



| **D-core**

2023 Market Outlook

Bitcoin Global Macro & D-Core

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Author Remarks: Digestion of last year and Prospects for 2023

2022: A year to remember.

The year 2022 started with a lot of optimism for crypto natives, Bitcoin's price was hovering above \$45,000 while the total market capitalization sat at \$2.2 trillion. But as central bankers announced plans to tighten monetary and fiscal policy to battle rising inflation, the 'air' certainly left the balloon and the markets began to tumble. Add on top a messy geopolitical picture where the conflict between Ukraine and Russia soon turned to an all out war.

Meanwhile China spent the better parts of last year committed to their "zero covid" policies crippling supply chains around the world, and only recently changed strategy to open up the country again.

The former British Empire saw prolonged effects of Brexit and instability with a year of: two monarchs, three prime ministers and four finance ministers.

Tech stocks had a complete meltdown sending the Nasdaq down by more than 30 percent. Some members of the index, Coinbase and Beyond Meat, fell as much as 90 percent.

2023: A year of digestion and hope

Transitioning into the new year, 2023, feels like a much-needed fresh start on many accords. 2022 delivered some of the toughest macroeconomic conditions many of us can remember in our lifetime, and crypto likewise suffered idiosyncratic disappointments.

Moving into the new year the theme of high inflation rates will continue to be central for market behavior. The good news is that there is a fair chance that inflation has already topped out for now. Both equities markets and crypto are seeing a fairly positive beginning which spins hope for a much more positive outlook for 2023 than 2022 proved to be.

In our 2023 Outlook, we have tried to look back on the year that has passed and circulate around some of the narratives, we believe will shape up 2023.

If you like our report please don't hesitate to let us know and feel free to **share it with friends or colleagues that might find it interesting.**

All the best,



Ulrik Kristian Lykke

Head of Research at Bitcoin Global Macro

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01

Market Overview: Barely Able to Bear with the Bear of 2022

The crypto market saw a significant downturn in 2022, with most digital assets, including BTC and ETH, losing over 65% in value.

The year began with BTC trading in the range of \$37,000 to \$47,000, but that range was soon broken as news about TerraLuna's collapse spread through the ecosystem. Add in the double-whammy of a very rapid downturn for US equities after fears of inflation running

amok forced central bankers to tighten monetary policy dramatically.

Since then, it has felt like the fate was sealed for crypto assets and the second wave of contagion following FTX's dramatic collapse sent the market to its (current) swing lows with BTC trading as low as \$16,000 with several larger-cap crypto assets being absolutely obliterated.



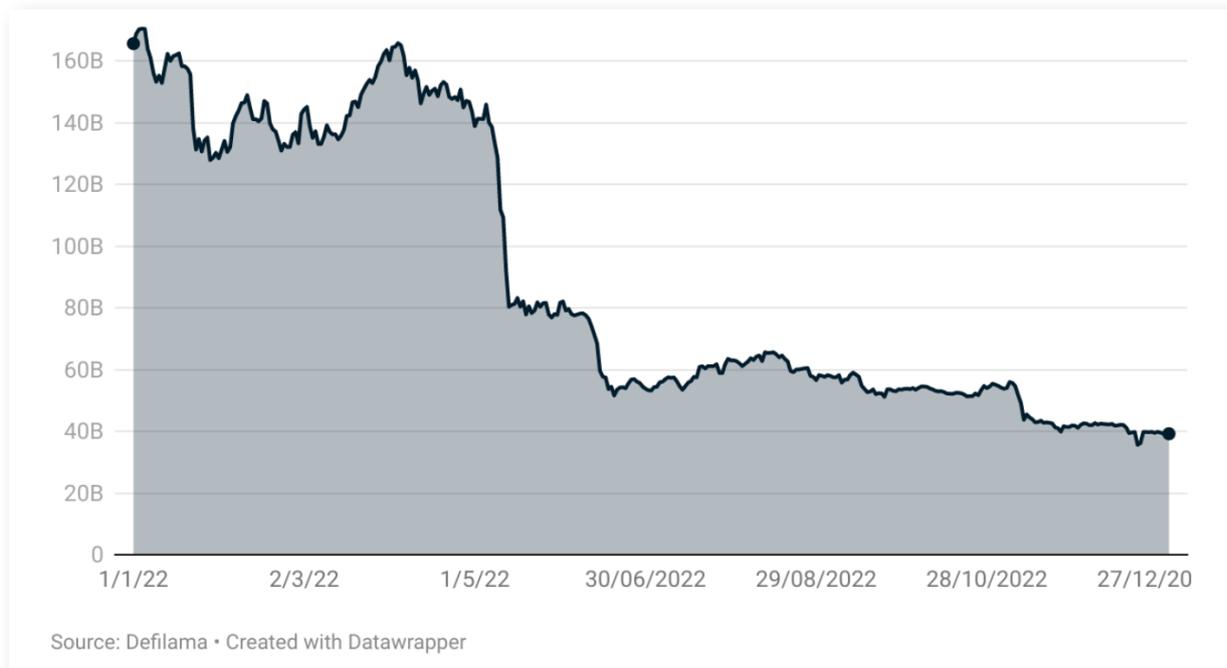
Also a Tough Year for DeFi

The DeFi space, in particular, had a tumultuous 2022, with the valuation of leading projects as indicated by market cap trending significantly down for the most part of 2022. According to DeFiLama, the Total Value Locked (TVL) dropped from \$180 Billion in early 2022 to

less than \$40 Billion towards year's end. This decline to be expected due to general market climate but was surely fueled by the bigger collapses such as Terra Luna and FTX, which hit this particular asset category exceptionally hard.

Total TVL (USD)

End of 2022, Total DeFi TVL was at ~\$39.2 billion



As one could expect, average monthly volumes traded through Decentralised Exchanges (DEXs) also trended down heavily in 2022 following the effects of the prolonged bear market. For instance, Uniswap, which is currently the largest DEX, recorded over \$80 billion in monthly trading volumes at the peak of the 2021 bull market. The volumes have since [dropped by over 70%](#) to \$21.5 billion for the whole month of December.

On the brighter side, fundamental metrics such as the number of unique DeFi wallet users witnessed some growth. According to on-chain data from Dune analytics, new unique DeFi wallets floated at around a monthly average of 500k. Also, the number of [accumulated DeFi wallet users](#) sat at over 6.6 Million at the close of 2022, up from 4.7 Million in January of 2022. Overall, there was a steady growth in usage and traction of DeFi protocols in spite of a slow market.

