Cryptocurrencies / Blockchain

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A(nother) good year for crypto

2021 was another breakout year for cryptocurrencies, with the total crypto market cap reaching $2.3bn, up from $782m in 2020.

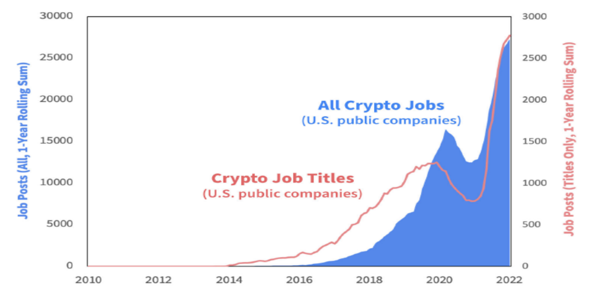
Nearly one in four US households owns crypto.

Collins Dictionary's word of the year was 'NFT' (non-fungible token), defined as "a unique digital certificate, registered in a blockchain, that is used to record ownership of an asset such as an artwork or a collectible". Its usage was up 11,000% over the year. OpenSea, the leading NFT marketplace, saw $13bn in NFT transactions in 2021, up from $18m in 2020.

Investor appetite for crypto remained elevated as venture capitalists poured $27bn into crypto start-ups in 2021, including $1bn into NYDIG and $1.3bn into FTX. Coinbase (COIN) went public during the year via a direct listing, positioning itself as the leading retail exchange transforming into the pre-eminent on-ramp to the crypto economy. We have also seen a migration of developer talent into the crypto world which, combined with the dramatic increase in capital put to work in a short space of time, could cement the place of crypto as a domain from which important future innovations derive. The analogy could be drawn with the failed dot.coms of the late 1990s, where the nexus of capital and talent moving into an immature space helped pave the way for more widespread technological and economic disruption, even though early efforts typically ended in failure. A July 2021 survey found seven out of 10 institutional investors expect to invest in digital assets in the future.

While much crypto activity, fundraising and market capitalisation currently relates to crypto trading, in its many forms, other uses are rapidly emerging. NFTs were perhaps the breakout use in 2021, but there was also meaningful innovation and activity in decentralised finance (DeFi), decentralised applications (dApps), play-to-earn (P2E) gaming and other Web3 opportunities. For example, DeFi platforms have seen widespread adoption globally and the value locked into DeFi contracts reached $250bn by the end of 2021, a 13-fold increase on 2020.

Crypto-related job openings



Source: Sparkline, 31/12/2021

While we are excited by the speed and scale of innovation in the crypto space, it is worth highlighting that the vast majority of crypto uses beyond trading still perform functions related to the crypto world. For example, the 'value' locked in DeFi contracts is primarily crypto assets and the leading dApps such as Uniswap11 (crypto trading protocol) and Curve (exchange liquidity pool) provide utility insofar as they can facilitate more efficient crypto-native trading/earning/activity.

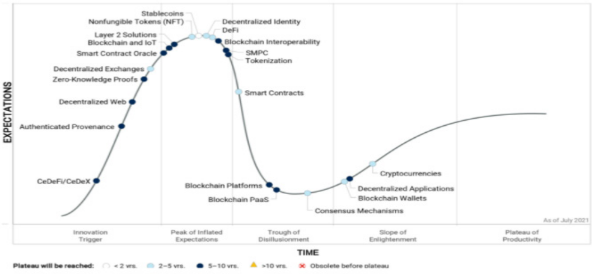
Crypto bulls could argue that 'real world' value exchange (ie unrelated to cryptos themselves) will move on-chain over time, but there are limited examples of this to date and big issues to solve around scalability, reliability and regulation for a more meaningful financialization of the crypto world.

State crypto

Governments are also being pulled into the crypto space as the risk of non-governmental digital currencies reducing state control over monetary policy have led more than four-fifths of central banks to engage in Central Bank Digital Currency (CBDC) pilots or other CBDC activities. Regulators stepped up their engagement in crypto during the year, and several key debates still need to be worked out to determine the direction of crypto development and more widespread adoption. This includes whether to classify crypto assets as securities or tokens, how stablecoins will be regulated, how anti-money laundering (AML)/know your customer (KYC) will work and what investor protections will be required. SEC Chair Gary Gensler has become increasingly vocal about the need for further regulation, including modernising the definition of an exchange to cover "all kinds of asset classes that bring together buyers and sellers", greater oversight of crypto tokens which should be treated as securities under SEC rules, and which DeFi apps fall under which regulator's purview. Some governments have taken a firmer approach. The People's Bank of China declared all cryptocurrency transactions as illegal, as did Turkey. The proliferation of coins also suggests bubble-like features with 8,600 coins listed on CoinMarketCap by the end of 2021, up from 3,200 in 2020. Only 1,800 have market caps in excess of $1m. Scams continue to occur, accounting for $7.7bn of crypto taken worldwide in 2021, according to Chainalysis, 81% up on 2020.

The environmental impact of some forms of crypto mining, most notably bitcoin, also raises major problems regarding its sustainability. The Cambridge Centre for Alternative Finance estimate bitcoin currently uses around 101TWh of energy annually (0.4% of global power consumption), having expanded its energy footprint in recent years due to the exponential increase in the network hashrate (total computing power to get bitcoin blocks as rewards). Ethereum moving to proof of stake this year will help performance, support increased inter-operability and bridging between different blockchains to drive richer functionality.

Hype cycle for blockchain, 2021



Source: Gartner

Outlook

Crypto is here to stay and is probably best seen as an emerging layer on the internet to transmit value in a programmable and trustless fashion in the same way internet protocol TCP/IP transmits information. This is sometimes presented as finally addressing the 'original sin' of the internet, failing to embed payment functionality in the browser, from where the web's reliance on advertising, loss of privacy and numerous other ills are perceived to have stemmed. Leaving the emerging Web3 debate aside, it is true that use outside the crypto ecosystem itself remains limited, and the vast majority of capital and development effort has been focused on crypto-native exchanges, lenders, custodians and so on.

The ability to pay for 'real-world' items with crypto still looks some way away given performance, lack of acceptance and regulatory questions, but this does not inhibit a greater use of crypto for some non-payment-related activities (as we have seen with NFTs). The financialization of crypto could potentially catalyse institutional and corporate blockchain adoption as the regulatory environment evolves.

Some analysts have suggested that the internet's role in shifting the financial and information-centric worlds from analogue to digital technologies over the past 20-30 years will evolve to a shift from centralised to decentralised technologies in the next 20-30 years. The oft-espoused view that "bitcoin is a bubble but blockchain is a valuable technology" misunderstands the role of cryptocurrencies and tokens as a reflection of, and mechanism to drive, the underlying value of the protocol to which they are attached, and the value of the uses derived from it. This is not to say that many tokens are not worthless (they likely are), but this is because the protocols or uses (whatever the tokens represent in the ecosystem) they reflect are worthless, rather than the notion that tokens themselves are necessarily worthless.

Investors are closely following the development of Ethereum, 'Ethereum killers' (Solana, Cardano, Polkadot, Tezos etc) and other layer one protocols investing and innovating to find the optimal solutions to the 'blockchain trilemma' – balancing the needs of security, decentralisation and scalability. A key interest is ultimately in blockchains' programmability and ability to function as software development platforms able to support application ecosystems, the rise of "computers that can make commitments" and the future innovation that will surely ignite. While the intrinsic value of NFTs may be highly questionable, the rise of tokenisation as a means of value exchange and the role tokens will continue to play in incentivising the validation of blockchains appear more robust. We retain an open mind.

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Find out more

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