2023 OUTLOOK REPORT: NEW YEAR, NEW NARRATIVES

JANUARY 2023

CryptoCompare

About CryptoCompare

CryptoCompare is an FCA authorised benchmark administrator and global leader in digital asset data, providing institutional and retail investors with high-quality real-time and historical data. Leveraging its track record of success in data expertise, CryptoCompare's thought-leadership reports and analytics offer objective insights into the digital asset industry.

About This Report

2022 was the second worst performing year in the 13-year history of Bitcoin, with the whole digital asset ecosystem suffering from multiple collapses of some of the largest entities in the sector. However, it was not just digital assets that performed poorly in 2022 – many traditional asset classes, including equities and bonds, also saw double-digit losses this year, putting into context the adverse macroeconomic conditions we are currently under. In this report we cover the macroeconomic environment of 2022 and look forward to how this might change in the new year. Off the back of this, we assess the developments in the centralised exchange sector, decentralised finance, and stablecoins & CBDCs, all while providing our view on trends to look out for in these subsector of the digital asset economy.

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For questions related to our research or any potential requests, feel free to contact our research department at **research@cryptocompare.com**.

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Executive Summary

Digital assets are in the midst of a bear market in which the industry has, over the last year, experienced both idiosyncratic headwinds in the collapse of multiple entities in the space, but also macroeconomic headwinds. BTC and ETH returned -65.4% and -68.3% respectively in 2022, compared to -33.6% for the NASDAQ 100 and -19.0% for the 10y US Treasury Bill, showcasing that all assets experienced significant headwinds last year.

Despite this, we expect cryptoassets to outperform traditional asset classes this coming year, as macroeconomic conditions improve, and market participants shift to a risk-on approach. Particularly, we expect interest rates to peak this year and inflation to significantly come down, in line with its declining trend over the last 6 months – which would suggest a return to 2.0% inflation by the end of 2023.

For Centralised Exchanges (CEXs), the collapse of FTX will have continued ripple effects on the industry. With the trust of market participants being significantly damaged, we expect the trend of lower volumes and exchange outflows to continue. As market participants move out of CEXs, they will likely seek alternatives in the decentralised space, with DEXs likely gaining market share in 2023. Exchanges that focus on transparency (Proof of Reserves), security, and regulatory adherence will be those that succeed in the new year.

Thus, as the macroeconomic conditions improve in 2023, we expect the DeFi ecosystem to thrive, with total value locked (TVL) down 76.4% in 2022. As mentioned above, decentralised exchanges (both spot and derivatives) will be some of the biggest winners in DeFi. Other major narratives include that of Liquid Staking Derivatives, who have an upcoming tailwind in the form of the Ethereum Shanghai Upgrade expected to take place in March, as well as the continued rise of Layer 2 blockchains such as Arbitrum and Optimism.

Following the collapse of TerraUSD, the stablecoins market has been dominated by centralised stablecoins. We believe decentralised stablecoins will gain traction in 2023, albeit these will be fully collateralised stablecoins. Governments will continue to make progress on their CBDC projects, with 15 government programs being in their pilot phase as of the end of 2022. Two CBDCs have already officially launched – Sand Dollar and JAM-DEX, in the Bahamas and Jamaica respectively.

2023 Expectations Summary

No.	Expectation	Section/Page	Page
1	*We expect crypto assets to outperform traditional asset classes in 2023, driven by an improvement in macroeconomic conditions in the second half of the year where market participants begin to shift to a risk-on approach*	Macroeconomic Outlook	6
2	*We expect the correlation between crypto and equities to decouple in 2023*	Macroeconomic Outlook	7
3	*We expect interest rates to peak this year as inflation continues to decline and the global economy begins to feel the effects of sustained higher rates*	Macroeconomic Outlook	9
4	*We expect the bear market to continue through the first half of 2023, as well as FTX's contagion, enforcing the trend of lower volumes and more outflows from exchanges*	Centralised Exchange Outlook	11
5	*In the long term we expect DEXs to gradually take market share from CEXs, thereby accelerating the overall adoption of decentralised markets and shedding light on other decentralised applications like borrowing and lending, derivatives, and yield providers*	Centralised Exchange Outlook	12
6	*We expect continued adoption and increased cryptocurrency volumes in emerging markets. Despite the inherent risks of cryptocurrencies, they offer a way for people in emerging markets to protect against severe fluctuations in the value of their own currencies and the high inflation rates that may be exacerbated by a potential recession in 2023*	Centralised Exchange Outlook	13
7	*We expect DeFi TVL to slightly improve in quarter one, with a much better performance expected in the second half of the year.*	DeFi	18
8	*We expect to see a spike in user activity in the decentralised derivatives exchanges in Q1 2023*	DeFi	20
9	*We expect Liquid Staking Protocols and their governance tokens to outperform the rest of the markets in the lead-up to the Ethereum Shanghai upgrade in March*	DeFi	21
10	*We expect the market dominance of decentralised stablecoins to increase in Q1 2023*	Stablecoins & CBDCs	25

Macroeconomic Outlook

Digital assets are currently in the midst of an unprecedented bear market where the industry is, for the first time, experiencing significant headwinds on the macroeconomic front. While in previous years severe price depreciation was, for the most part, ring-fenced around crypto, the collapse in prices in 2022 took place across most financial assets. Figure 1 outlines the annual performance of a wide range of assets over the last 5 years.

Figure 1 – Annual Performance of Assets, 2017 – 2022

Asset	2017	2018	2019	2020	2021	2022
BTC	1,291%	-72.1%	85.1%	303%	57.2%	-65.4%
ETH	8,991%	-82.4%	-9.08%	465%	403%	-68.3%
MVDA Index	437%*	-81.3%	35.8%	244%	132%	-66.0%
S&P500	18.7%	-6.59%	30.4%	15.7%	26.6%	-19.6%
NASDAQ	27.2%	-4.35%	37.9%	42.6%	20.7%	-33.6%
Gold	13.6%	-1.84%	23.1%	24.7%	-4.43%	-0.57%
Crude Oil	12.5%	-24.6%	34.5%	-21.2%	55.4%	6.04%
10y US T Bill	-0.37%	-2.52%	8.16%	11.3%	-6.22%	-19.0%

**MVDA Index began trading on the 20th of July 2017.*
Source: CryptoCompare, Yahoo Finance

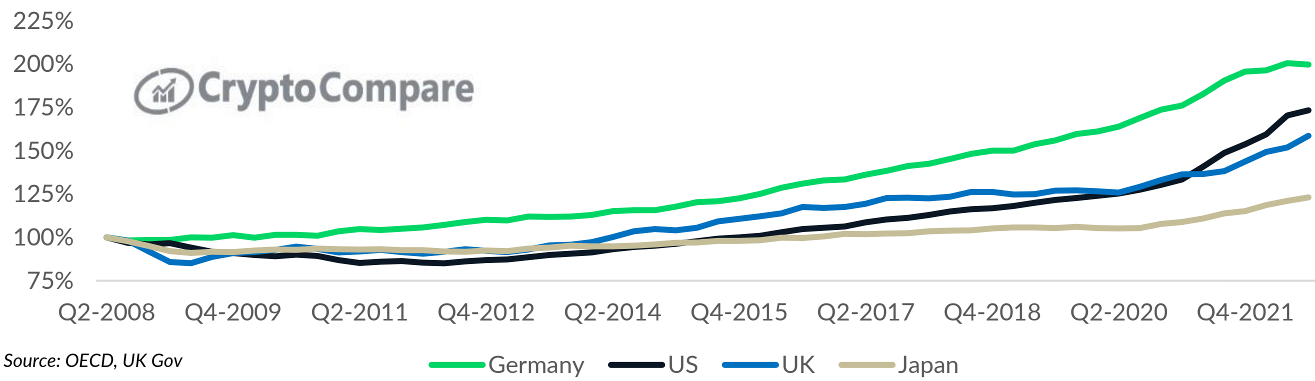
One of the observations we can make from the above is that 2022 was the first year in recent times where equity indices like the S&P500 and NASDAQ100 saw significant double-digit declines. This trend also extended to assets that have traditionally acted as a hedge against falls in equity prices – such as bonds – which also experienced double-digit declines.

The famed '60/40' portfolio, which allocates 60% weight to equities (SP500) and 40% weight to fixed income (10y Treasury), saw its 3rd worst annual performance in its history - only in 1937 and 1928 was the performance of such a portfolio lower. This highlights the severity of the macroeconomic conditions we have experienced in the last year. Rising inflation and the reversion from quantitative easing to quantitative tightening has deflated asset prices considerably, and was the driving force in the market in 2022.

Expectation 1: We expect crypto assets to outperform traditional asset classes in 2023, driven by an improvement in macroeconomic conditions in the second half of the year where market participants begin to shift to a risk-on approach

For traditional assets classes, elevated inflation and interest rates will likely continue to dampen performance in 2023. While we believe cryptoassets' price action will also be somewhat suppressed, the range of high-profile collapses in the space over the last 12 months suggests that crypto is deeper into its downward cycle than equities or other asset classes which so far have seemed unaffected by the adverse market conditions. For example, higher interest rates appear to not yet be reflected in housing, with house price indices globally still reaching all-time highs.