NFTs and the Metaverse Space Staying Afloat

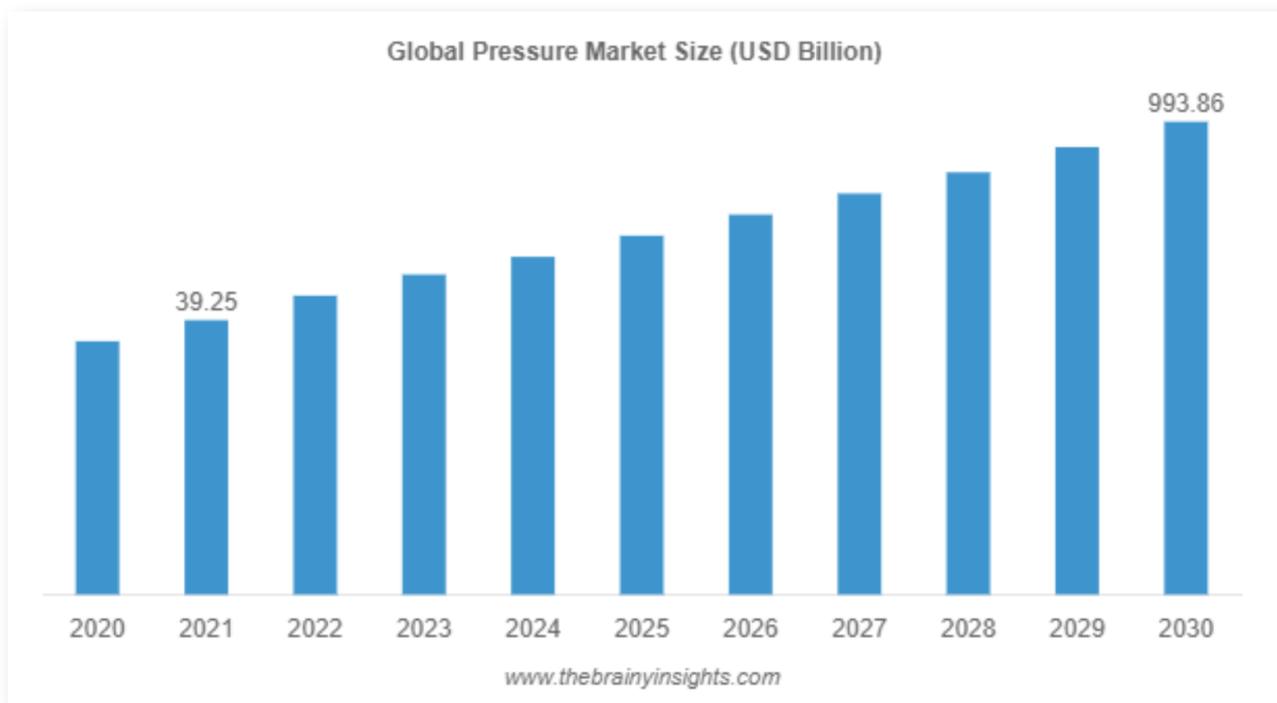
Despite the market turbulence, NFT market on-chain metrics recorded a positive trend, with a 0.41% increase in trading volume compared to 2021, and an average ETH price of \$2,015. Additionally, DappRadar [reported](#) an 876.89% increase in the number of unique traders, reaching 10.6 million. The sales count also increased, with a 10.16% increase this year, to 68.35 million.

Meanwhile, Blockchain games made up 49% of all dapp activity and saw 1.15 million daily unique active wallets and 7.4 billion in transactions. Of all blockchain games, Splinterlands was the most popular, boasting 217,914 monthly unique active wallets, an 85.78% increase. Alien Worlds was the second most popular game, but it saw a 3.67% decrease in monthly unique active wallets, at 178,118.

The Metaverse on the Rise

Although still a nascent innovation, there was a growing interest in building virtual worlds and establishing presence in the metaverse - and for good reason. In June 2022, McKinsey & Company published a [report](#) in which they predicted that the metaverse economy could reach \$5 trillion by 2030 - stating it was too

big for companies to ignore. Brain Insights, on the other hand, [predicted](#) that the global metaverse market is expected to reach USD 993.86 billion by 2030, at a Compound Annual Growth Rate (CAGR) of 43.20% from 2022 to 2030.



There was also an increased interest by traditional game publishers in joining the Web3 gaming ecosystem; Atari recently launched its Web3 gaming arm 'Atari.X' on The Sandbox metaverse. Meanwhile, Microsoft is still in the hot pursuit of acquiring U.S game publisher Activision Blizzard, making the company a prime candidate to bet big on the Web3 gaming space for the years to come.

In addition to game publishers, other famous brands also joined the metaverse gamification trend. Coca Cola released an NFT collection on Decentraland and Adidas bought a virtual parcel of land on The Sandbox and partnered with Punk Comics to premiere their own NFT collection.





The Backbone of Digital Assets: Bitcoin and Ethereum

Bitcoin managed to partially reverse its bearish trend in the first weeks of 2023. Analysts remain divided as to how long the bull run will last, with \$25,000 figuring as a key resistance level at the time of writing.

Bitcoin Price Performance.

In 2022, BTC lost 65% of its value, but is off to a good start to 2023.



Adoption Steadily Increasing

As far as adoption is concerned, the outlook for the coming year remains positive. Bitcoin has witnessed increased use as a means of payment throughout the globe and attracted growing interest from the TradFi sector. In January 2023, Goldman Sachs [ranked Bitcoin](#) as its top-performing asset year-to-date, surpassing Gold, US treasury, and the S&P 500.

The Bank for International Settlements' (BIS) Basel Committee on Banking Supervision

Asset Classes	3-Year CAGR		4-Year CAGR		5-Year CAGR	
	Average ¹	2022	Average ¹	2022	Average ¹	2022
Global Equities	10.6%	4.9%	10.1%	10.2%	6.1%	6.1%
Global Debt	1.5%	-4.5%	1.5%	-1.8%	1.4%	-1.7%
Gold	2.4%	6.3%	2.5%	9.2%	2.2%	7.0%
Bitcoin	152%	35.6%	187%	49.4%	272%	8.7%

Bitcoin vs. Traditional Asset Classes. Source: Ark-Invest Big Ideas 2023

finalized a [proposed policy](#) that would place a 2% limit on banks' Tier 1 capital held in bitcoin.

There was also an endorsement from the Group of Central Bank Governors and Heads of Supervision (GHOS), the oversight body of the Basel Committee, which is the "[primary global standard setter for the prudential regulation of banks](#)."

Tier 1 capital is [defined](#) as the core capital held in a bank's reserves used to fund business activities for the bank's clients. It includes common stock, as well as disclosed reserves and certain other assets." [Source](#)

Blackrock, the world's largest asset manager, overseeing over \$10 trillion in total assets, launched a new private spot Bitcoin trust. The fund seeks to track the performance of Bitcoin and is only available to U.S. institutional investors. Blackrock has been quoted as saying: "Bitcoin is the oldest, largest and most liquid digital asset and is currently our clients' primary subject of interest within the digital asset space". [Source](#)

Bitcoin: A Look at Key Indicators Showing Strength

Bitcoin's core network metrics have remained robust in 2022, even amid a tumultuous market. This trend appears to be continuing into 2023; however, an unfavorable market could present a headwind.

