Singapore Fintech Festival

Nov 2022 Web3 Insights





Key drivers for web3 growth

Growing customer awareness and useof digital assets

Significant VC and institutional investment in Web3 companies

Increasing focus on Web3 from regulators

Traditional and Web3native competitors developing new offerings

Top talent migratingto Web3 companies

1.2_{TN} Market cap

VC investment

fund

last year

A16z 2022 Q2 investment

Countries exploring CDBC **320** MM

Crime insurance policy held by Coinbase

Total limits extended by Nexus Mutual (Web3 insurer)

395%

Increase in crypto jobs on LinkedIn last year

Monthly active developers last year

Crypto asset owners globally

Source: Oliver Wyman



Traditional vs. web3 economy











Monetary assets

Non-monetary assets

Information technology

Financial services providers

Traditional economy examples



Individuals or corporations

Fiat (e.g.,USD, Euro) Houses Cars

Warehouses **Business operations** **Phone** Internet **Email**

Servers

Banks

Insurers Stock markets

Web3 economy examples

Digital currency/ NFT holders in selfcustody, Web3 organizations (including DAOs), miners/validators

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Digital currency (e.g., crypto currencies stablecoins, CBDCs) Non-fungible tokens (NFTs) tied to digital or physical assets, Web3enabled operations (e.g., DAO infrastructure)

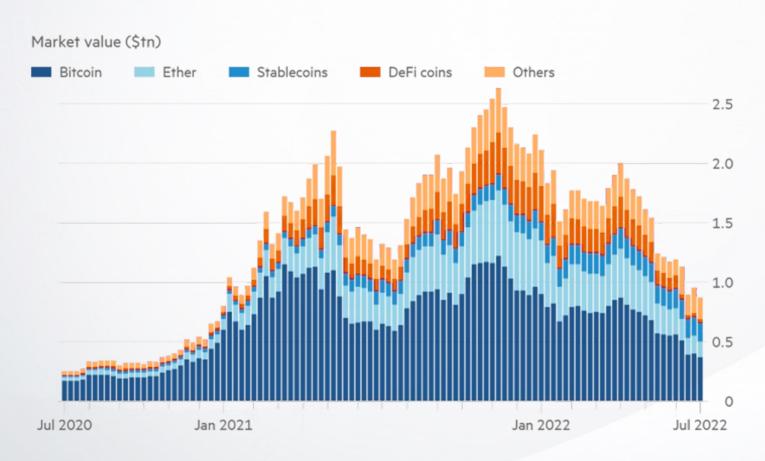
Blockchain, smart contracts, oracles, decentralized applications

Centralized exchanges, decentralized finance (DeFi) platforms, Web3enabled insurers

Source: Oliver Wyman



The rise and fall of the great cryptocurrency bubble



Fundamentally, crypto and stable coins lead to a fragmented and fragile monetary system. Importantly, these flaws derive from the underlying economics of incentives, not from technological constraints. And, no less significantly, these flaws would persist even if regulation and oversight were to address the financial instability problems and risk of loss implicit in crypto.

Bank of International Settlements

Source: Financial Times



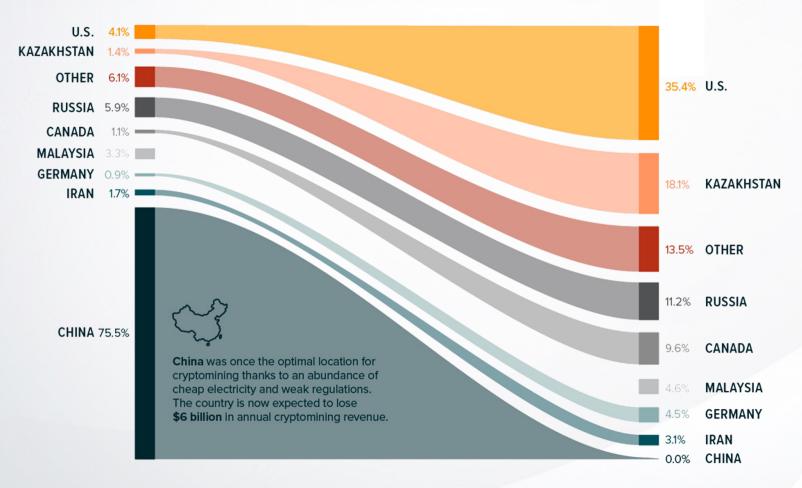
Evolution of cryptocurrencies

2009 2011 2012 2013 Satoshi Nakamoto mines Litecoin Ripple The price of a single the first Bitcoin on a launches is founded Bitcoin reaches \$1,000 decentralized network 2018 2017 2015 EOS offers a blockchain-based Over 1,000 Ethereum launches, infrastructure for decentralized introducing smart cryptocurrencies apps (DApps) listed contracts into the crypto ecosystem **Future** Decentralized finance (DeFi) entering a new digital age