Figure 2 – Global House Price Indices, 2008 – 2022

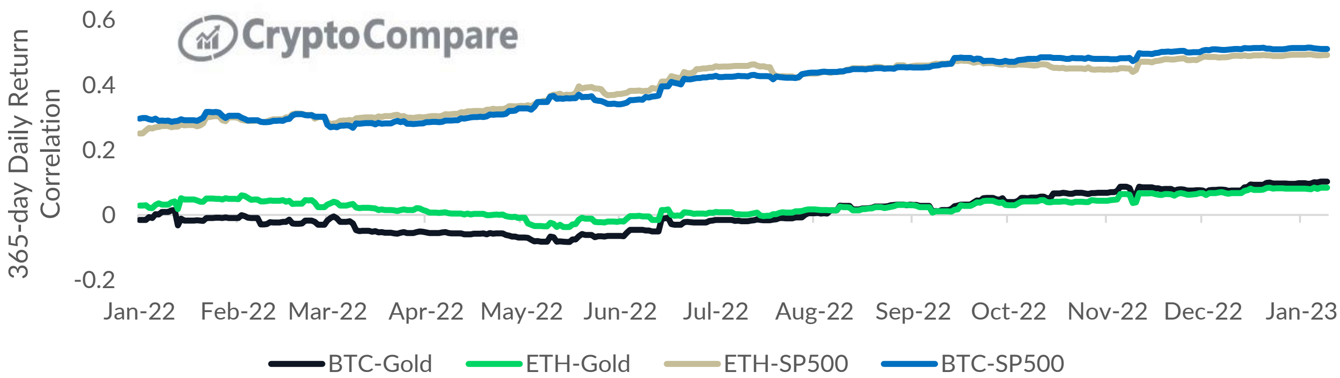


Source: OECD, UK Gov

Expectation 2: We expect the correlation between crypto and equities to decouple in 2023

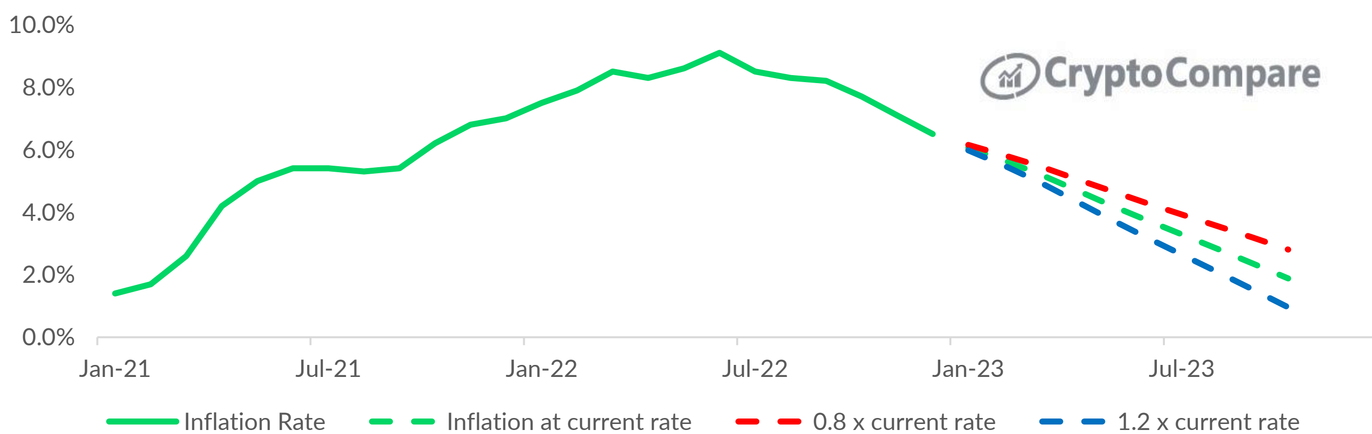
As unfavourable market conditions continue to settle in and impact the real economy, we believe the correlation of crypto assets with equities will begin to decline in 2023, particularly in the latter stages of the year. As adverse macro conditions impact the real economy, public firms will struggle to meet earnings expectations given demand side pressures, as consumers decrease consumption given continued increases in prices and higher cost of capital. On the other hand, the digital asset space will see continued innovation and marginal recovery from a hectic 2022. Of course, digital assets have seen a notable increase in correlation with traditional assets in the last year, as illustrated in figure 3, and thus we expect a reversal of this trend.

Figure 3 – 365-day Correlation between BTC, ETH, Gold, & S&P500, 2022



It appears that macroeconomic conditions have recently begun to improve, at least in the United States, as the Federal Reserve's hawkish policies seem to be taking effect. If you take the average CPI month-on-month change over the last six months as the predictive rate, we expect inflation to reach the Federal Reserve's 2% target by October 2023. Adjusting the rate of change for bull and bear cases suggests that we may reach the 2% target by August 2023 or December 2023 respectively, as displayed in figure 4.

Figure 4 – US Inflation & Projections



Of course, this is a simplified approach and we do not believe the decline in inflation will happen linearly – in fact, a recent study by [BofA Securities] suggested that it takes an average of 10 years to return to 2% inflation after it has crossed over 5% - however the deflationary force that is technology will undoubtedly contribute to declining inflation.

The above, however, is useful to discern an approximate timeframe for when inflation will return to normal levels. Importantly, it is also possible that there will be bounces in inflation over the next year, particularly with the ongoing energy crisis and the Russo-Ukrainian War still in full effect. Therefore, while at the current pace inflation will return to normal levels in January 2024, this will likely take somewhat longer.

Expectation 3: We expect interest rates to peak this year as inflation continues to decline and the global economy begins to feel the effects of sustained higher rates

The Federal Reserve has been adamant that its main focus is to combat inflation, and the most recent minutes released by the Fed reiterate this point – no Fed Member believes it will be appropriate to cut interest rates in 2023, with the terminal interest rate is expected to fall around 5.2% based on the judgment of each individual Fed Member - this is highlighted in the Federal Reserve Terminal Rate Plot in the Appendix.

While it is true that the Fed has stated they will not lower rates in 2023, the past few years have shown that the Fed has acted in a reactionary manner, rather than preemptively. We are reminded of the overused phrase 'inflation is transitory' by Fed and government officials at the beginning of 2022, a statement that was inaccurate if we are to take the Fed's current actions into account.

Therefore, we believe a likely outcome is for the higher interest rate environment to harm the economy, where other signs of weakness will arise (unemployment, housing, and GDP declines), leading to a possible U-turn in Fed policy which will see liquidity come back into markets, creating a tailwind for asset prices.

So, what does this mean for crypto assets? As outlined above, the digital asset space has seen significant headwinds in 2022, with the collapse of multiple entities causing a flushing out of leverage and hubris. Since crypto is still considered a risk asset, we expect the downward trend to continue into the first half of the year, with idiosyncratic risks still prevalent - most importantly surrounding Genesis Trading and DCG, with the former recently laying off 30% of its workforce. However, the second half of the year will likely be more positive with the possibility of easing macroeconomic conditions and continued innovation in crypto fuelling growth and adoption.

In the following sections, we cover three market areas in more detail - centralised exchanges, Decentralised Finance, and Stablecoins & CBDCs.

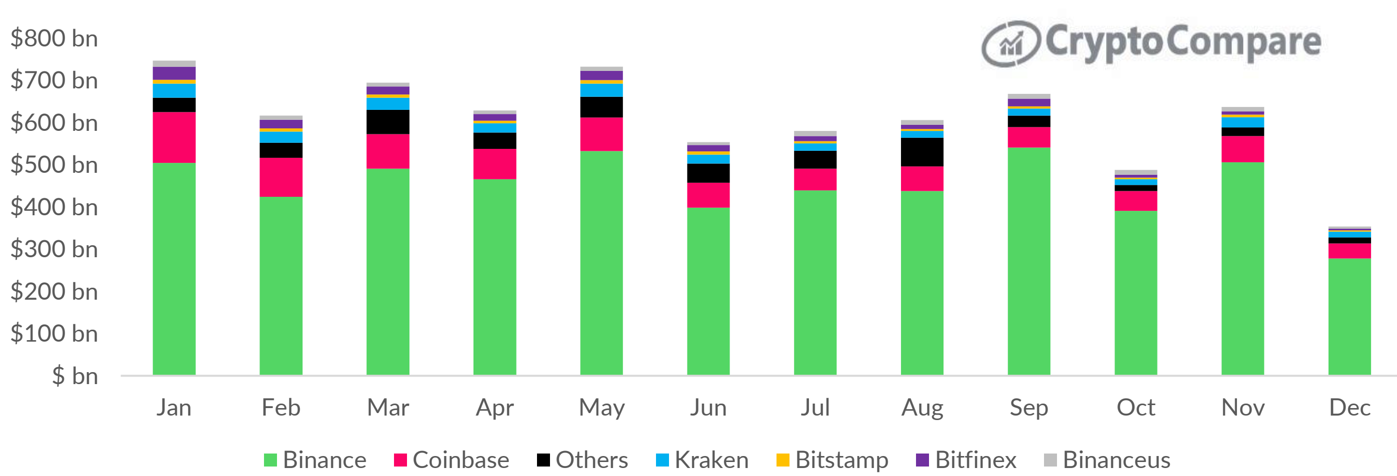
Centralised Exchange Outlook

FTX Contagion to Continue in 2023

The centralised exchange industry is currently one of the largest sectors of the cryptocurrency space, with an average daily trading volume of $110bn in 2022 (compared to an average daily trading volume of $9.0bn in Decentralized Exchanges (DEXs), according to Defillama). Some of the leading names in the industry include Coinbase ($2.21bn average daily volume (ADV) in 2022), Kraken ($726mn ADV), and Binance ($14.8bn ADV). These exchanges have played a significant role in the development and growth of the industry and have accelerated the adoption of blockchain technology in general.