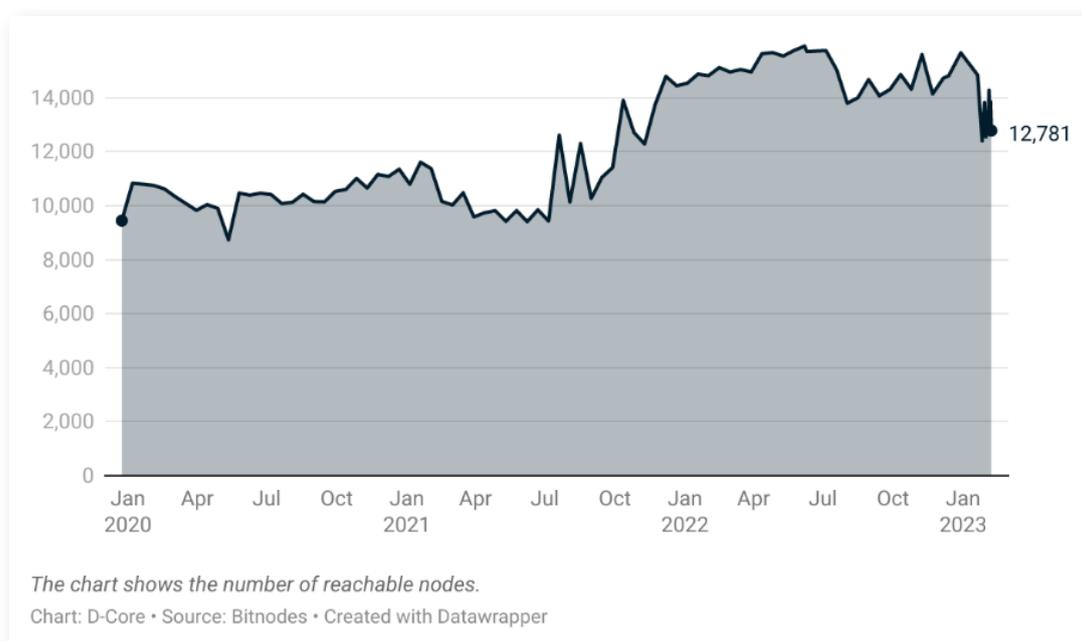
Bitcoin Network Difficulty boasts the highest value ever and even with the occurrences

of weather-related incidents and miner bankruptcies, the Network Hashrate remains high.

An often overlooked metric, the Bitcoin Node count is now at 12,781 globally. This number is a decline of approximately 18% compared to the node count before the end of 2022.

Bitcoin Network Nodes

In 2022, the global total of Bitcoin nodes increased by approximately 8%

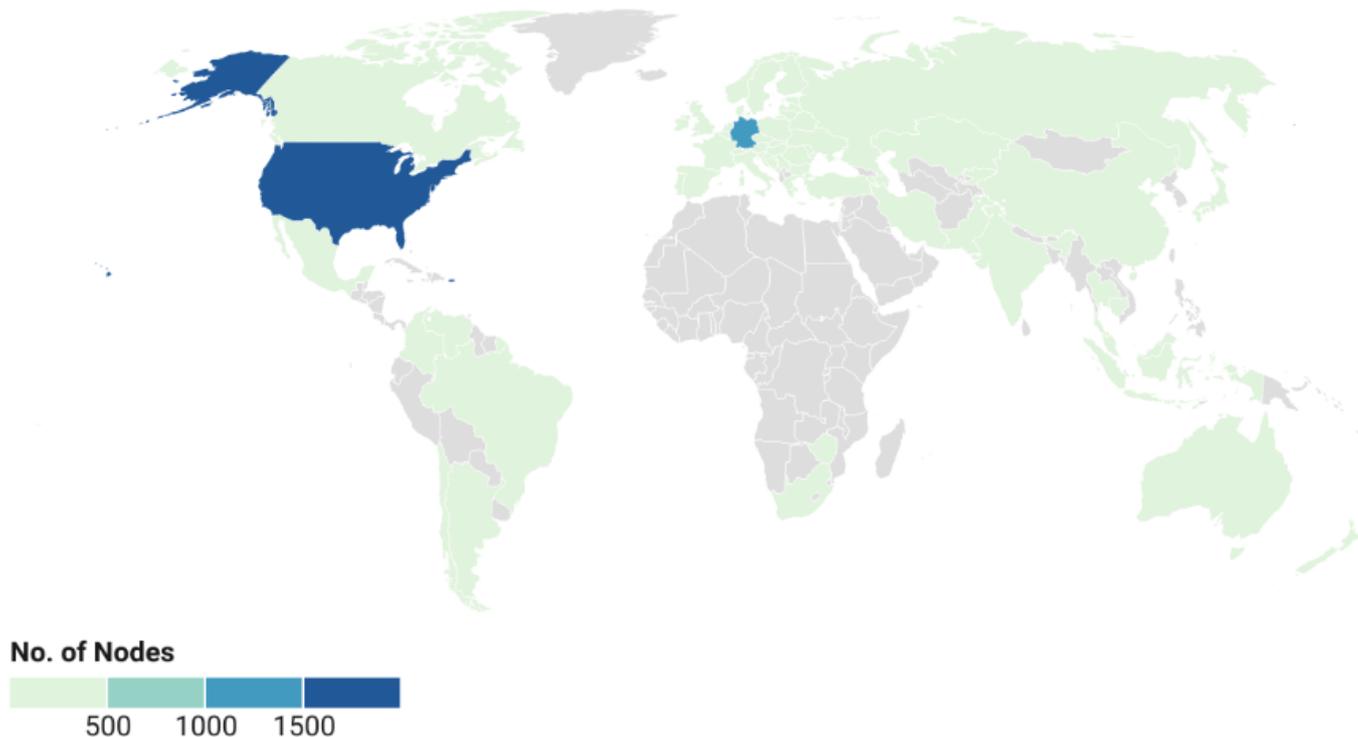


Despite the added complexity of privacy layers such as TOR, the geographic distribution of nodes portrays a suitable gauge of Bitcoin's peer-to-peer network.

Additionally, it illustrates that there remains ample opportunity for the node count to diversify further.

Bitcoin Node Distribution

Reachable nodes can now be found in 65 countries worldwide.



Roughly 6,373 (49.53%) of the nodes are Tor Nodes, making it impossible to pinpoint a specific country.

Map: D-Core • Source: bitrawr • Created with Datawrapper

Nevertheless, the increasing size of the blockchain, currently at 442GB, may obstruct further geographic diversification on the node count. This year, the central focus in

the Bitcoin community is expected to be the upcoming Halving, which is [scheduled](#) at the end of April 2024.

