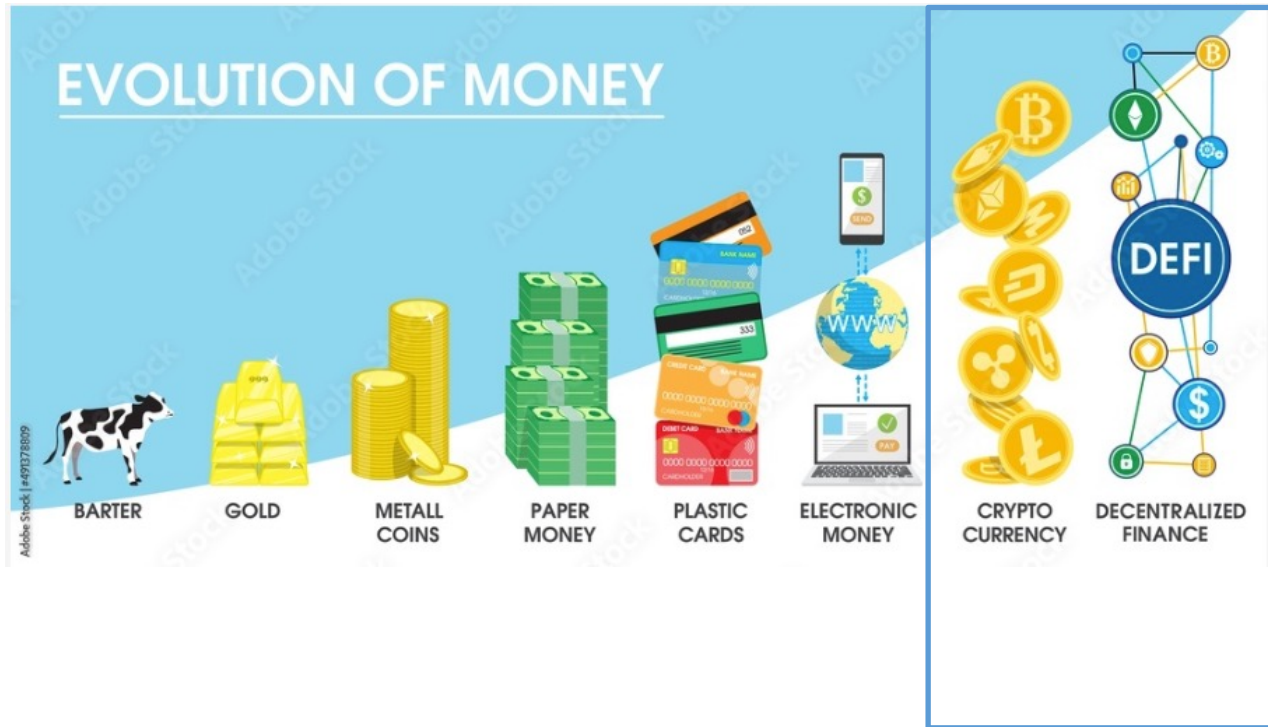- Introduction (30 mins)

- Facilitated Q/A with industry professional & hobbyist (45 mins)
  - Paul Meeusen (VP of Finance, DFINITY Foundation)
  - Paul Lacourbe (Quantic SME and crypto Hobbyist Investor)

- Audience Q/A (15 mins)