Source: Visual Capitalist (https://www.visualcapitalist.com/cryptocurrency-redefining-future-of-finance/)



Bitcoin mining moves to America



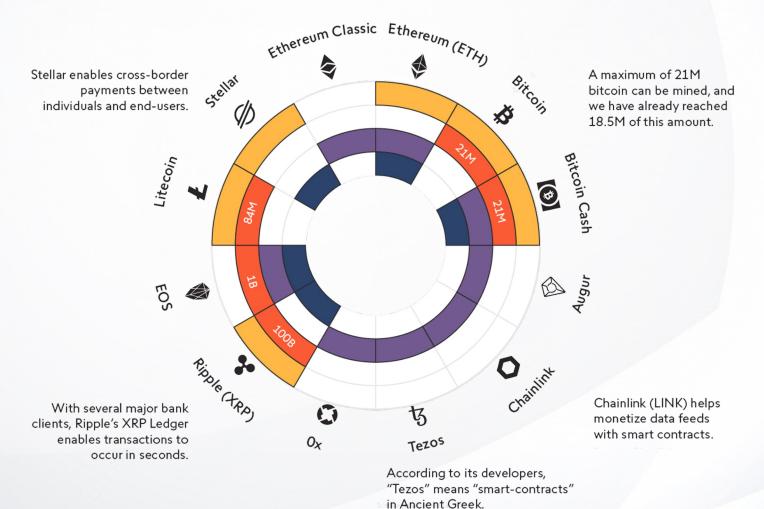
Bitcoin's global hashrate was historically dominated by China until September 2021, when Chinese regulators issued a blanket ban on all crypto transactions and mining.

The biggest benefactor from this ban has been the United States.

Source: Visual Capitalist(https://www.visualcapitalist.com/sp/after-chinas-crypto-ban-who-leads-in-bitcoin-mining/



Crypto-currency use cases



Payments

Value Storage (total supply)

Utility

Transactions

Source: Visual Capitalist (https://www.visualcapitalist.com/cryptocurrency-redefining-future-of-finance/)



Web 3 Technologies & Applications

Web3
applications
and use cases

Identity

Art

Web3
Retail

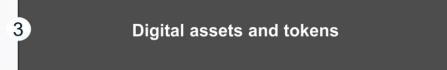
Gaming DAO

Metaverse And more ...

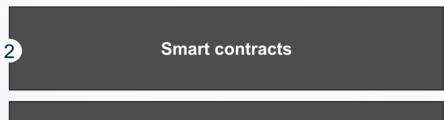
Applications and use cases built on top of Web3 technologies, including notable use cases in decentralized finance (DeFi), entertainment (art and gaming), and retail, among others

Connection of these virtual experiences is sometimes referred to as the metaverse

Web3 technologies



Digital assets: Digitally native intangible items such as native cryptocurrencies, governance tokens, stablecoins, NFTs,² and tokenized assets



Smart contracts: Software programs established in immutable code on a blockchain, which are automatically executed when specified conditions (such as terms agreed on by a buyer and seller) are met

1 Blockchain

Blockchain: Digitally distributed, decentralized data ledger that exists across a network of computers. These computers work together to facilitate the recording and confirmation of transactions

Source: McKinsey, Technology Trends Outlook, (August 2022)



¹ Decentralized finance.

² Nonfungible tokens.

2021 saw an increase of developer talent going into Web3

Developers contributing to Web3 projects 2015-21 (thousands)



Naturally, people will want to work on what they view as the most exciting and innovative developments in the technology space, and currently, that is crypto and Web3,

Many are seeing it as the future of the tech industry, in the same way that Facebook and Amazon were attractive in the past.