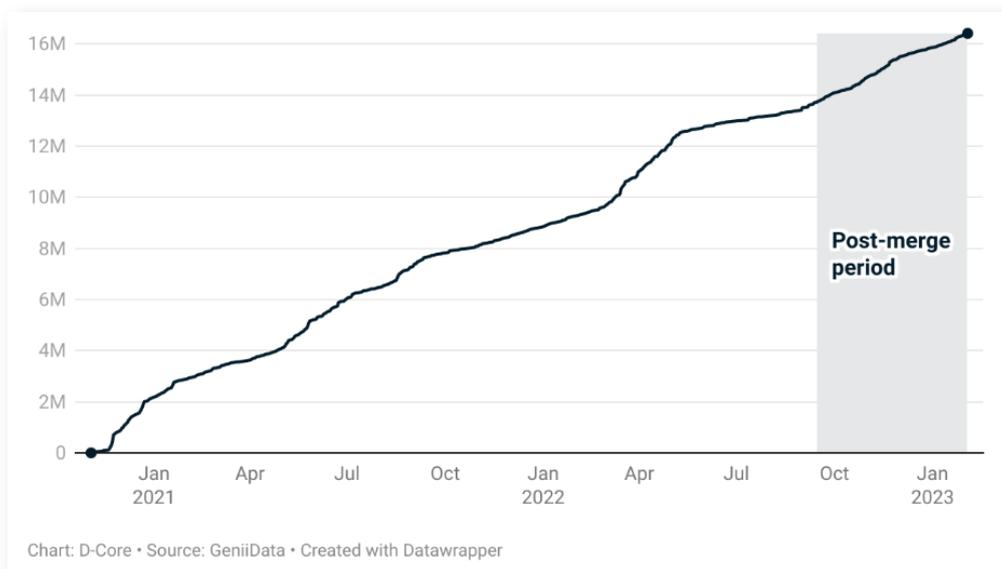
Leveraging Ethereum's Shanghai Upgrade: Liquid Staking Market & More

Ethereum's transition to Proof-of-Stake was an impressive achievement for the industry, and its smooth transition showcases the capabilities of its engineering teams to deliver

results. Thanks to this experience and the learning curve, we should anticipate future upgrades to be quicker and more aligned with the roadmap.

Total ETH Deposited

Since the Merge, an average of 19.2k ETH has been deposited daily in the ETH deposit contract.



One of the main upgrades expected by the Ethereum community in 2023 is the [Shanghai upgrade \(EIP-4895\)](#) planned for March 2023. It's anticipated to enable [ETH withdrawals](#) and other features.

Competition for Yield: The Benefits of Staking vs Alternatives

With the [ETH withdrawals](#) enabled (post-Shanghai upgrade planned for March 2023), more Liquid Staking options will likely become available. Nonetheless, traditional fixed-income offerings are expected to become a viable alternative due to rising interest rates and tighter liquidity conditions caused by Central Banks around the world.

Withdrawals are not instantaneous, and there is a set process that must be followed. [This process](#) includes an exit queue that validators must go through in order to ensure that the network is stable.

It is essential to remember that withdrawals have safeguards in place to prevent network security issues, such as limiting full validator

exits to mitigate the potential mass exodus of funds. There is a restriction of six validator exits per Epoch (equivalent to 6.4 minutes), and an estimated 43,200 ETH per day can be withdrawn.

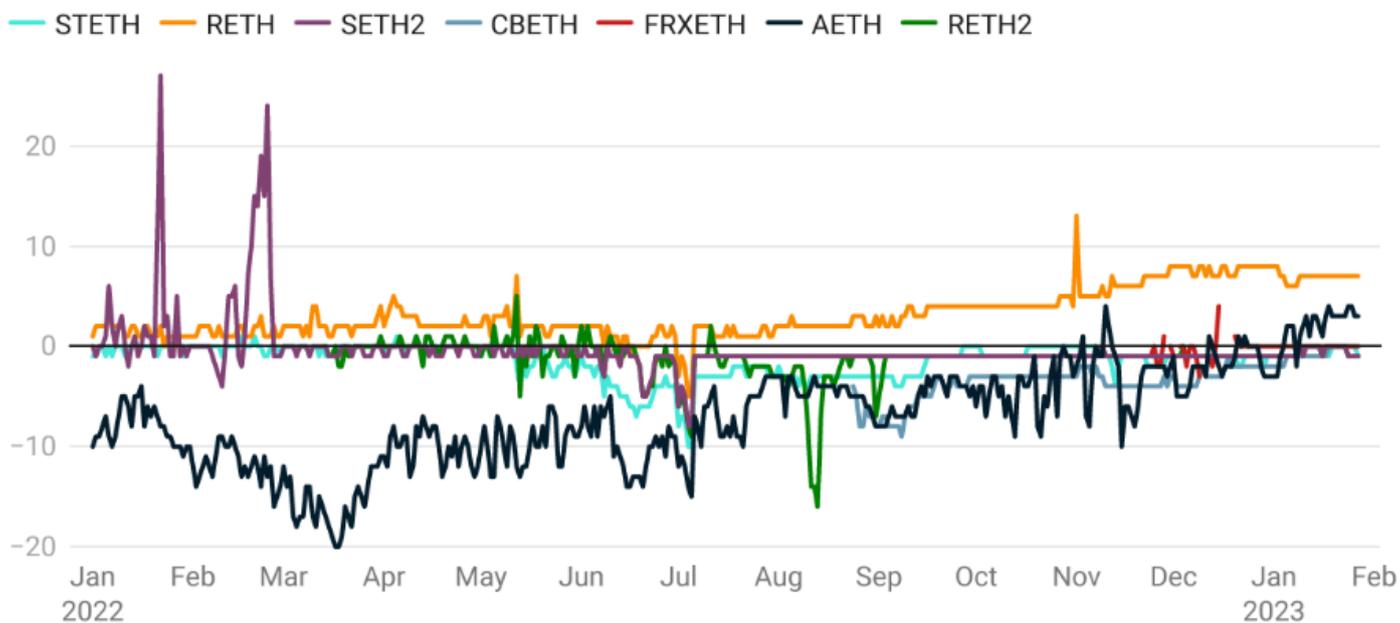
What is more important, however, is the comfort of knowing that ETH is liquid and that the stake can be withdrawn.

The potential growth of the Liquid Staking market could also increase the opportunities for fraudulent activity. Therefore, caution should be taken when investing in this market, and the users should prefer decentralized, trustless, and transparent (open-source) products.

As the chart below demonstrates, Staked ETH tokens yielded inconsistent returns during periods of volatility. However, the ability to withdraw gives the users a chance to fall back to the underlying ETH. Thus, during times of instability, derivative platforms for Staked ETH will likely experience more redemptions instead, and the derivative tokens might trade at a narrow margin to ETH.

Performance of ETH vs Staked ETH

During times of market turbulence, Staked ETH tokens deviated significantly from their peg to ETH.



Staking Derivative Platforms: LIDO (STETH), Rocket Pool (RETH), StakeWise (SETH2), Coinbase (CBETH), FRAX (FRXETH), Ankr (AETH), and Stafi (RETH2). RETH accrues staking rewards over time.

Chart: D-Core • Source: Flipside Crypto, GeniiData • Created with Datawrapper

The possibility of withdrawals will likely inspire innovation surrounding [Withdrawal Credentials](#) on the Ethereum protocol. EigenLayer is already pioneering this avenue by introducing Re-Staking. While [EigenLayer](#) proceeds in its mission, other potential use cases emerging from Withdrawal Credentials are expected to appear. The competition between alternative sources for yield and staking could serve as one of the key motivators for these developments. Nonetheless, the risks involved in these developments should not be overlooked since they involve commitments that are outside the realm of Ethereum's protocol. The speed of these developments may necessitate protocol-level risk management features. Fortunately, [conversation](#) concerning this has started taking place within the Ethereum community.