Despite dominating volumes, centralised exchanges have faced numerous challenges in 2022, including bankruptcy or closures (FTX, Liquid, AAX), significant losses in market capitalisation (Coinbase), negative rumours and setbacks (Binance), and severe liquidity issues (Gemini and Crypto.com). However, the most significant event impacting exchanges last year was without a doubt the collapse of FTX. Not only are we still seeing the ripple effects of this play out, but concerns about the safety of the industry have dramatically influenced exchange outflows, volumes and liquidity on almost all centralised exchanges.

Figure 5 – Centralised Exchanges Volume, 2022 (A-AA- Graded Exchanges)



For instance, the volumes of the exchanges examined in figure 5 saw a drop of 43.0% in December relative to November. Similarly, outflows saw a spike in the last quarter of 2022, especially in November – recording a 47.8% increase in outflows compared to the 2022 average. Liquidity, however, increased during 2022 with November being the only exception.

Figure 6 – Centralised Exchanges 1% Market Depth For BTC-USD & BTC-USDT Pairs, 2022

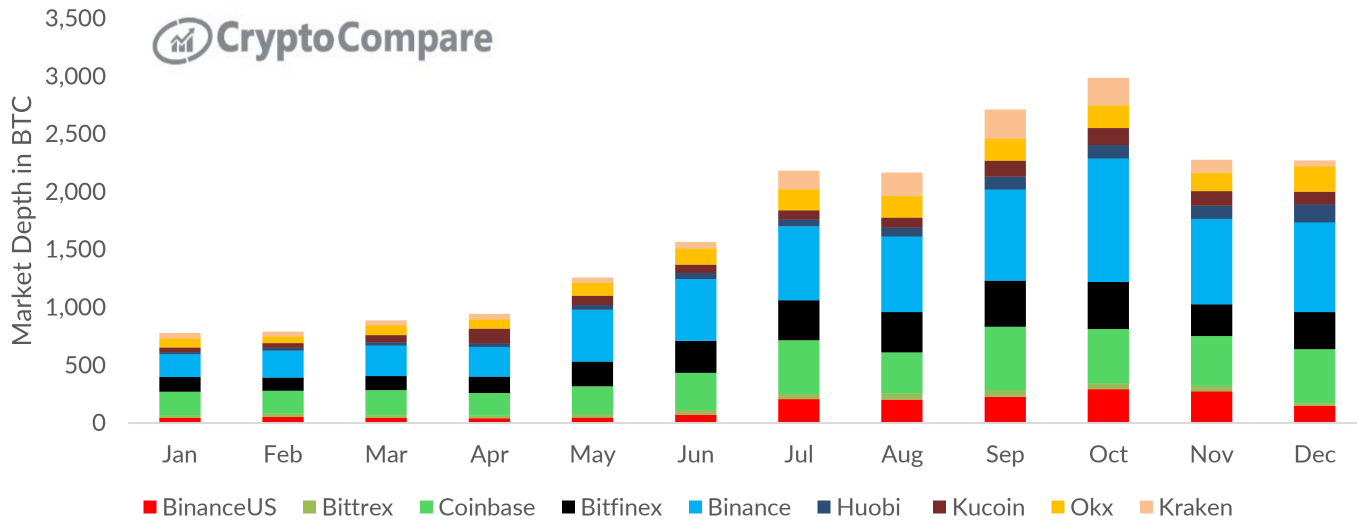
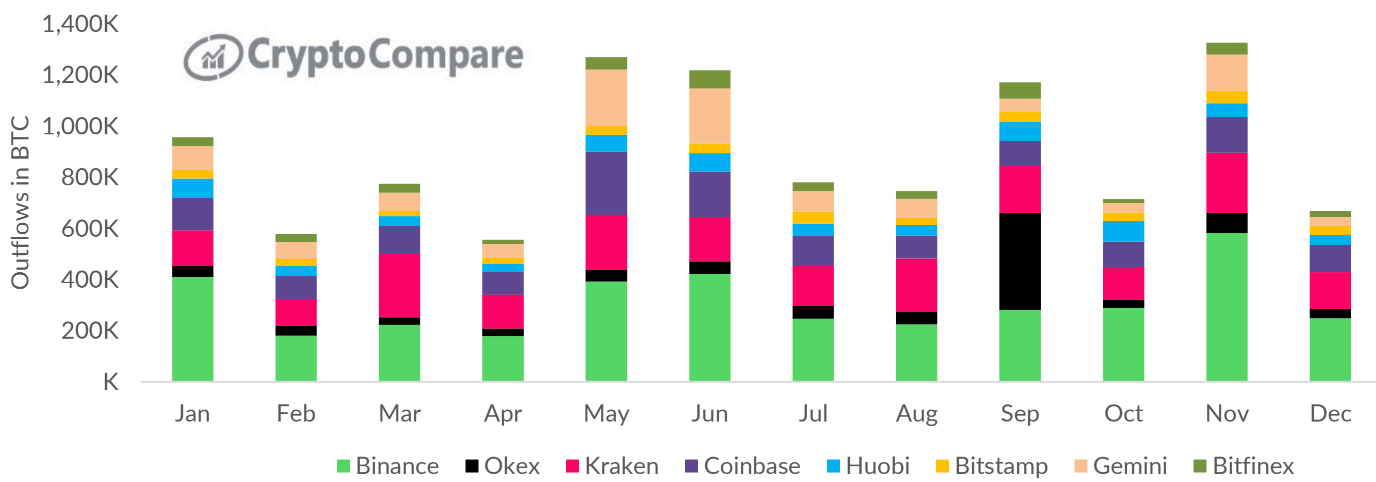


Figure 7 – Centralised Exchange Outflows in BTC, 2022



Expectation 4: We expect the bear market to continue through the first half of 2023, as well as FTX's contagion, enforcing the trend of lower volumes and more outflows from exchanges

The impact on user confidence and the headwinds created by FTX have led to two main narratives. First, traders have begun to migrate to decentralised exchanges by using self-custodial wallets as a substitute for centralised exchanges, represented by the increasing inflows on decentralised trading protocols. It is important to note that

CEXs will always have a place in crypto, given they are the main method for users on-ramp and off-ramp into and out of the decentralised finance ecosystem.

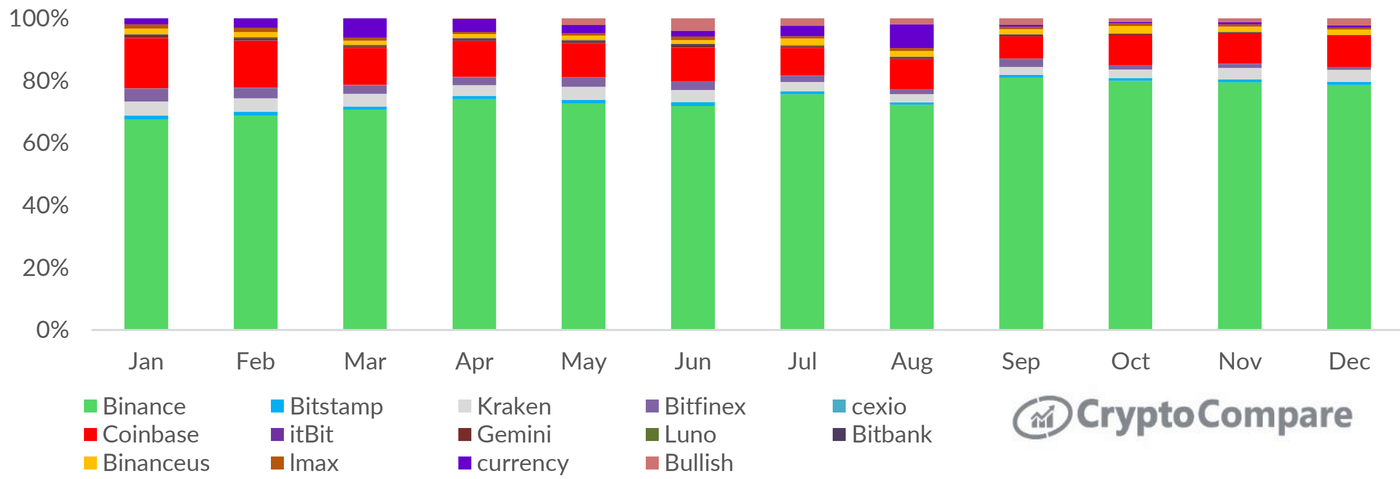
Expectation 5: In the long term we expect DEXs to gradually take market share from CEXs, thereby accelerating the overall adoption of decentralised markets and shedding light on other decentralised applications like borrowing and lending, derivatives, and yield providers

Second, centralised exchanges have begun to adopt transparency practices to restore user confidence and limit outflows. For example, in December 2022, there was a reported case of more than $15 million being stolen from users of the trading bot 3Commas, which via a security vulnerability had user API keys leaked, allowing hackers to use these keys to transfer out of user's exchange accounts. These types of incidents highlight the importance for all centralised providers to implement a robust security system and be transparent about their operations – whether it is exchanges, trading bots, portfolio trackers, or others.

Currently, many centralised exchanges have released proof of reserves and increased regulatory compliance. Some exchanges have made public announcements about their proof of reserves in response to regulatory scrutiny. CryptoCompare is closely following the latest developments relating to exchange security and transparency and will be incorporating new metrics relating to these fields in its upcoming April 2023 Exchange Benchmark.

Binance was the biggest winner in terms of market share increase in 2022, recording a 16.3% increase in market share against AA and A Graded Exchanges. The increase in market share came despite some concerns that Binance, whose token BNB is to a certain extent similar to FTX's FTT (albeit BNB is the native token to the Binance Smart Chain, an active smart contract platform) could face similar issues due to recent audits that have not had favourable outcomes (For more information read our latest blog).