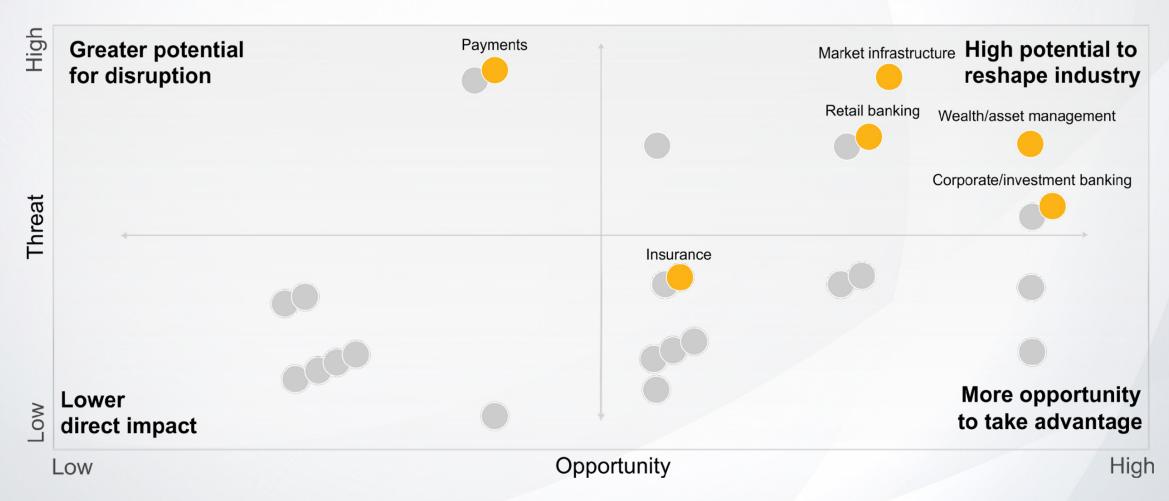
Alex Bouaziz
(CEO and co-founder of Deel)

Source: McKinsey, Technology Trends Outlook, (August 2022)





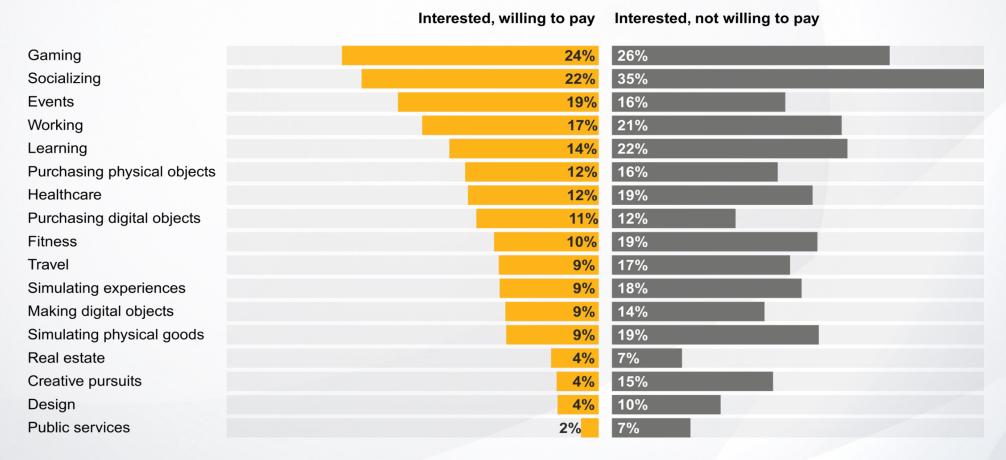
Web 3 potential to disrupt financial services



Source: Bain, How much is Web 3 disrupting our industry?, (August 30, 2022)



Activities metazens are interested in doing in the metaverse and may pay for



Source: Oliver Wyman Forum Global Consumer Sentiment Survey 2021





Governance models in the metaverse

Governance models

Centralized and corporately controlled

More commonly seen in a Web2
metaverse, this type of governance
involves the developer, usually a
corporation, controlling all aspects of
the governance. This model may be
more efficient than a DAO, but it
is less democratic.

DAO-governed with assigned voting rights

In a DAO with assigned voting rights, the right to vote in the DAO is based on a factor such as the amount of land a user holds.