Distributed Validator Technology ([DVT](#)) may experience more significant development in 2023. Although the idea has been in the works since 2019, the ground was set when the Merge took place. LIDO has already conducted a [Pilot](#) with one of the two DVT providers and plans to keep running tests with both. [SSV Network](#) has also taken steps to advance DVT.

MEV Continuing to dominate headlines

During the run-up to the Merge, MEV became an interesting subject matter as the dominant [MEV-Boost](#) actor, Flashbots, had no option but to be compliant. This resulted in community-wide displeasure as it paved the way for censorship and was believed to affect the credible neutrality of the network.

03

Crypto VC behavior reveals market trends for 2023 and beyond

The venture capital space was somewhat shaky in 2022 due to general economic uncertainty, rising inflation, interest rate spikes, fears of recession, and volatile economic situations.

Some obvious evidence of this can be seen in overall VC deal value from 2021 to 2022. More precisely, the overall VC funding fell from \$713B in 2021 to \$230B by Q2 of 2022. Interestingly, deal volume had a contrary spike of 4,567 to 15,652 deals in the same period.

[Analysts](#) reported reasons for VC investment reservations as a refocus on business fundamentals amid the global economic downturn and a focus on profitability rather than growth.

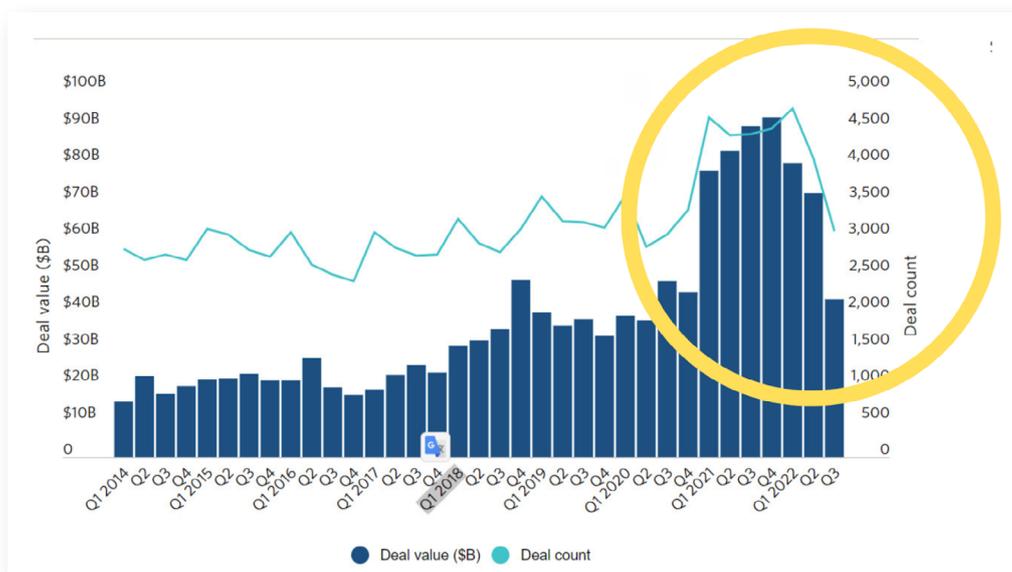
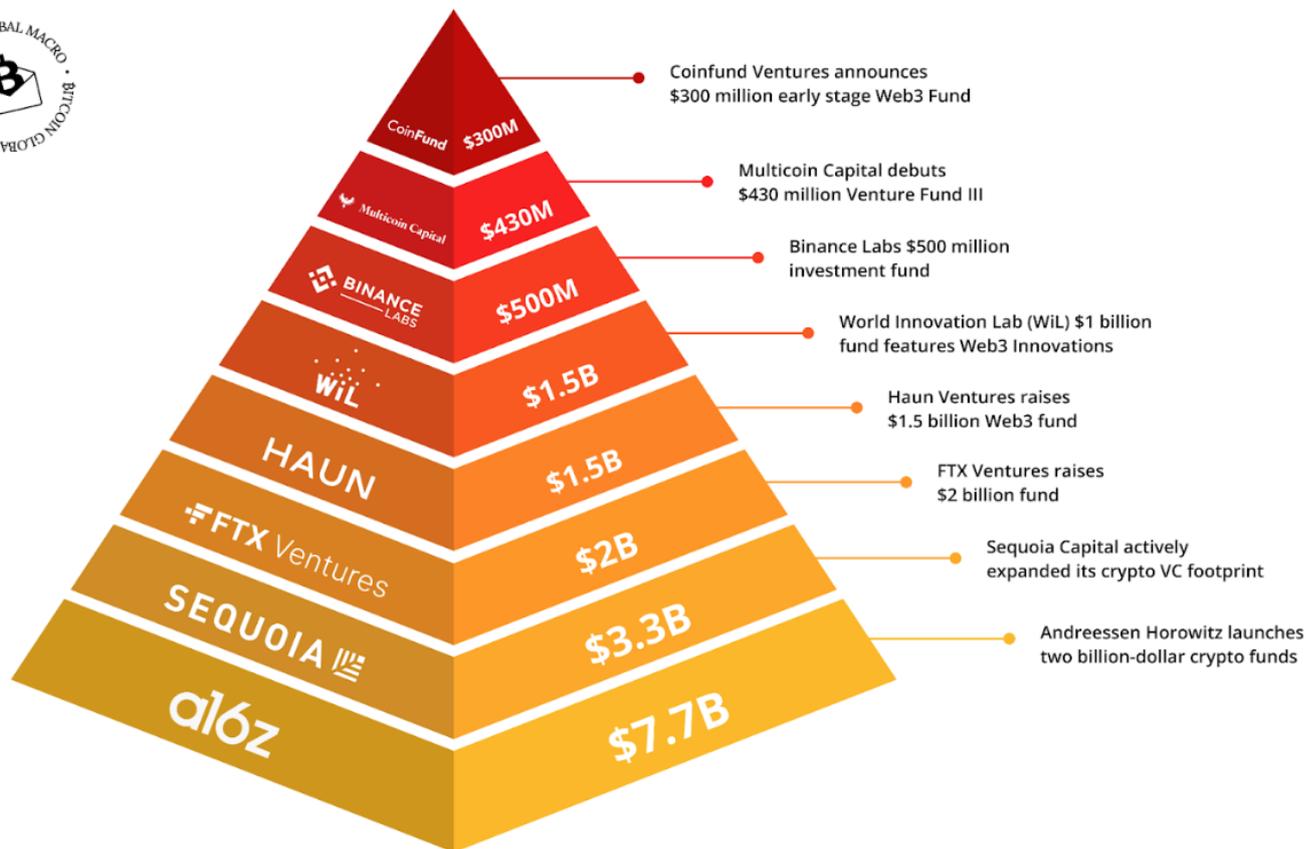


Image source: [Pitchbook](#)

Crypto VC Fund Directions - More Web3 deals, less NFT & DeFi deals



Similar to other high growth industries, overall VC deals across the blockchain industry have also declined in 2022, dropping 71% from Q1 to Q2. But more interestingly, the most active blockchain VCs slowly tilted their portfolio towards Web3 solutions as opposed to DeFi and NFT, which were the biggest sectors to attract capital in 2021.