# Introduction

## EVOLUTION OF MONEY

BARTER — GOLD — METALL COINS — PAPER MONEY — PLASTIC CARDS — ELECTRONIC MONEY — CRYPTO CURRENCY — DECENTRALIZED FINANCE

DEFI



## Evolution Of Cryptocurrency

**2009** — Bitcoin, the first cryptocurrency

**2011** — Litecoin, a cryptocurrency based on the Bitcoin protocol

**2013** — Ripple payment protocol and the XRP cryptocurrency. Ethereum is proposed by Vitalik Buterin

**2014** — The first cryptocurrency-based crowdfunding project. Overstock.com

**2015** — The first blockchain-based voting system is implemented in Estonia.

**2016** — Enterprise Ethereum Alliance is founded.

**2017** — The ICO boom begins, with thousands of new tokens being created and sold to investors.

**2018** — Regulatory scrutiny of cryptocurrencies increases worldwide.

**2019** — Facebook announces plans to launch its own cryptocurrency

**2020** — PayPal announces it will allow its users to buy, sell, and hold cryptocurrencies.

**2021** — El Salvador becomes the first country to adopt Bitcoin as legal tender.



## The Evolution of the Crypto Economy

Total number of cryptocurrencies and overall market capitalization*

■ Number of crypto coins     — Market cap (billion $)
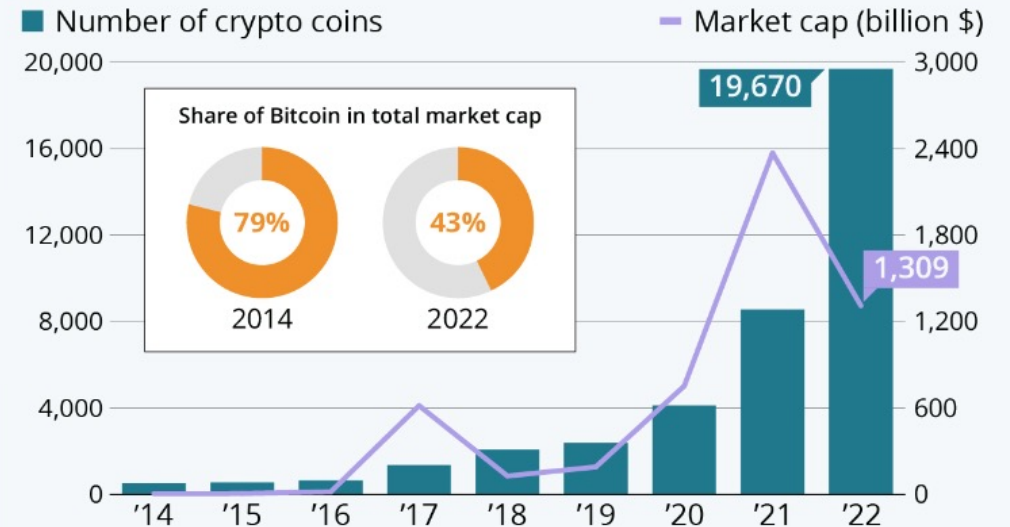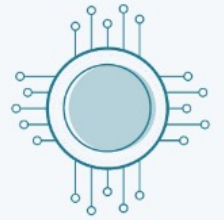
**Share of Bitcoin in total market cap**
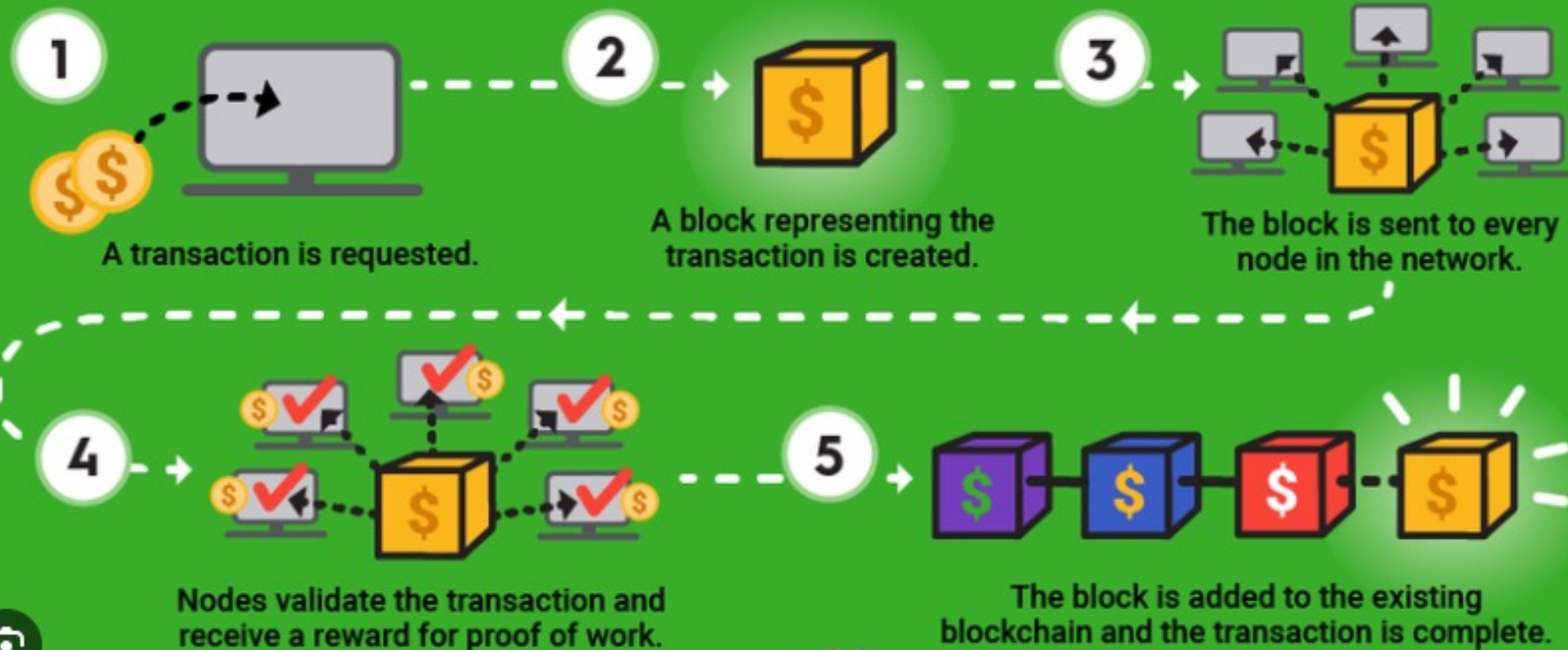
79% — 2014     43% — 2022