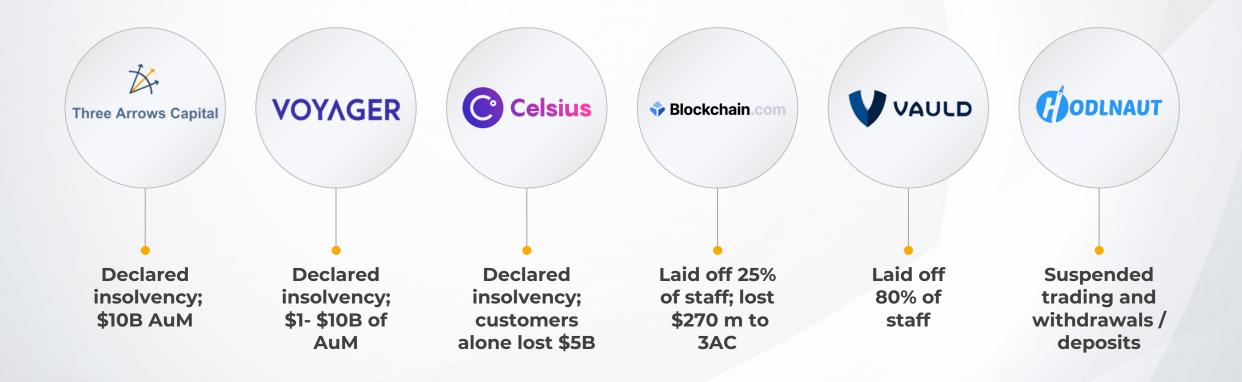
DAO-governed with governance tokens

Covernance tokens give the holder the ability to vote as a member of a DAO without needing to hold any other tokens or property.

Source: Oliver Wyman Forum



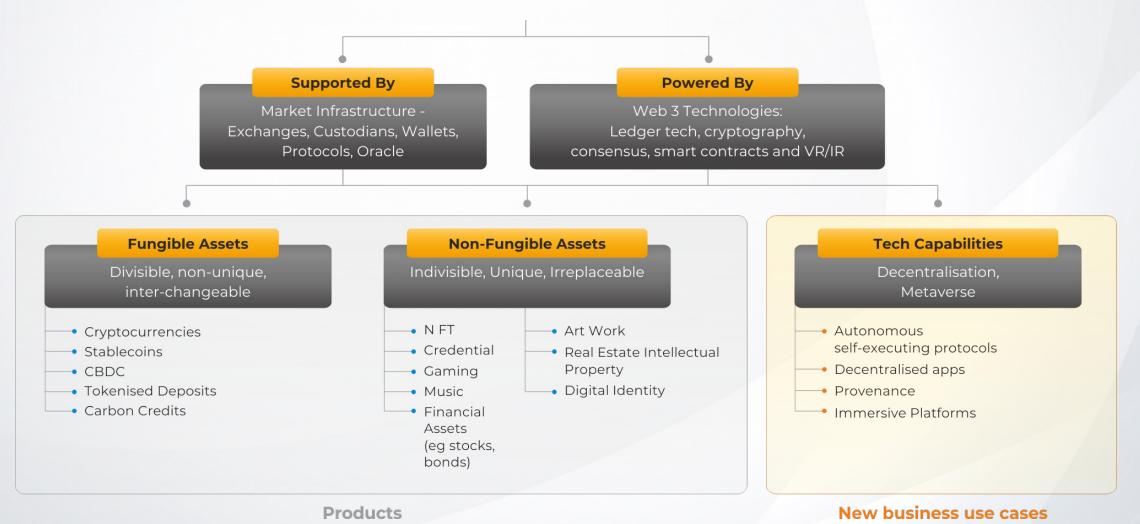
2022 has seen many crypto lenders buckle







Digital assets ecosystem







"Not all innovation is unqualifiedly good; not everything that we can build should be built."



technology that is not built for purpose and will remain forever unsuitable as a foundation for large-scale economic activity It has severe limitations and design flaws that preclude almost all applications that deal with public customer data and regulated financial transactions solution in search of a problem vehicle for unsound and highly volatile speculative investment schemes

Dear U.S. Congressional Leadership, Committee Chairs and Ranking Members,

We are 1500 computer scientists, software engineers, and technologists who have spent decades working in these fields producing innovative and effective products for a variety of applications in the fields of database technology, open-source software, cryptography, and financial technology applications.