Figure 8 – Binance's Growing Market Share, 2022



Expectation 6: We expect continued adoption and increased cryptocurrency volumes in emerging markets. Despite the inherent risks of cryptocurrencies, they offer a way for people in emerging markets to protect against severe fluctuations in the value of their own currencies and the high inflation rates that may be exacerbated by a potential recession in 2023

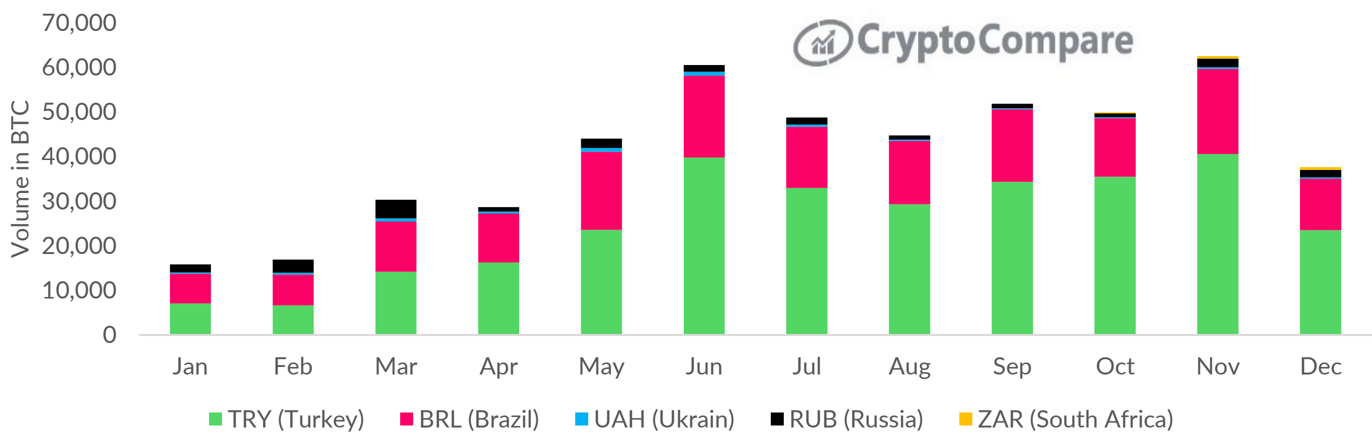
Binance's increasing market share is also a result of the growing adoption of cryptocurrencies, particularly in emerging markets. Severe inflation in these markets has led to increased investment in crypto assets as people try to safeguard their wealth from devaluing currencies. Binance, being one of the most widely used exchanges, has been able to capitalize on this trend and is often the most available choice for users in emerging markets. For example, it saw its RUB and UAH volumes increase notably in March, following the beginning of the war in Ukraine – illustrated in Figure 10.

Figure 9 – Inflation Figures in some of Binance's Operating Markets, 2022

	Turkey	South Africa	Brazil	Ukraine	Russia
Q1, 2022	54.7%	5.8%	10.7%	11.5%	8.8%
Q2, 2022	74.0%	6.6%	11.9%	18.6%	17.2%
Q3, 2022	81.1%	7.6%	8.7%	23.5%	15.1%
Q4, 2022	78.1%	7.5%	6.1%	26.6%	12.8%

Source: Trading Economics

Figure 10 – Emerging Markets' Adoption of Binance (BTC-fiat Trading Volume), 2022

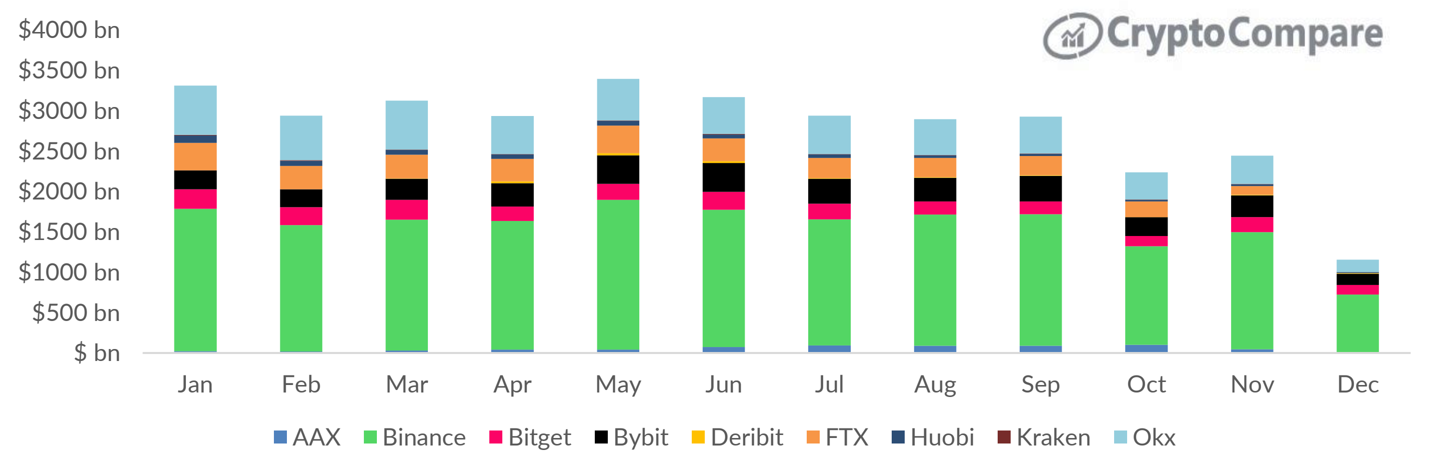


Similarly to Binance, other exchanges have also benefited from the collapse of FTX including Kraken, Coinbase and Bitstamp. These three exchanges saw their market share increase by 27.4%, 13.9%, and 9.70% in the fourth quarter of 2022, recording a share of 3.90%, 9.90% and 1.00%, respectively, for the quarter. Some of the exchanges gaining market share are those with a more acute focus on security and transparency. For example, Kraken has been a long-term proponent of establishing Proof of Reserves as a requirement for exchanges – allowing users to be confident that their selected exchange holds their deposits safely. We expect exchanges with this focus to excel in 2023.

Derivatives in 2023: Continuation of Decline

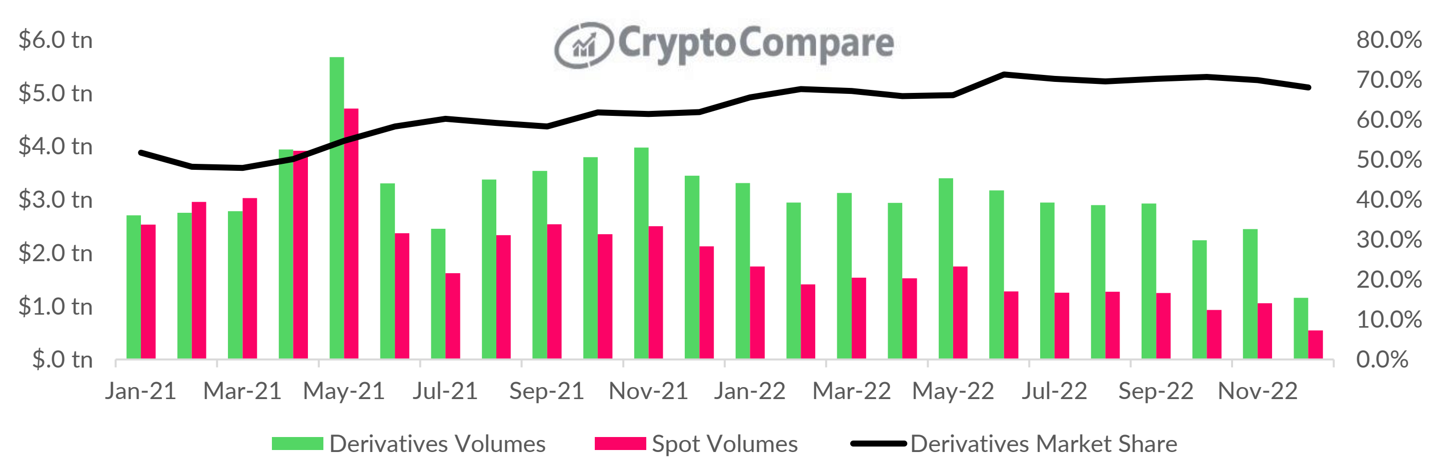
In 2022, derivatives volumes have been declining steadily following the downward trend in the entire market. In December, volumes declined 65.0% compared to Jan 2022, to $1.16tn. Despite the drop, derivative volumes have continued to gain market share over spot volumes with a 68.5% market share in 2022 compared to 56.1% in 2021. The relative increase in derivative volumes could be attributed to the maturity of the industry and the participation of institutional investors and more sophisticated traders.

Figure 11 – Derivatives Volumes on Centralised Exchanges, 2022



Similar to spot volumes, Binance remained the top derivatives exchange, achieving the highest market share of 62.7% in December increasing from 53.4% market share in January 2022. Based on the data above and current trends, we expect derivatives volumes to further plummet in the first innings of the year, forced by market behaviour and the continuation of the bear market, while we expect that derivatives further outperform spot in the latter stages of 2023 as traders take leveraged positions to make up for their losses and beat the bear market.