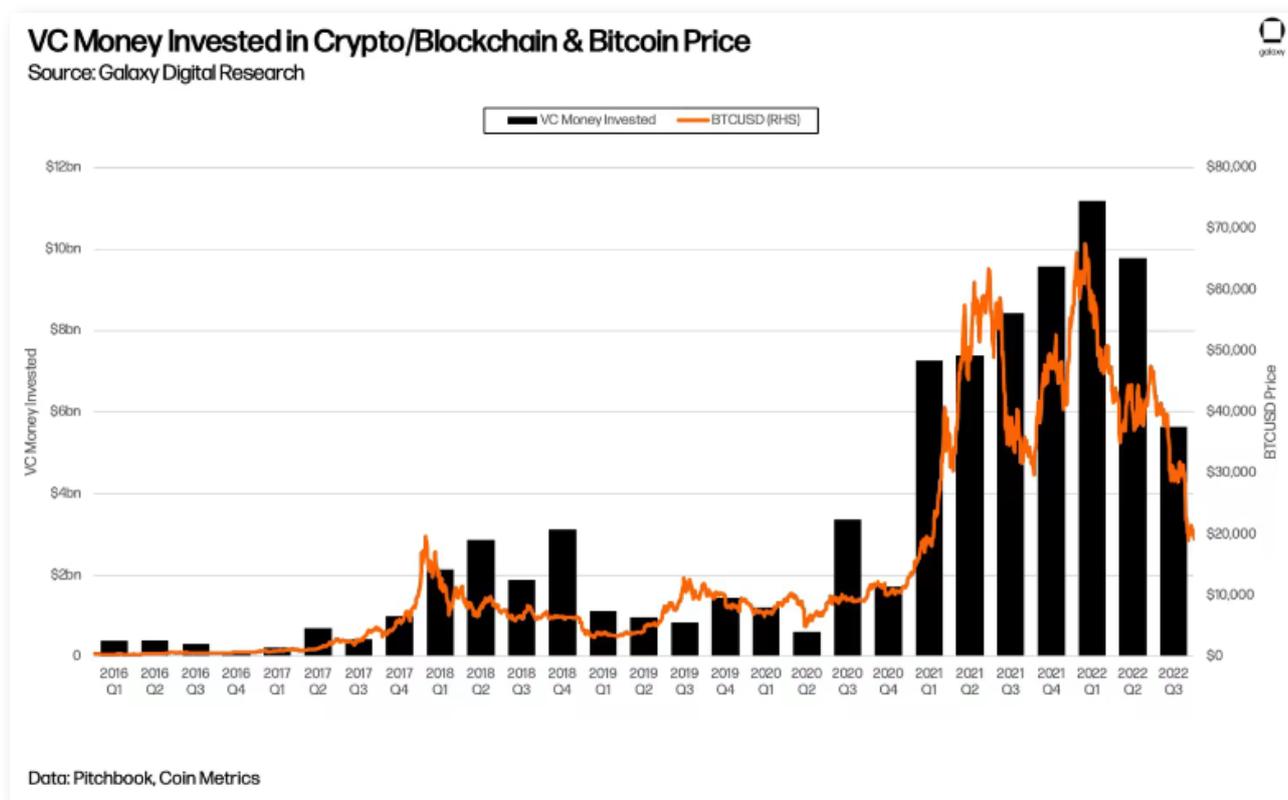
As displayed in the diagram above, there were quite a number of significant raises by both traditional and crypto VCs throughout 2022. Industry titans such as Sequoia Capital and Andreessen Horowitz (a16z) were particularly active, raising billions in funding to enhance the growth of Web3 ecosystems.



Funding flow topped early in the year

The estimated funding invested across the cryptocurrency and blockchain space peaked

at around \$11 Billion in Q1 of 2022, a number that had been on a steady rise two years prior.



In the wake of Q2, things took a different turn as the Fed started to tighten economic policy. Add on top an escalating situation between Russia and Ukraine and all of a sudden the environment became vastly more difficult for investors to be risk tolerant in than the months before.

The crypto industry was extraordinarily plagued in this regard, as major actors such as TerraLuna and their stablecoin UST went bust, [setting off cascading effects in the industry.](#)

Overall, Q2 of 2022 saw drawback in VC funding across the space, with the figure

slightly dropping below \$10 billion. On the brighter side, the cascading streak of insolvencies from the Terra Luna fiasco came with its lessons and wisdom for VCs, shaping new investment patterns in Q3.

Even with the market turning bearish, crypto VCs continued to invest in Q3 particularly in the under-explored sub-niches. Cointelegraph's venture capital database report revealed an unusual shift in individual deals towards Web3 projects with strong infrastructural leaning; examples are GameFi and metaverse-related infrastructure projects. Contrary to the trends seen in 2021, mostly DeFi and NFT-related, over 44% of individual deals are Web3 based.

Percentage of Individual Investments Per Active Investor

	NFTs	CeFi	Web3	DeFi	Infrastructure	Total
Animoca Brands	26%	0%	72%	2%	0%	43
Coinbase Ventures	12%	12%	44%	24%	9%	34
Shima Capital	18%	4%	50%	25%	4%	28
Big Brain Holdings	21%	0%	29%	42%	8%	24
Andreessen Horowitz	21%	0%	58%	8%	13%	24
Dragonfly Capital	9%	9%	43%	26%	13%	23
GSR	0%	0%	32%	50%	18%	22
Infinity Ventures Crypto	20%	5%	75%	0%	0%	20
Balaji Srinivasan	15%	10%	55%	10%	10%	20
Jump Capital	6%	6%	22%	56%	11%	18

Looking Into the Horizon

With such a strong year for the venture capital sector of crypto, it is natural that expectations should be also high for 2023 as well. However, given the uncertainties in especially the macro markets there is a significant risk that VC's will be much more hesitant to write cheques in the new year and that cheque sizes will continue to fall over the course of the next quarters.

Given the establishment of many prominent VC funds between 2020 to 2022, it is, however, unlikely that the slow down will transition to a complete halt given how much dry powder many VC's still have on their balance sheets.



04

Contagion: The Word of the Year

The crypto market's intertwined nature was undoubtedly exposed in 2022; many big firms were affected by the collapse of Terra and FTX, including industry heavyweights that had billions worth of U.S dollars in assets under management (AUM). Some of the big players that went bankrupt due to substantial exposure in either Terra or FTX include Three Arrows Capital (3AC), Celsius, Voyager Digital

and more recently BlockFi, which was one of the largest digital asset lending firms.

Simply put, **the chickens came home to roost in 2022**, and to make it worse we are not sure to be fully out of the woods yet with several implications following the FTX implosion still to settle.

Terra (LUNA)'s Collapse

First launched in 2018, Terra's ecosystem was on a roll until May 2022 when the UST algorithmic stablecoin lost its peg against the U.S dollar. It all started when over \$2 billion was withdrawn from Terra's lending and borrowing protocol Anchor on May 7, triggering hundreds of millions of U.S dollars liquidations. Ultimately, the UST stablecoin was affected by the massive capital outflow and lost its peg to trade at 35 cents by May 9.