19,670

1,309
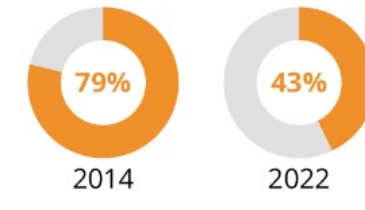
*At the end of the respective years from 2014 to 2021, May 31 for 2022.
Sources: Statista Digital Economy Compass 2022, CoinMarketCap

statista

# Crypto Finance: Blockchain



**HOW BLOCKCHAIN WORKS**

1. A transaction is requested.

2. A block representing the transaction is created.

3. The block is sent to every node in the network.

4. Nodes validate the transaction and receive a reward for proof of work.

5. The block is added to the existing blockchain and the transaction is complete.

The Motley Fool

- Distributed database or ledger that is shared among the nodes of a computer network
- Guarantees the fidelity and security of record of data, generates trust without the need of a third party

# Crypto Finance: Bitcoin



Bitcoin US Dollar
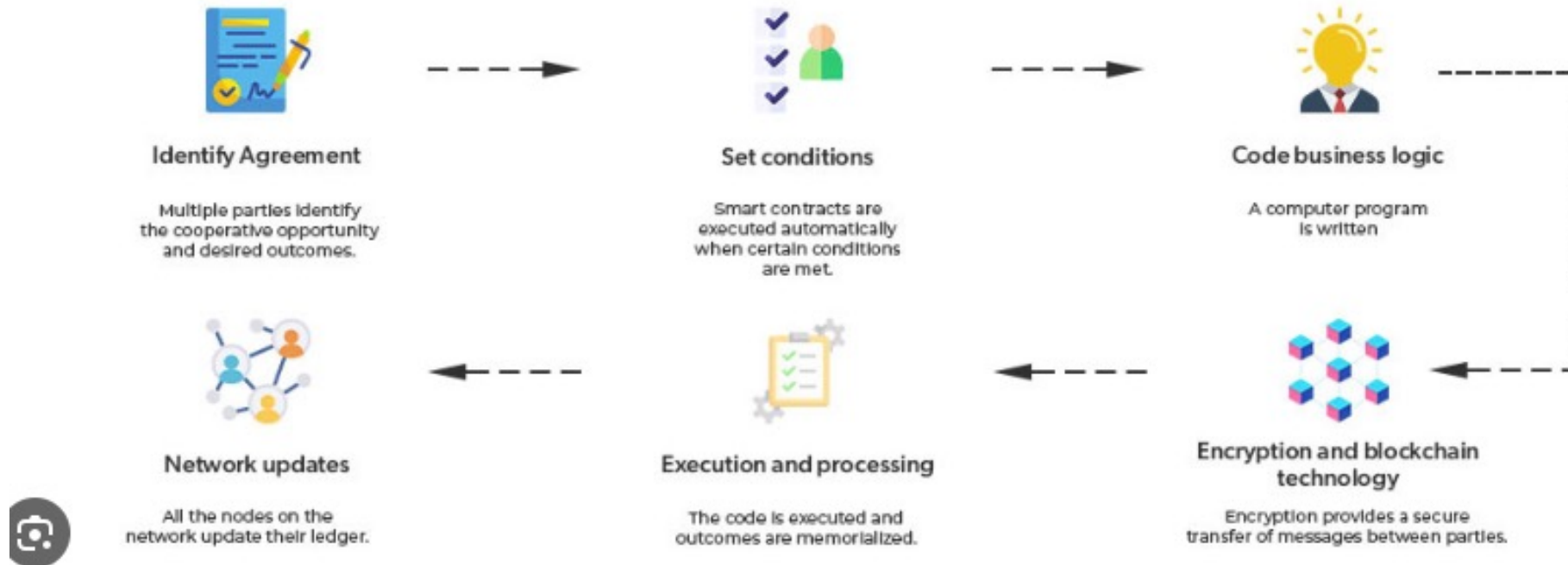
source: tradingeconomics.com
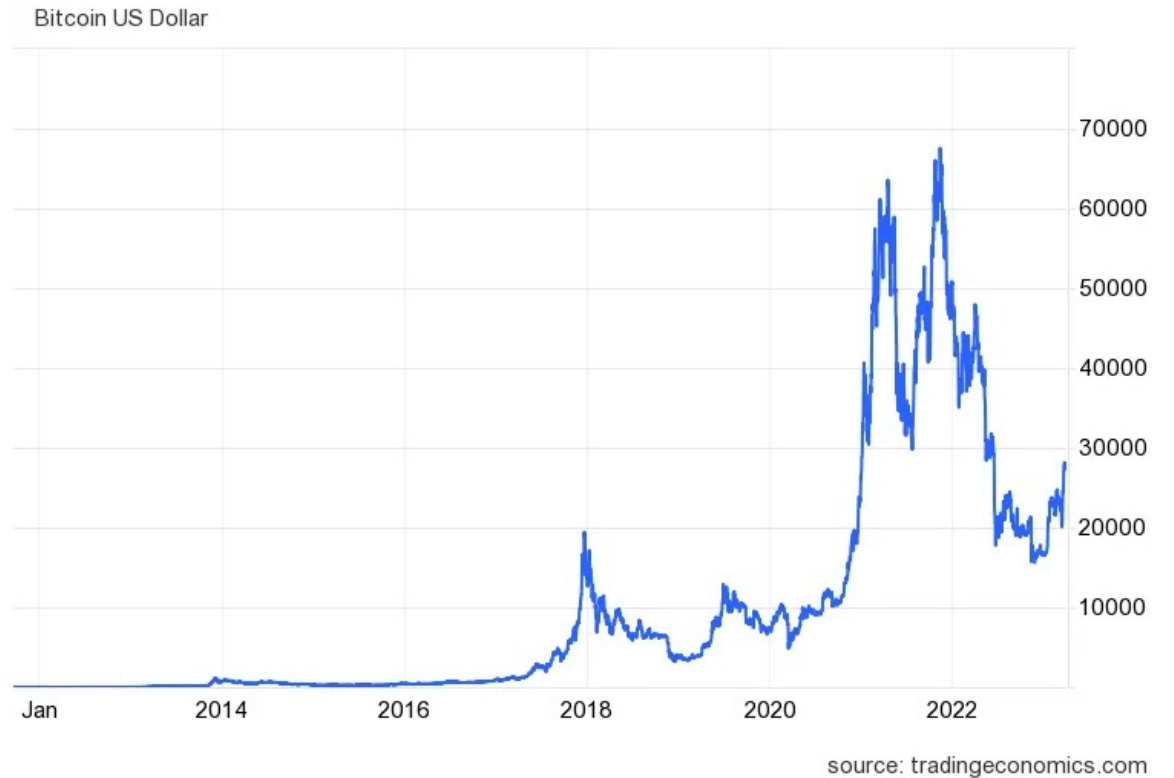
- Digital (crypto) currency whose transactions are processed, verified, and stored on a blockchain
- Uses "proof of work" consensus mechanism that expends a lot of computing resources