Figure 12 – Derivatives Volumes vs. Spot Volumes, 2022

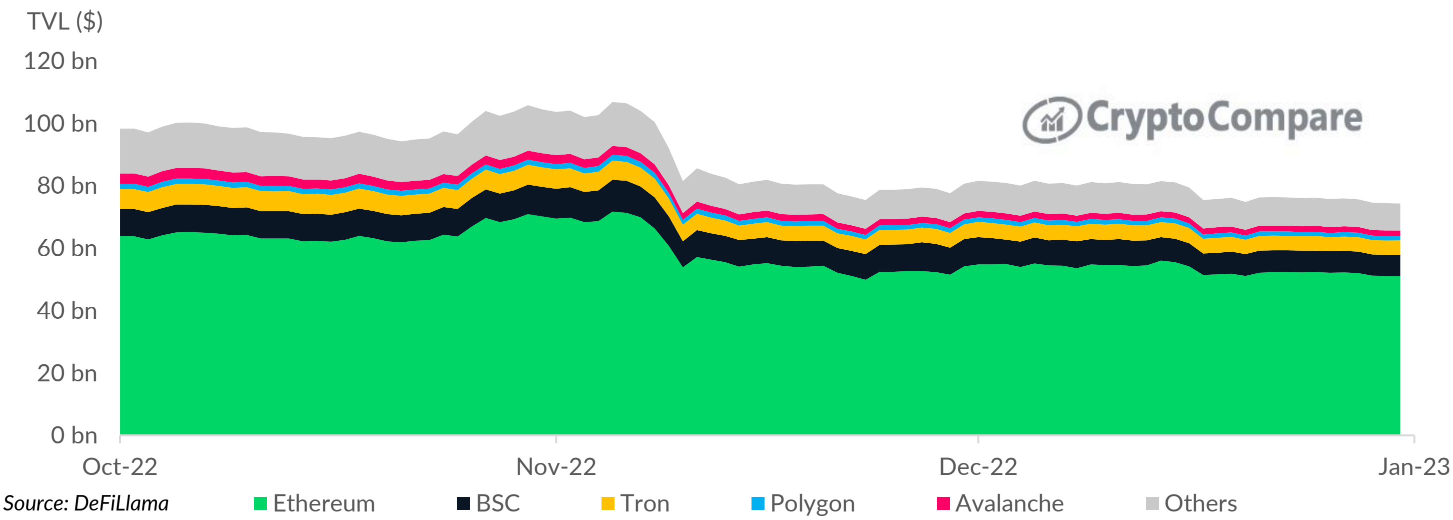


DeFi

Q4 Recap

The total value locked (TVL) in DeFi fell 24.7% to $74.3bn, recording the second-largest quarterly TVL decline in DeFi history (2018 - Present), only behind the collapse of the Terra ecosystem in Q2 2022. This also meant that DeFi recorded its first yearly decline in TVL in its history, falling 76.4% from the start of the year, further highlighting the subpar performance of crypto assets in 2022.

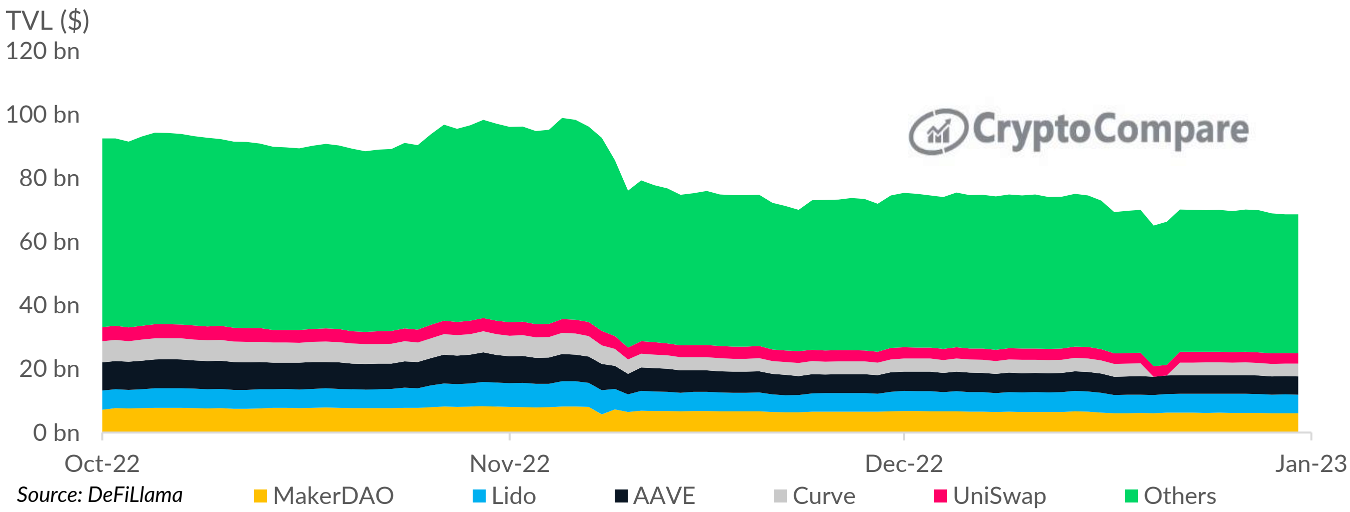
Figure 13 – Total Value Locked by Chain, Q4 2022



Source: DeFiLlama

Ethereum remains the largest network in DeFi with a dominance of 68.7% - increasing its market share from 64.8% in Q3, despite TVL in the chain falling 20.2% to $51.0bn. The increase in Ethereum's market share was largely due to the larger drawdown in token prices and TVL in other ecosystems. Notably, the total value locked in Solana fell 81.7% to $445mn in Q4 following the collapse of FTX and Alameda Research, which were widely associated with the ecosystem. BSC and Tron followed Ethereum in TVL, falling 22.4% and 27.7% to $6.83bn and $4.58bn respectively.

Figure 14 – Total Value Locked by Protocols, Q4 2022



Source: DeFiLlama

Figure 15 – Top 5 Protocols, Recent Events, Q4 2022

Protocol	Events
MakerDAO	MakerDAO, the protocol behind the DAI stablecoin, remained the largest DeFi protocol in Q4 with its TVL falling 15.4% to $6.07bn. The platform was at the centre of controversy last quarter when it voted to pass a restructuring plan called 'Endgame' that replaces the existing departments in the DAO with 'mini DAOs'. It was alleged that the cofounder, Rune Christensen, had his influence on 63% of the votes that passed the proposal, a blow to the ethos of decentralisation.
Lido Finance	The liquid staking platform was one of the better performers in Q4, with its TVL falling just 2.92% to $5.88bn. The staking protocol has seen a surge in total value locked with the liquid staking derivative narrative and its governance token LDO has doubled in price in 2023.
AAVE	The lending platform saw its TVL fall 36.7% to $5.73bn. The protocol gained a lot of attention after releasing the whitepaper of its much-anticipated decentralised stablecoin, *GHO*, which is set to launch in early 2023.
Curve	The stableswap protocol saw its TVL fall 40.4% to $3.94bn. The exchange also launched the whitepaper for its upcoming stablecoin crvUSD which uses a novel lending-liquidating AMM algorithm for its operation.
Uniswap	The largest DEX, Uniswap saw its TVL fall 25.7% to $3.31bn. The exchange launched NFT Trading on its platform in November. The largest exchange also outtraded all CEXs except Binance during the FTX collapse.

The collapse of FTX is likely to expedite the regulatory oversight of crypto this year as the misuse of customer funds by FTX will force further regulatory crackdown on other centralised exchanges. Moreover, if past examples are to go by, authorities have often failed to distinguish between centralised and decentralised products, a significant concern for the currently self-regulated DeFi space. The SEC filing of the first insider trading case in crypto and the arrest of famed Mango Markets exploiter, Avraham Eisenberg, highlights that regulators will differentiate between what is unregulated and what is illegal. Avraham Eisenberg suggested his exploit of Mango Markets was a 'highly profitable trading strategy', however this involved price manipulation and has therefore led to a lawsuit from the CFTC. We expect similar cases to arise in 2023 as regulators pay more attention to DeFi exploits and hacks.

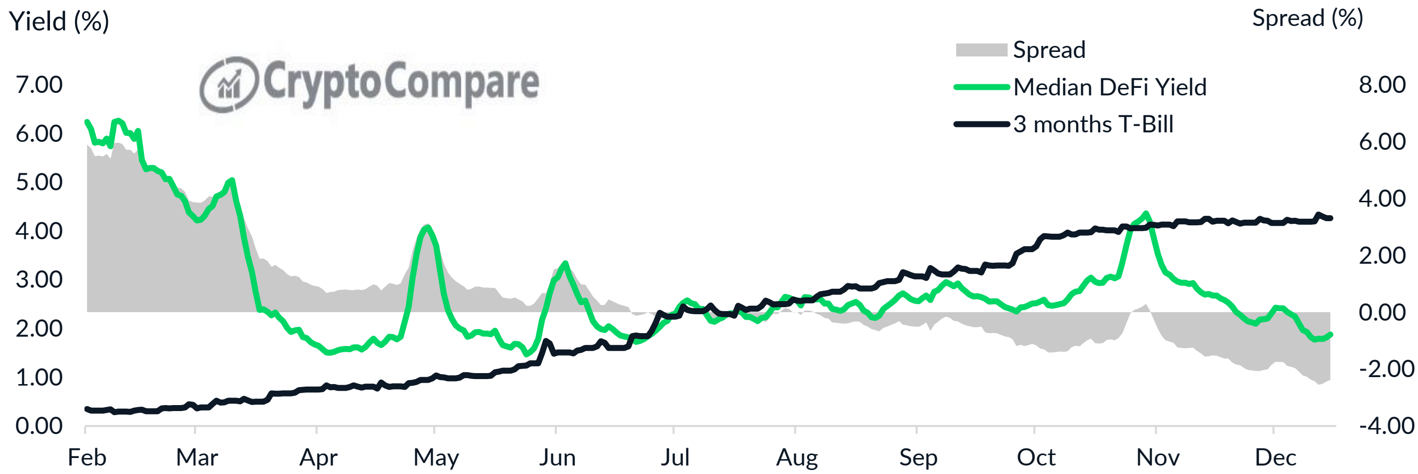
DeFi TVL: In Hope of a Fed Pivot

Expectation 7: We expect DeFi TVL to slightly improve in quarter one, with a much better performance expected in the second half of the year

The negative macroeconomic landscape we described earlier has been a major driver in the severe decline of TVL in DeFi. We expect high inflation and interest rates to continue to deter the performance of risk-on assets in early 2023 and improve in the second half of the year.