Today, we write to you urging you to take a critical, skeptical approach toward industry claims that crypto-assets (sometimes called cryptocurrencies, crypto tokens, or web3) are an innovative technology that is unreservedly good. We urge you to resist pressure from digital asset industry financiers, lobbyists, and boosters to create a regulatory safe haven for these risky, flawed, and unproven digital financial instruments and to instead take an approach that protects the public interest and ensures technology is deployed in genuine service to the needs of ordinary citizens.

We strongly disagree with the narrative—peddled by those with a financial stake in the crypto-asset industry—that these technologies represent a positive financial innovation and are in any way suited to solving the financial problems facing ordinary Americans.

Not all innovation is unqualifiedly good; not everything that we can build should be built. The history of technology is full of dead ends, false starts, and wrong turns. Append-only digital ledgers are not a new innovation. They have been known and used since 1980 for rather limited functions.

As software engineers and technologists with deep expertise in our fields, we dispute the claims made in recent years about the novelty and potential of blockchain technology. Blockchain technology cannot, and will not, have transaction reversal or data privacy mechanisms because they are antithetical to its base design. Financial technologies that serve the public must always have mechanisms for fraud mitigation and allow a human-in-the-loop to reverse transactions; blockchain permits neither.

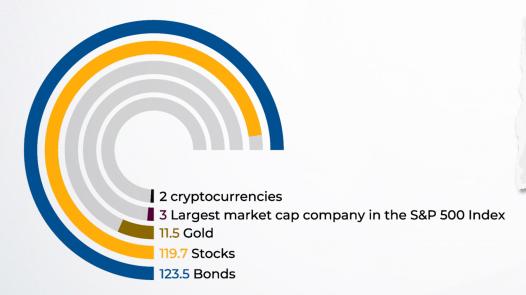
By its very design, blockchain technology is poorly suited for just about every purpose currently touted as a present or potential source of public benefit. From its inception, this technology has been a solution in search of a problem and has now latched onto concepts such as financial inclusion and data transparency to justify its existence, despite far better solutions to these issues already in use. Despite more than thirteen years of development, it has severe limitations and design flaws that preclude almost all applications that deal with public customer data and regulated financial transactions and are not an improvement on existing non-blockchain solutions.

Source: Letter in Support of Responsible Fintech Policy (June 1, 2022)

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Are digital assets yet to mature to be a foundation for large-scale economic activity?

Limited market size



Market size of select assets in USD trillions

Crypto scams proliferate

Crypto platforms linked to surge in suspicious activity reports

Filings from San Francisco-based 'money services businesses' almost triple to 207,000

The 3rd cryptocurrency exchange in South Korea, Coinbit, was seized by police, as reports found that 99% of its transaction volume was faked Crypto scams have cost people more than \$1 billion since 2021, says FTC Losses last year were nearly 60x vs. 2018, with a median individual loss of \$2,600.

> In the Netherlands and Britain, 6 people were arrested for creating a fake online crypto- exchange, which duped 4k victims in 12 countries out of c. \$27m

In 2017, South Korean authorities exposed BitKRX (named to look like the crypto arm of Korea Exchange - KRX)

Source: Wells Fargo Investment Institute; Special Report Understanding Cryptocurrency, Financial Times, Gemini (https://www.gemini.com/cryptopedia/cryptocurrency-exchange-fake-website#section-how-to-identify-fake-cryptocurrency-exchanges)



Are FI's simply limited to applications of digital asset technology?







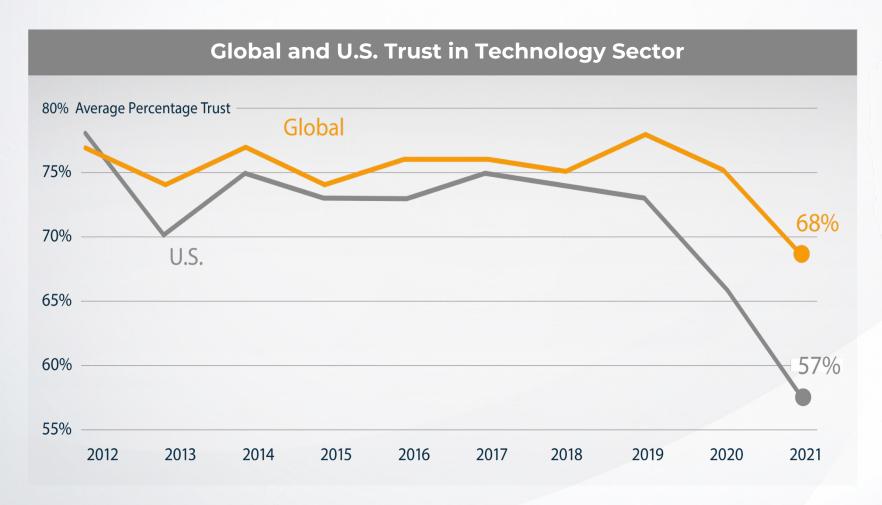
Foundational shift in internet architecture