# Crypto Finance: Ethereum



Ethereum (ETH) price per day from Aug 2015 - Jun 21, 2023 (in U.S. dollars)
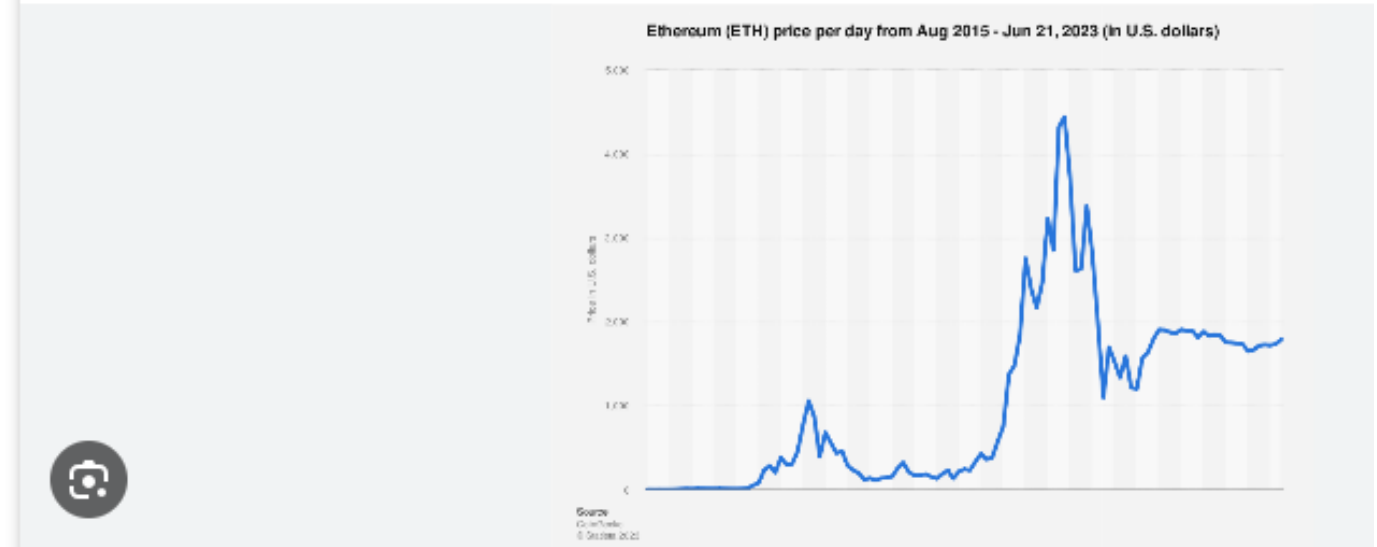
- Decentralized global software platform powered by blockchain technology
- Infrastructure supports <u>smart contracts</u> that are essential for DeFi applications
- Uses "proof of stake" consensus mechanism that reduces resource usage (environmentally friendlier)

## How does a
## Smart Contract Work?

**Identify Agreement**

Multiple parties identify the cooperative opportunity and desired outcomes.

**Set conditions**

Smart contracts are executed automatically when certain conditions are met.

**Code business logic**

A computer program is written

**Network updates**

All the nodes on the network update their ledger.

**Execution and processing**

The code is executed and outcomes are memorialized.

**Encryption and blockchain technology**

Encryption provides a secure transfer of messages between parties.

- Self-executing program that automates the actions required in an agreement or contract
- Once completed, the transactions are trackable and irreversible
- It's a set of "if-then-else" statements that executes actions when conditions are met!
- Wide ranging use cases are currently evolving!