One important factor that was increasingly prominent in the DeFi sector last year is the decline in the annual yield on DeFi Protocols, particularly relative to yields in traditional finance, which have moved upward due to quantitative tightening. In 2022, the median yield of all liquidity pools in the DeFi sector fell from 6.24% to just 1.87% at the end of the year. This is lower than the 3-month Treasury Bill yields which currently sit at 4.40%. Alongside declining token prices, low yields have certainly been a factor contributing to the decline in TVL. As rewards diminish, it is wiser for investors to use their capital on risk-free treasury yields than something that's inherently more speculative, such as Defi protocols. However, DeFi protocols remain a viable option for investors who prefer to earn yield without relying on centralised solutions.

Figure 16 – Median DeFi APY vs 3-Months Treasury Bills Yield



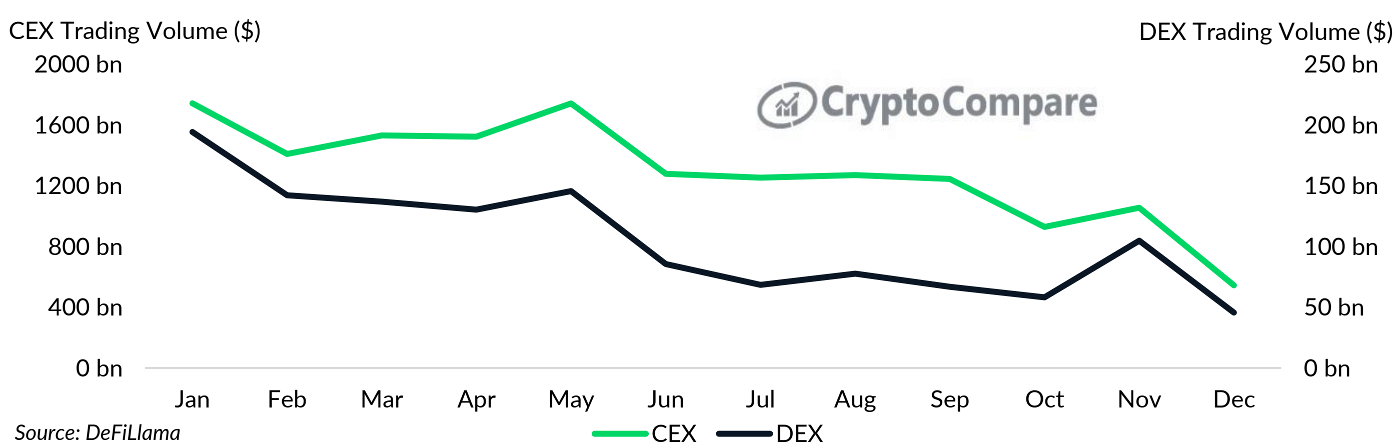
Source: DeFiLlama

Given our projections of a dovish US Federal Reserve interest rate decision and slower inflation in the second part of the year, we expect the total value locked to alter course as economic conditions and market sentiment improves.

All Hands on DEXs

The collapse of FTX in November further highlighted the shortfalls and dangers of centralised avenues and has instigated more doubts and concerns over the legitimacy of other centralised exchanges, resulting in a spectacular drop in trading volumes in December 2022. However, the low trust in centralised exchanges has led to an increased spotlight on their decentralised alternatives.

Figure 17 – Trading Volumes: Centralised Exchanges vs Decentralised Exchanges, 2022



Source: DeFiLlama

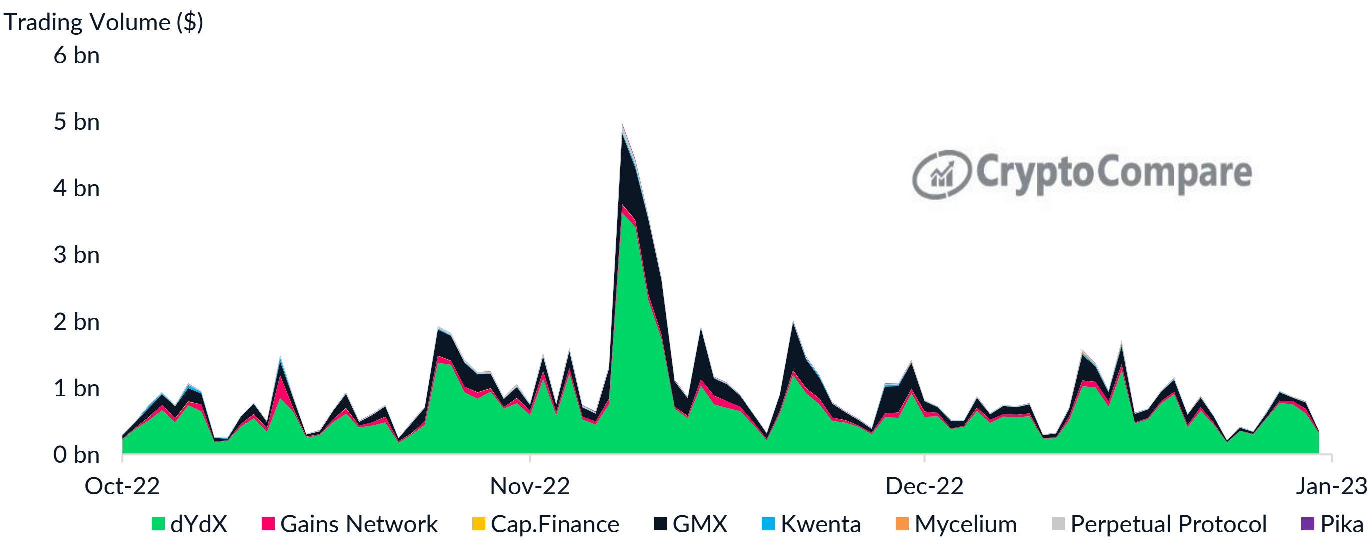
As mentioned earlier, we do not expect the trading volume on decentralised platforms to overtake centralised exchanges any time soon, as the latter remains an important jigsaw piece in the web3 landscape for onboarding newer participants. Spot trading volume on decentralised exchanges in 2022 totalled $1.26tn, this is pale in comparison to the $15.5tn traded on centralised exchanges. We expect decentralised exchanges to increase their market dominance which currently stands at 8.09%.

Uniswap, which dominates the DEX sector with a market share of 47.5%, traded $103bn in trading volume in 2022 – only behind Binance and Coinbase when compared to A-AA graded exchanges. The outflow from centralised exchanges during the FTX collapse saw the DEX out-trade all centralised exchanges bar Binance in trading volume, suggesting the rise of DEXs may very well be underway.

Expectation 8: We expect to see a spike in user activity in the decentralised derivatives exchanges in Q1 2023

Decentralised derivatives and perpetual exchanges are another area in DeFi that is poised for growth this year. The rise of GMX, a DEX on Arbitrum and Avalanche, has been fascinating to watch in the second half of 2022. Since then, several newer derivatives exchanges have launched including Gains Network, and Perpetual Protocol, and will be competing with GMX to take the throne off dYdX, which is currently the largest decentralised derivatives exchange. These exchanges have seen an increase in user base since the collapse of FTX.

Figure 18 – Daily Decentralised Derivatives Exchange Trading Volume, Q4 2022



Source: Dune Analytics

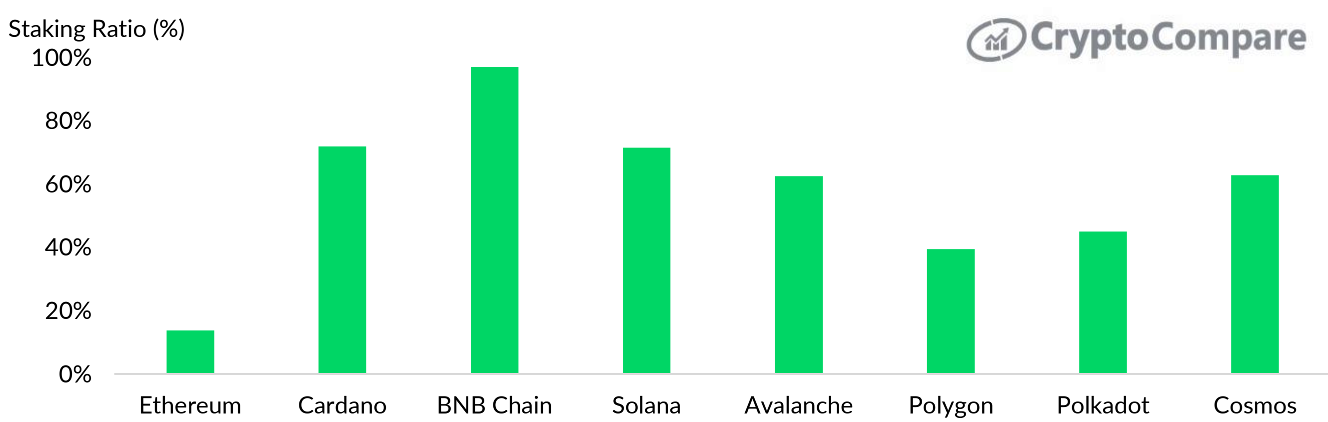
Liquid Staking Derivatives

Expectation 9: We expect Liquid Staking Protocols and their governance tokens to outperform the rest of the markets in the lead-up to the Ethereum Shanghai upgrade in March

Another narrative to look forward to next quarter is that of Liquid Staking Derivatives, or 'LSD' for short. Liquid staking protocols provide users with staking derivatives such as stETH in return for staking their assets, which can then be used for other functionalities including borrowing and lending. One of the primary concerns for users taking part in Ethereum's Proof of Stake was the lockup period of ETH in case they want to move the asset elsewhere. These protocols alleviate such concerns as the staking derivatives allow users to earn a yield on their assets with fewer restrictions.