The impending blockchain revolution



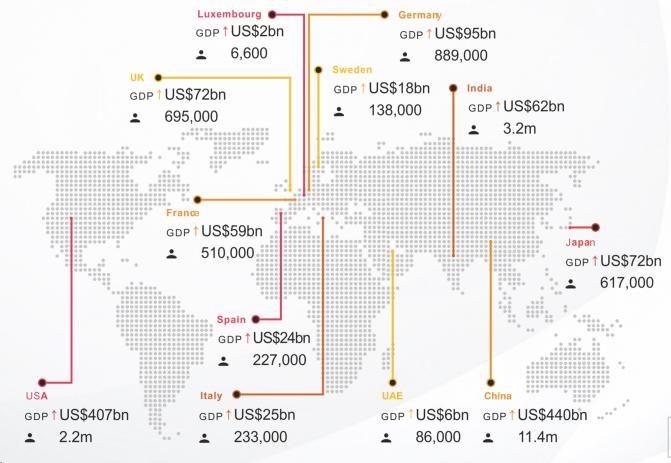
Public blockchains are disrupting centralized "Big Tech", as people are looking for technologies that don't compromise their online privacy and cyber-security

Consumers are less trusting with their financial data, and blockchain is providing a trust-minimized option

Source: Edelman Trust Barometer



Blockchain is set to deliver a big boost to GDP and jobs by 2030



Rest of the world

GDP↑US\$473bn

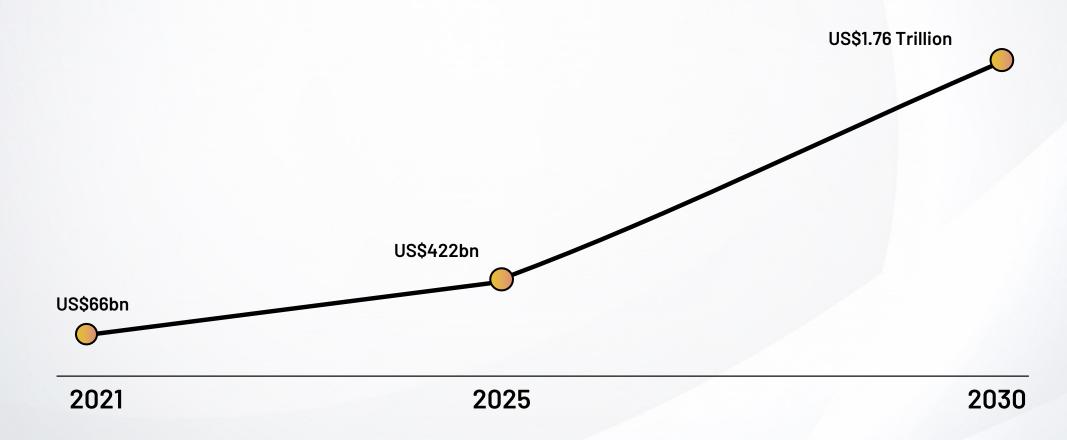
21m

Source: PWC, Time for trust (October 2020)