# Crypto Finance: Stable Coins



- Cryptocurrencies whose values are pegged to that of another currency (say $ or BTC), commodity, or financial instrument
- More useful than more-volatile cryptocurrencies as a medium of exchange, so act as a bridge between CeFi and DeFi
- Maintain price stability through enforcing collateral requirements

# Traditional Finance (CeFi) vs. DeFi
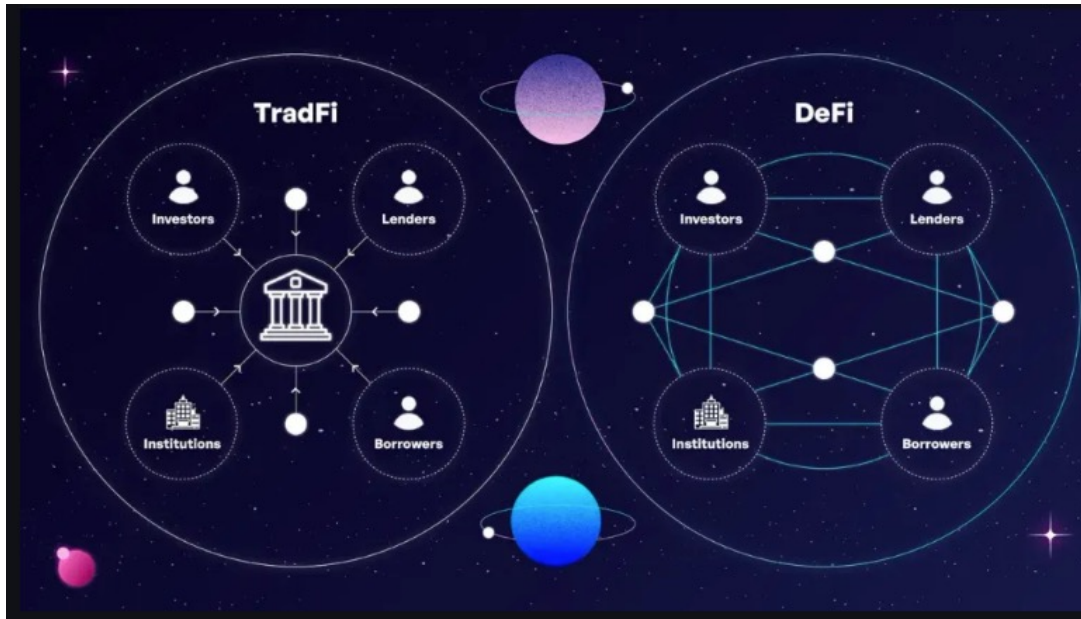


### Traditional

- Users must share personal data, which is vulnerable to security breaches.

- The unbanked or underbanked can't access traditional financial services.

- Payments can be intercepted and markets can be shut down.

- The clearing and settling of transactions can take days.

- The hours of operation are limited.

**vs.**

### DeFi

- No need to disclose personal details, just connect a digital wallet.

- Users custody their own funds, easier to avoid loss of funds.

- Trustless — no need to worry if a protocol will do what it says it will do.

- Speedy — transactions are completed in near real-time.

- The DeFi markets operate around the clock, 24/7/365.

# Crypto Finance: Top Trends

**Blockchains have more active users!**



Active addresses are growing steadily as web3 adoption increases

**Active Addresses**

Number of unique active (sending) addresses across all tracked blockchains during the month.

Source: Nansen Query. Tracked blockchains include Ethereum, Polygon, Solana, Avalanche, Fantom, Celo, Optimism, and Arbitrum.

**Number of active developers holding steady!**



**Active Developers**

Number of unique GitHub users who have committed to or forked a public crypto repository during the month.
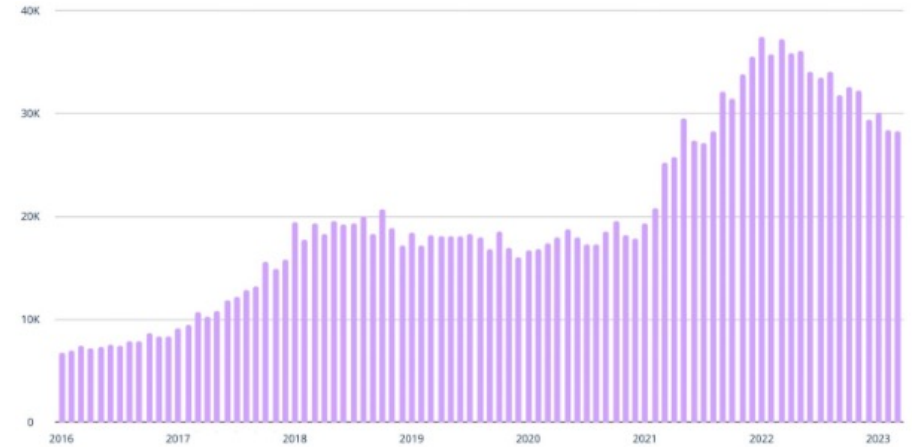
Source: Github and Electric Capital (https://github.com/electric-capital/crypto-ecosystems).