The Ethereum Shanghai upgrade, which allows staked ETH to be withdrawn from the beacon chain, is set for completion in March. The upgrade, which significantly reduces the risk of staking Ethereum as it turns unlocked, has led to increased speculation on the related protocols and their governance tokens. One of the driving factors behind this thesis is that only 13.7% of eligible ETH token is currently being staked. This represents a modest amount when compared to other Proof of Stake networks such as Binance Chain, Solana and Avalanche, as outlined in the chart below.

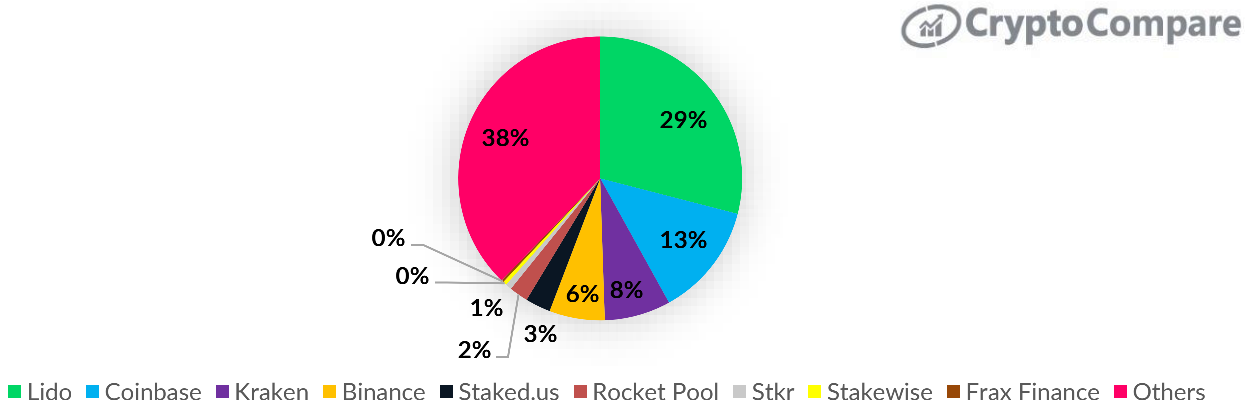
Figure 19 – Layer 1 Networks: Staking Ratio, January 2023



Source: Staking Rewards

Lido is the largest staking pool with a market share of 29.0%. Centralised Exchanges Coinbase, Kraken and Binance are the next largest entities with deposits on the Beacon Chain. Smaller staking pools including Rocket Pool and Stakewise, which have a market share of 2.20% and 0.40%, respectively, have been the beneficiaries of a lot of speculation and have outperformed the rest of the markets in price action in recent weeks.

Figure 20 – Beacon Chain Depositors, Q4 2022

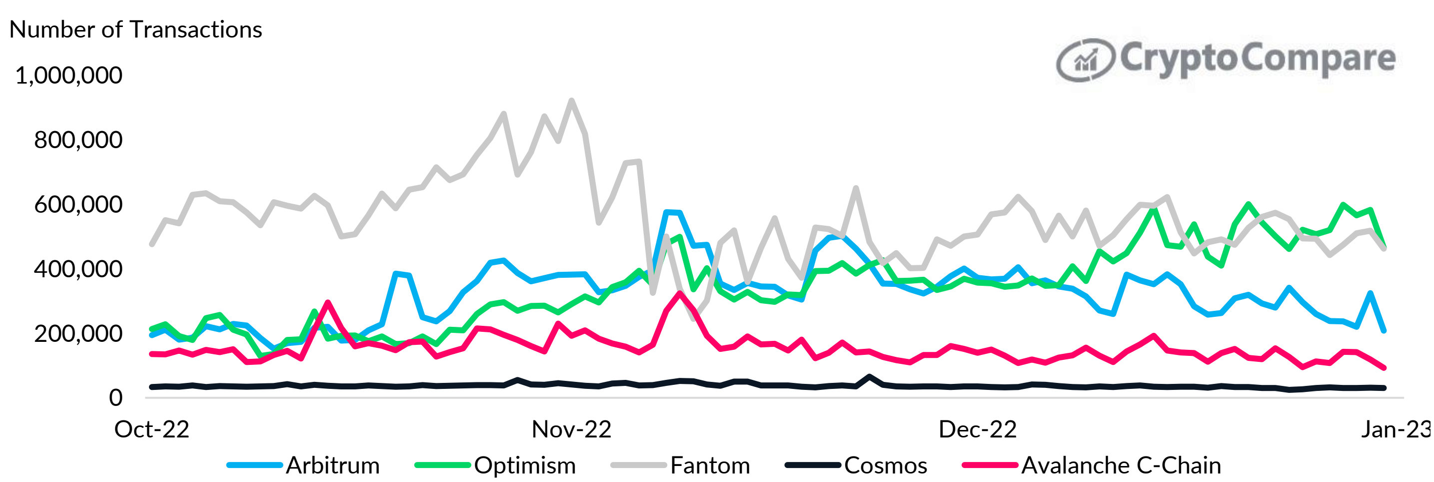


Source: NansenAI

Layer 1s and 2s: Risks and Rewards

As mentioned in the 2022 Q4 Outlook, Layer 2 blockchains, including Arbitrum and Optimism, have witnessed superior growth in performance compared to Layer 1 networks such as Cardano, Harmony, and Algorand. Arbitrum was the only chain in the top 10 that recorded a growth in TVL this quarter, rising 7.85% to $1.02bn – coinciding with the launch of Arbitrum Nova and anticipation of their upcoming token airdrop.

Figure 21 – Layer 1s vs Layer 2s: Number of Transactions, Q4 2022



Source: Block Explorers

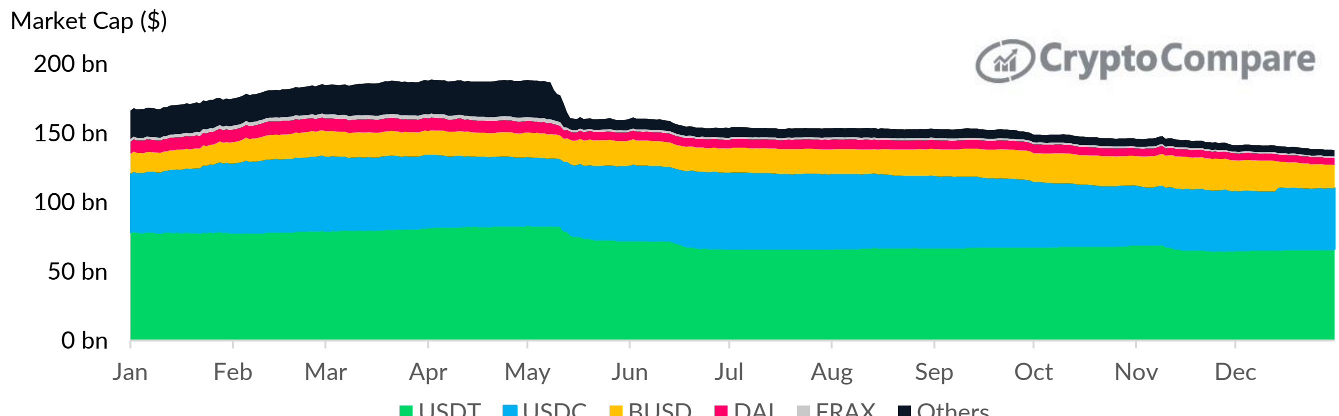
After the collapse of FTX and the poor macroeconomic conditions this year, the prices of many alt-Layer1s have fallen to levels which can now be considered attractive from a risk-to-reward perspective. Some of these networks, such as Solana, which was down 94.1% in 2022, now have asymmetrical upside potential and are likely to see a spike in growth from the current levels in the next quarter. Cosmos Hub is another chain that is likely to see growth this quarter with its interchain security which is set to launch in Q1.

The return of prolific developer, Andre Cronje, has also made Fantom a suitable candidate for growth in the ecosystem next year. Fantom has now been focusing on using zero-knowledge technology as a scaling solution. Moreover, the network has introduced changes to its gas fee-burning mechanisms, which now act as an added source of revenue for protocols in the ecosystem. These changes, combined with their strong balance sheet, make Fantom an ecosystem that is poised for growth this year.

Stablecoins & CBDCs

Though the collapse of the algorithmic stablecoin TerraUSD was a stain on the sector, stablecoins have arguably been the biggest success story of the past year. The asset class proved incredibly useful for investors and traders alike amid the falling prices of crypto assets this year and established itself as a store of value against the rising inflation rate in various parts of the world.