While Terra's founder Do Kwon tried to restore back the peg by 'Deploying more capital - steady lads', the statement only amounted to become a meme within the crypto community.

However, it was the aftermath that shocked most crypto stakeholders, a cumulative \$60

billion worth of investors money was lost in this unfortunate event. What followed was a streak of bankruptcy filings by several crypto firms that had invested in Terra's ecosystem, either directly or indirectly.



3AC, Voyager Digital and Celsius File for Bankruptcy

The collapse of Terra's UST stablecoin caused a serious ripple effect in the industry, with Three Arrows Capital (3AC), Voyager Digital and Celsius being among the most affected. Just three weeks after UST depegged, 3AC filed for a chapter 15 bankruptcy and defaulted on a \$650 million loan owed to Voyager Digital. This forced the investment firm to also halt withdrawals and eventually file for bankruptcy in the Southern District of New York.

The script was similar for Celsius although it took a bit longer before the crypto lending company declared bankruptcy. At first, Celsius halted BTC withdrawals on June 12 citing 'extreme market conditions' but with its native token \$CEL plummeting by over 70%, the firm was ultimately forced to file for bankruptcy on July 13, 2022. Besides these big players, quite a number of potential DeFi projects became insolvent as a result of Terra's collapse.

The FTX Collapse

FTX's collapse is perhaps the most unexpected black swan event that happened last year, not many people would have imagined that Sam Bankman-Fried, a crypto darling and now turned villain was [mismanaging](#) clients' deposits.

The news first broke through a Coindesk article which revealed that a large part of Alameda's holdings was in illiquid FTT tokens and there were also some notable discrepancies in the balance sheet; this raised eyebrows across the industry, with Binance's CEO Changpeng Zhao making it public that the exchange would start to gradually

liquidate its enormous FTT holdings.

The ensuing panic caused a mass FTT sell-off, accompanied by a withdrawal run on the FTX exchange. According to Dune Analytics, FTX clients had withdrawn over \$1 billion in the space of a week before FTX officially halted withdrawals. With FTX insolvent, hopes were pinned on a strategic acquisition by Binance, but the plan fell through. FTX was forced to file for Bankruptcy, and SBF turned crypto villain overnight.

The contagion spread further with BlockFi, one of the leading digital asset lenders, filing for bankruptcy due to their substantial exposure to FTX. Other major firms affected include Genesis Trading, Galaxy Digital, and Voyager Digital.

We have written quite extensive pieces on the FTX saga [here](#) and [here](#). Give them a look, if you want a deep dive.

Aftermath

Moving into the year 2023, we have already seen the first signs that **we are not out of the woods in relation to the contagion** that plagued the markets during last year. More than a few notable entities have been taking headlines in the beginning of the year with similar trouble. Most prominently the situation revolving around Genesis' from the Digital Currency Group is currently unresolved but reports mentions a hole in their balance sheet of close to \$3B, why it is likely we can expect this to continue to be a theme well into 2023.

05

One Step Closer to Regulation of Crypto

In 2022, there were several notable developments in the crypto regulation space, including the famous MiCA bill which was again delayed, prioritization of the Digital Euro, and the SEC with various manoeuvres such as continued rejection of a Bitcoin spot ETF.

Three Major Regulatory Developments in 2022

MiCA bill

MiCA (Markets in Crypto-Assets) is a proposed regulatory framework for the EU (European Union) that aims to establish a uniform set of rules for the supervision and oversight of crypto-assets and their underlying infrastructure. The framework is being developed by the European Securities and Markets Authority (ESMA), the EU's financial regulatory agency. In the aftermath of the collapse of FTX exchange, Christine Lagarde, president of the ECB, recently called the regulation and supervision of cryptocurrency an "absolute necessity" for the European Union.

Digital Euro becoming a priority before 2024

The European Parliament recently outlined 164 legislations as a top priority before the 2024 elections, among them is legislation to govern the Digital Euro. Currently, the ECB

is working on a prototype, with the design phase set to be completed in March 2023. The European Commission plans to table a proposal in the second quarter of 2023, which is much earlier than most stakeholders expected.

SEC doubled down on rejection of Grayscale's Bitcoin ETF

It was another rejection year from the SEC for Grayscale's Bitcoin ETF, the commission reiterated in December 2022, noting that such products are prone to manipulation and fraud. And in a more recent [investor letter](#), Grayscale seems to be preparing to throw in the towel; the firm said it is exploring options to return a portion of investors' capital if the SEC does not approve its spot Bitcoin ETF.



Emerging themes for Regulation in 2023

Clarity and consistency in regulation is one of the emerging themes for the future of cryptocurrency regulation. Many people do not understand how cryptocurrencies and the underlying blockchain technology work, making it difficult for regulators to effectively oversee and regulate the industry. To address this, clear and consistent guidelines and regulations are needed to provide a clear framework for the industry to operate within.

Balanced regulation is another key theme. It is important to ensure that the industry is properly regulated to protect consumers and prevent fraud, but it is also important to allow for innovation and growth. Overly burdensome or restrictive regulations could stifle innovation and hinder the development

of the industry. Following the severe after-effects of the FTX collapse, it is becoming evident that regulators will likely try to proceed with speed rather than caution, why the discussion about balanced regulation will be ever more relevant.

Last but not least, **International coordination** is needed to create a more cohesive and consistent global regulatory framework. Cryptocurrencies and blockchain technology are global in nature, and different countries have taken very different approaches to regulation, creating a patchwork of different regulations that can be confusing and create barriers to entry.



According to crypto intelligence firm Chainalysis, 2022 holds by far the largest number of cryptocurrency heists recorded, totaling over \$3 Billion. A majority of these attacks targeted Decentralised Finance (DeFi) protocols, with the malicious players taking advantage of this nascent ecosystem.

Biggest DeFi Hacks of 2022

1 Wormhole

On February 2, a hacker successfully exploited a security flaw in the Wormhole protocol, a cross-chain crypto network connecting Solana, Ethereum, Avalanche, and other major networks. According to analytics firm Elliptic, the vulnerability stemmed from the protocol's lack of "guardian" account validation, which allowed the attacker to create 120,000 wETH without any Ethereum backing. The hacker then converted 93,750 wETH into Ethereum and the rest into Solana, resulting in a total loss of nearly \$320 million.

2 Ronin Exploit

The Ronin Validator suffered a major security breach in March 2022 where 173,600 ETH and 25.5 million USDC (\$615.5 million) were stolen. The hackers, who are believed to be part of the Lazarus Group, compromised the Sky

Mavis's Ronin and Axie DAO validator nodes, allowing them to steal private keys and make fake withdrawals. This is considered the largest DeFi hack to date.

3 Beanstalk Attack

On April 18th, 2022, the Beanstalk attack occurred, becoming one of the largest flash loan attacks. By exploiting a one-day delay in the \$BEAN governance proposal contract, the hacker was able to take out a flash loan and gain control of over 70% of all seeds. This gave them access to 350 million DAI, 500 million USDC, 150 million USDT, 32 million BEAN, and 11.6 million LUSD. Eventually, the hacker was able to transfer \$182 million although Beanstalk claims they only made away with \$80 million.