**Decentralized exchanges trading over $100B!**



**DEX Volume**

Total on-chain volume on decentralized exchanges (denominated in USD) during the month.
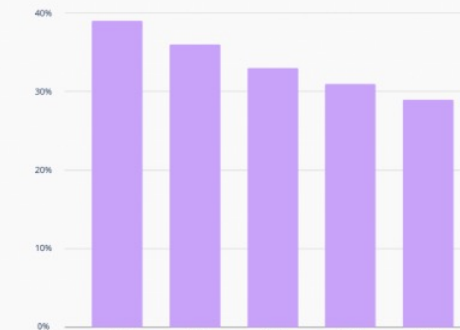
Source: Defi Llama.

**Lack of regulatory clarity slowing US crypto growth**



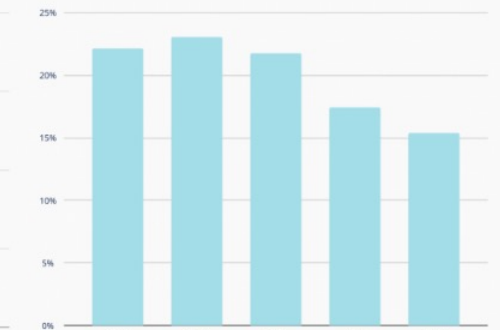a16z crypto          State of Crypto          2023          Trends to Watch: Regulation and Policy          27

The U.S. is losing its lead in web3

% of crypto developers in the United States

Top crypto websites* - % of traffic from the United States

Source: Electric Capital, SimilarWeb | *Includes Coinbase.com, Binance.com, Coinmarketcap.com, Coingecko.com, Etherscan.io.

# Q/A with Paul Meeusen

# About Paul M.

- VP of Finance at Dfinity Foundation (www.dfinity.org), is an experienced entrepreneur, finance and risk manager.
- Co-founded the insurance blockchain firm B3i and was elected by Acord among the Top Ten InsurTech Leaders in 2018.
- Spent 25 years in finance, risk, operations and audit management roles at Swiss Re and PwC, across Europe, US and Asia.
- Swiss and Belgian citizen and holds a MS in economics from the University of Leuven (Belgium) and is a Certified Internal Auditor.

# Q/A with Paul Lacourbe

# About Paul L.

- Subject matter expert in Supply Chain and Operations Management at Quantic. Prior teaching roles at ESSEC (France) and CEU (Hungary).
- Ph.D. from INSEAD in France.
- Published in Production and Operations Management, European Journal of Operational Research, International Journal of Innovation Management, Current Issues of Business and Law, Revue Française de Gestion.
- Invited to give a talk twice at TEDx Danubia.

Q/A with Audience

- Hope you found this session to be interesting and informative!
- I would love your feedback – will help me refine content for future sessions

[Link to Feedback Survey](Link to Feedback Survey)

Thank You!

# DeFi: Key Characteristics

**Replicating Financial Services in a decentralised, programmable manner**

## BLOCKCHAIN-BASED

### Public, permissionless chains

**Public:** In "public" Blockchains anyone can send a transaction

DeFi

**Permissioned:** In "Permissioned" Blockchains, the people transacting are known

**Permissionless:** "Permissionless" Blockchains allow people to act anonymously (you do not know their identity)

ripple

ethereum

JPMorgan

HYPERLEDGER FABRIC

**Private:** In "private" Blockchains, only people who are approved to participate can

## PROTOCOLS RELYING ON SMART CONTRACTS

### ETHEREUM (ERC-20)

Programmable contracts written as code on the ledger committed to the blockchain Self-executing based on triggers

## COMMUNITY-DRIVEN

## NON-CUSTODIAL

CUSTODIAL          NON - CUSTODIAL

**CUSTODIAL:** Third parties (exchanges, brokers) hold and have control over users' crypto

**NON- CUSTODIAL:** Users have 100% control over their crypto, owners hold their private keys & data

## COMPOSABLE