Figure 22 – Stablecoin Market Capitalisation, 2022



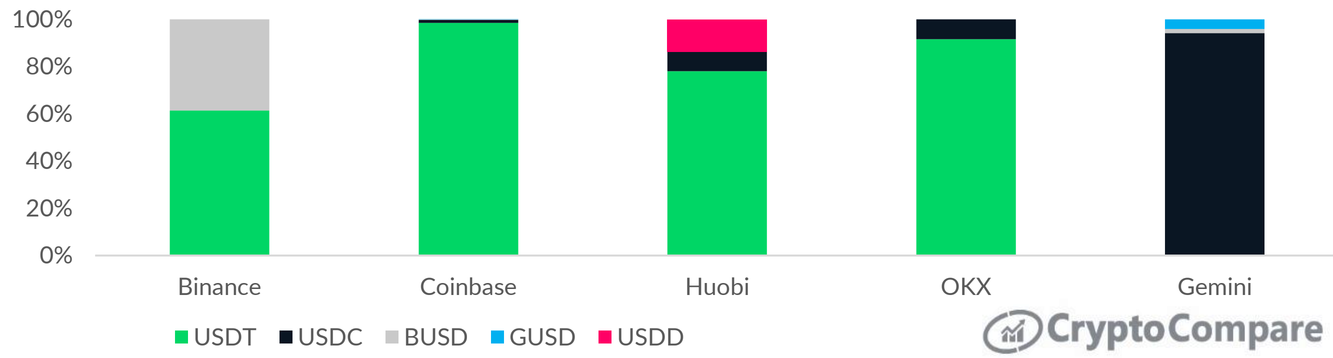
Source: DeFiLlama

The market cap of stablecoins, which currently stands at $138bn, has grown its dominance over the total crypto market cap to 16.6% from 6.76% at the start of 2022. Though Tether has remained the largest stablecoin with a market capitalisation of $66.2bn, its market share has declined due to the rise of Circle's USDC and Paxos' BUSD.

The rise of USDC and BUSD this year has given way to the so-called 'Second Great Stablecoins War', where centralised exchanges have started to favour a certain stablecoin on their platform. Back in September, Binance announced its new feature called 'BUSD auto-conversion' which automatically converts users' balances of USDC, USDP and TrueUSD to BUSD on a 1:1 basis, to enhance liquidity and capital efficiency for the users.

In December, Coinbase encouraged users to convert their USDT for 'the more trusted and reputable USDC', which they cofounded with Circle without incurring any fees. Huobi, after its takeover by Tron founder Justin Sun, delisted its native stablecoin HUSD after auto-conversion to USDT. The exchange also introduced zero trading fees for trading pairs with Tron's native stablecoin USDD.

Figure 23 – Stablecoin Volumes Market Share by Exchange, December 2022

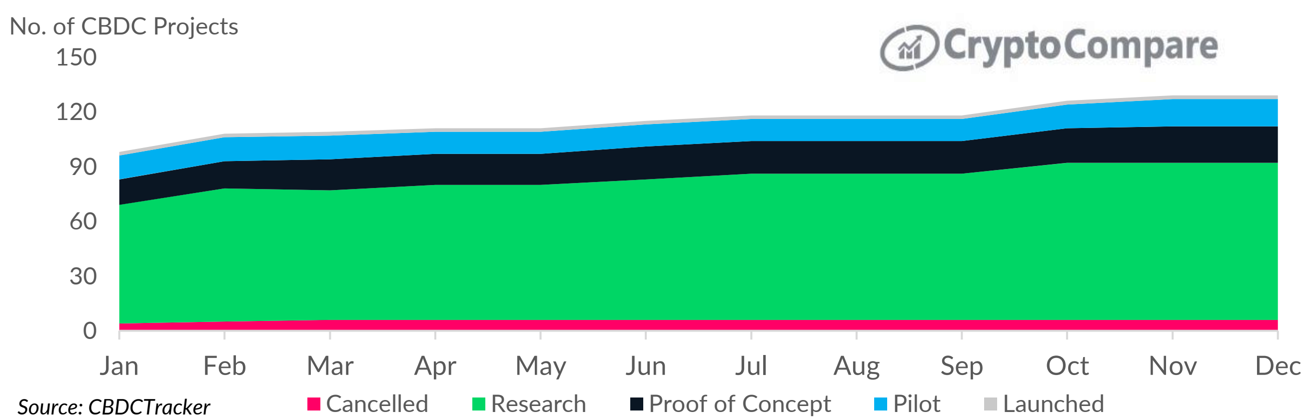


Expectation 10: We expect the market dominance of decentralised stablecoins to increase in Q1 2023

Decentralised stablecoins have largely taken the back seat to centralised stablecoins, with DAI and FRAX, the largest in the sector, seeing their market cap fall 43.6% and 43.0% to $5.06bn and $1.02bn, respectively. However, as users take an increased interest in decentralised solutions following the collapse of centralised systems last year, we expect the market share of decentralised stablecoins to grow in comparison to their centralised counterparts this year. Moreover, now that DeFi protocols have seen the potential in the total addressable market of stablecoins, we expect to see the launch of more decentralised stablecoins this quarter. The upcoming launch of stablecoins GHO, crvUSD, dpxUSD, and DINERO by AAVE, Curve, Dopex and Redacted Cartel respectively, are a sign of this trend.

On the other side of decentralisation, we have seen steady progress in the development of CBDCs this year. The number of projects under the research and proof-of-concept phases has risen to 86 and 20, respectively, from 65 and 13 projects at the start of the year. Currently, there are 15 projects that are in pilot programs and two officially launched CBDCs - Sand Dollar and JAM-DEX in the Bahamas and Jamaica.

Figure 24 – CBDC Projects, 2022



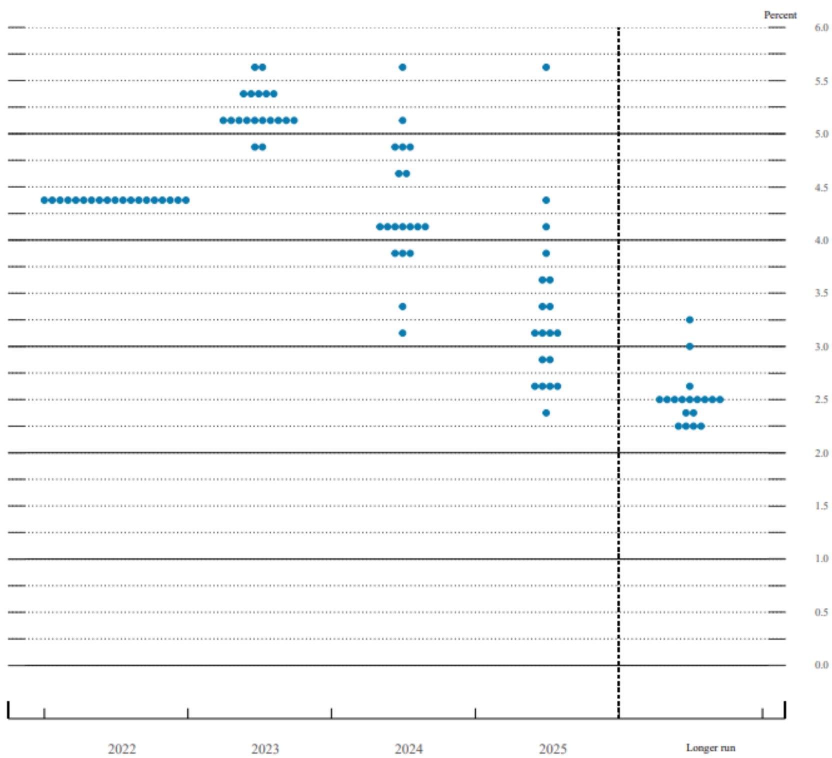
Source: CBDCTracker

The growth in the number of CBDC projects all points towards the eventual inevitable future of digital currencies issued by central banks around the world. We expect the advancement of CBDC projects to continue in 2023 with more countries launching their proof-of-concept and pilot programmes to explore the possibilities. However, there are still many concerns about the effect of CBDCs on privacy, security and the extent of control on individuals' personal finance by governments which needs to be addressed in time.

While we believe the launch of CBDCs will be beneficial for the crypto space in the short-term, as it will bring more attention to blockchain technology and digital assets, in the long term it may hinder the shift to decentralised and self-custodial finance.

Appendix

Federal Reserve Terminal Rate Plot



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Report	Description
Exchange Review	Captures key developments within the cryptocurrency exchange market — providing readers with an in-depth analysis of exchange volumes, trading activity, and derivatives open interest.
Digital Asset Management Review	Tracks and provides analysis of the most innovative institutional products in the industry, assessing volumes, assets under management (AUM), and product flow trends.
Exchange Benchmark	Brings clarity to the crypto asset exchange sector. Two years on, it has become the industry standard for assessing and evaluating cryptocurrency exchanges, with the methodology and rankings now being utilised to help create financial products and indices.
Asset Report	Provides professionals in the financial services space, particularly the investment management industry, with a summarised analysis of the latest movements in five of the largest cryptocurrencies.
Market Outlooks	A quarterly report that identifies the most important developments of the last quarter, which may thereafter set the tone for key trends to look out for in the following months. This includes references to the macroeconomic environment, DeFi, NFTs, stablecoins, and more.

Topic Deep Dives

Report	Description
Liquidity Report	Created in collaboration with Bitstamp — a first of its kind report — it examines the intricacies of digital asset liquidity and compares it across top-tier exchanges to find the true liquidity of digital asset exchanges.
UST's Fall From Grace	Summarises the depegging of UST and subsequent debacle of LUNA and the Terra ecosystem, including analysis on the ripple effects of the event and where it situates the digital asset industry.