Blockchain GDP boost: \$1.76 trillion by 2030

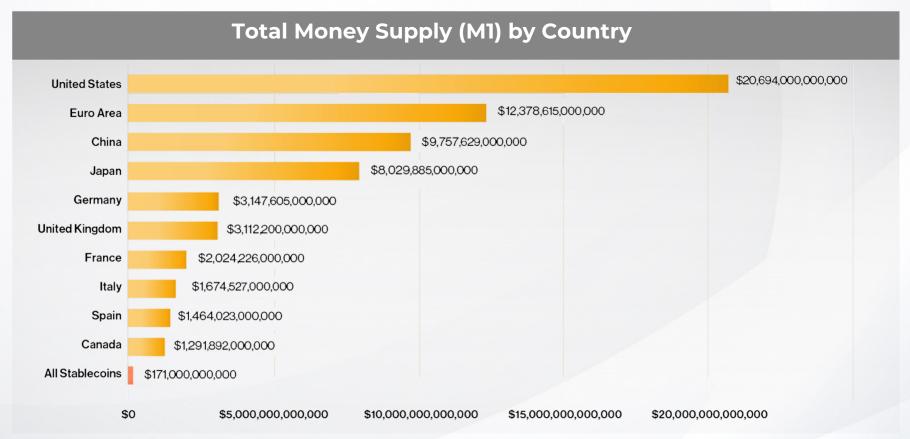


Source: PWC, Time for trust (October 2020)
This report looks at GDP (in USD, 2019 prices) which is the net additional value created by blockchain.





Stablecoins represent just a tiny fraction of the world money supply



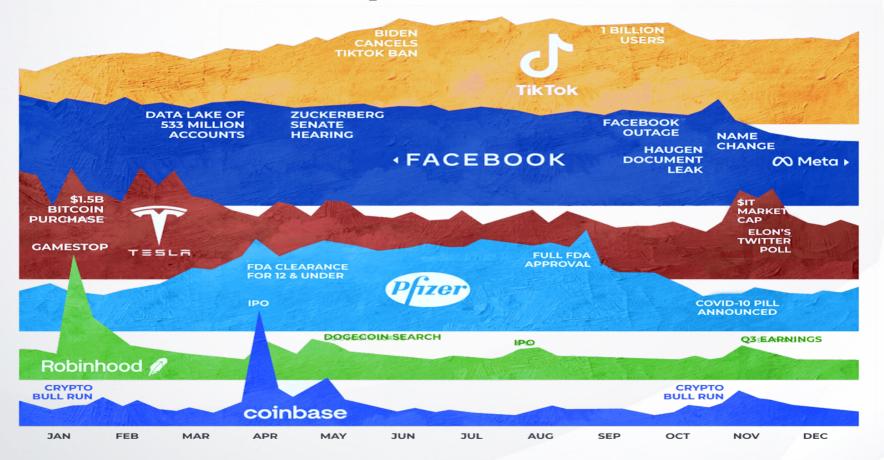
Source: State of Crypto Report by a16z;

Messari; https://take-profit.org/en/statistics/money-supply-m1/ Data is as of 5/12/2022





Gamification of investing and access to crypto assets were top of mind in 2021



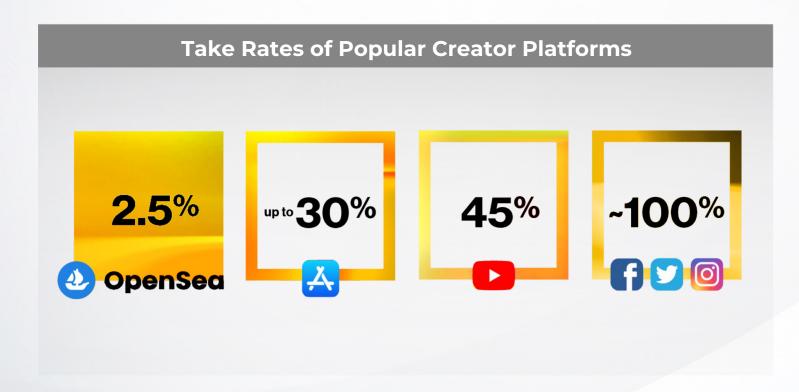
These six companies had a big influence over society and the markets in 2021, dominating the headlines for both positive and negative reasons.

Source: Visual Capitalist (https://www.visualcapitalist.com/the-companies-that-defined-2021/); Google Search Trends





Web 3 platforms have drastically lower take rates than the internet giants today



You know something is profoundly wrong with our economy when Big Tech has a higher take rate than the mafia.

Ritchie Torres, U.S. Congressman representing the South Bronx

Source: State of Crypto Report by a16z

Definition: A take rate is the fee charged by a marketplace on a transaction performed by a third-party seller or service provider.