4 Nomad Bridge Attack

On Aug. 2, a group of hackers stole \$190 million in cryptocurrency by compromising the Nomad token bridge, a platform that allows users to swap tokens between various blockchain ecosystems. The attack exploited a flaw in the platform's smart contract, allowing the hackers to repeatedly withdraw more assets than they had deposited. Unfortunately, the Nomad team was unaware of the breach until it was too late.

5 Maiar Hack

Hackers exploited a loophole in the decentralised exchange Maiar and stole approximately 1.65 million Elrond Egold (EGLD) tokens, worth approximately \$113 million, in June. The attackers used a smart contract and three different wallets to execute the theft, then quickly sold 800,000 of the stolen EGLD tokens for a total of \$54 million on the same DEX. The remaining EGLD was either sold on centralised exchanges or exchanged for Ethereum.

Centralised Exchanges: Crypto's Biggest Honeytrap

While there were only a handful of attacks on centralised exchanges in 2022, several high profile players were caught.

Crypto.com January 2022 Hack

On January 17, 2022, Crypto.com, one of the world's most popular crypto apps and well-known exchanges, experienced a data breach which resulted in 483 customer accounts being compromised. The exact cause of the breach is yet to be determined. However, the CEO of Crypto.com, Kriz Marszalek, confirmed the security breach, resulting in the exchange shutting down certain services for 13-14 hours. Reports indicate that 4,836.26 ETH, 443.93 BTC and approximately US\$66,200 in other currencies were stolen from the cryptocurrency exchange.

Binance's BNB Chain \$570 million hack

At first, it was reported that \$100 million had been hacked. However, soon the number rose drastically to \$570 million after 2 million BNB

tokens were withdrawn. Changpeng Zhao ("CZ"), Binance co-founder and CEO, revealed that the hack occurred on a cross-chain bridge, BSC Token Hub, which enables users to move digital assets from one blockchain to another. The hackers were able to generate 2 million BNB tokens out of thin air by exploiting a security flaw in the bridge. The attacker then sent themselves one million BNB tokens twice in a row.

FTX Hacked Amid Bankruptcy Process

On November 12, 2022, embattled exchange FTX was hacked, resulting in the theft of approximately USD 60 million. The hack occurred as FTX was entering into Chapter 11 bankruptcy proceedings. The exact cause of the hack is unknown, though reports suggest that an inexperienced insider may have transferred the funds to a Kraken wallet.



Despite the many hurdles that faced the crypto industry during 2022, we must not fail to pay attention to the many points of progress that were also made. What stood out is that long term stakeholders shifted focus to more fundamental areas as opposed FOMOing in on speculative narratives. The interest in valuable Web3 innovations increased while we also witnessed celebrities and big brands joining crypto, thanks to NFTs and the metaverse. So, what were the positive trends and developments this year?

DApp usage was on the rise

The number of daily unique active wallets interacting with Decentralised applications (DApps) increased by 50% to hit 2.37 million from 1.58 million in 2021. Most notably, blockchain-oriented games accounted for close to 50% of the on-chain activity, with Splinterlands ranking as the most popular game in this category. Gambling DApps also recorded a 106% spike in new users, the number of dUAW jumped from 53,364 to hit 110,140 this year.

Ethereum's long awaited merge was successful

The much-awaited Ethereum [merge](#) finally happened on September 15th, marking

the transition from Proof-of-Work (PoW) to Proof-of-Stake. This transition has made the Ethereum blockchain more eco-friendly as it will no longer depend on mining power to secure the network; instead, stakers are now the ones tasked with this function. Looking ahead, Ethereum's developers are working on the next phase, the surge, which is expected to make the network more scalable.

Ulrik Lykke delivered a quite lengthy commentary on this subject in [Hedge Nordic](#).

VCs Showed a Growing Interest

While the overall funding across crypto innovations took a hit this year, VCs appeared to be particularly interested in potential Web3 innovations. Some of the notable players that allocated a significant amount of funding towards this niche include Andreessen Horowitz (a16z) and Sequoia capital. The former announced two billion dollar Web3 focused funds totaling over \$7.7 billion while the latter committed close to \$3.3 billion towards Web3 innovations as well.

Our article about VC trends for 2022 was featured on [Hackernoon](#) and hit their Top Stories.

Big Brands joined the Metaverse

The metaverse continued to gain traction this year with big brands such as Gucci, Adidas and Prada launching their own NFT collections. Atari, one of the most iconic game publishers, also recently launched a massive social and gaming experience in The Sandbox metaverse; Atari Sunnyvale. This virtual world allows users to explore and interact with each other, alongside an opportunity to participate in featured games and quests for in-game rewards.

Nations Adopting Bitcoin

For a long time, most governments have been against the use of crypto assets within their jurisdictions. But this stance seems to be gradually changing with the Central African Republic joining El Salvador to recognize Bitcoin as legal tender. Meanwhile, Russia and Nigeria are making a u-turn on previous legislations that limited crypto transactions. Russian officials recently approved the use of cryptocurrencies for cross-border payments while Nigeria is set to pass a bill that will recognize the use of Bitcoin and other crypto assets.





Behavioral Themes: What We Expect For 2023

With 2022 behind us, there is a lot to be optimistic about in 2023, prices seem to have bottomed out although the uncertainty in macro factors and possible continuation of the FTX contagion could spell more doom for the market. That said, there are some major themes that are already emerging as the top narratives for 2023. Below is a glimpse into the horizon:

Self-Custody

One of the biggest lessons crypto natives ought to have learnt this year is '**not your keys, not your coins**'. A good number of centralised crypto service providers have gone under with clients funds, including FTX which was among the most trusted exchanges. Already the shift is happening, the number of BTC held in centralised exchanges witnessed a sharp decline in the aftermath of FTX's demise as investors sought for alternative non-custodial storage solutions. This trend will likely continue in 2023, ushering in a new paradigm where crypto natives reduce their reliance on third-party service providers.

Fundamentals over Speculation

Gone are the days when the crypto market was mainly driven by speculative narratives, most

of the capital in 2023 will be chasing valuable projects that are based on the principles of decentralisation and transparency. Crypto VCs and individual investors who have been in the game for some time are now scouting for Web3 projects that have a solid value proposition as opposed to speculative driven narratives that promise riches overnight. In my opinion, this will be a game-changer in the adoption of real blockchain-based solutions as well as integrations with existing industries.

Regulation is around the corner

Regulators from across the globe have signalled an intention to pursue regulatory frameworks that will govern the digital asset industry in future. One of the key bills expected to come into action is Europe's MiCA bill which is aimed at preventing insider trading, market manipulation of crypto assets and unlawful disclosure of inside information. In the U.S, the senate banking committee has held several hearings this year and are also keen on pursuing crypto governance frameworks especially after the FTX saga which has left a majority of investors in limbo.

It should be obvious that this report does not constitute investment advice, why we adhere any reader of this content to **always only act on own initiative and conduct careful due diligence personally.** Please do also

always seek professional assistance for asset management, taxation and legal issues and consider all information delivered in this report as suggestive rather than actual advice.

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Contributors



Ulrik K. Lykke



Edwin Munyui



Otavio Viegas



Tharanga Gamage