



# ASSET REPORT

DECEMBER 2022

## **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**

Cryptocurrencies were born in 2009 when Bitcoin was released as the first global decentralised currency. In the last 13 years, crypto has grown into an investable asset class of its own, with exchanges providing a platform to buy and sell thousands of different currencies. However, for most of its history, the asset class has mainly been fuelled by a purely retail investor base who have arguably left institutional investors and investment management professionals behind when it comes to grasping the opportunities in the cryptocurrency space. This began to change in 2020 when well-regarded investors and corporations started to pay more attention to this growing asset class.

A major challenge for institutional investors and other professionals looking into the sector is the lack of reliable data. This complicates the analysis of investment opportunities in cryptocurrencies, specifically when considering crypto as part of a wider investment portfolio. The Asset Report was initiated to tackle this challenge.

CryptoCompare's Asset Report aims to provide professionals in the financial services space, particularly the investment management industry, with key insights relating to some of the largest cryptocurrencies by market capitalization. The report frames cryptocurrencies as an investable asset that has a role to play in global investment portfolios, and thus also compares these cryptocurrencies with traditional asset classes

This review is conducted on a monthly basis and caters to institutional investors, analysts and regulators interested in more specific analyses on the performance and risk metrics of the largest available cryptocurrencies.

For questions related to this research or any potential requests, feel free to contact CryptoCompare's research department at [research@cryptocompare.com](mailto:research@cryptocompare.com).

### **Disclaimer:**

The content found in this report is for informational purposes only, you should not construe any such information or other material as legal, tax, investment, financial, or other advice.

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## Featured Currencies

### 1. BTC

Bitcoin is the world's first decentralised cryptocurrency, having been released in 2009 by the pseudonymous developer(s) Satoshi Nakamoto. It utilises Proof of Work (PoW) mining to validate transactions between decentralised parties and to ensure the security of the blockchain network. It is the largest cryptocurrency by market capitalization, having reached a \$1T valuation for the first time in February 2021.



### 2. ETH

Ether is the native currency of Ethereum, an open-source blockchain created by Vitalik Buterin in 2014. It has a large range of decentralised applications facilitated via smart contracts, including peer-to-peer lending, insurance, and yield farming. Ethereum historically used a PoW consensus protocol, however, it successfully transitioned to a Proof of Stake (PoS) consensus after 'The Merge' on September 15<sup>th</sup>, 2022.



### 3. SOL

SOL is the native token of the Solana blockchain, which was released in April 2019. It is a smart contract platform that saw incredible growth in 2021. It uses a combination of PoS and Proof of History to validate transactions and has grown to become one of Ethereum's biggest competitors in the Decentralised Finance space.



### 4. ADA

ADA is the cryptocurrency of the Cardano blockchain network, which was launched in 2017 by Charles Hoskinson, a co-founder of Ethereum. It is one of the largest PoS blockchains, which validates transactions by selecting validators on the blockchain proportionally to the amount of ADA they own and stake. It is an academically rigorous project, which launched smart contract functionalities in September 2021.



## Latest News

TOPIC	STORY	DATE
Cardano	<a href="#">Cardano Founding Entity EMURGO Launches Cardano Spot, a Social Network to Connect Cardano Enthusiasts</a>	Dec 5
Bitcoin	<a href="#">Bitcoin's Stagnant Crypto Dominance Points to Investor Exodus After FTX Bankruptcy</a>	Dec 6
Solana	<a href="#">Solana DeFi Exchange Raydium Hacked for Over \$2 Million</a>	Dec 16
Bitcoin	<a href="#">Bitcoin miner Core Scientific is filing for Chapter 11 bankruptcy – but plans to keep mining</a>	Dec 20
Bitcoin	<a href="#">Russia Close To Legalizing International Trade In Bitcoin, Crypto: Head Of Finance Committee</a>	Dec 23
Solana	<a href="#">Mango Markets Exploiter Eisenberg Arrested in Puerto Rico</a>	Dec 27
Solana	<a href="#">DeGods and Y00ts NFTs are bridging off Solana: Here's why</a>	Dec 27
Cardano	<a href="#">Cardano Founder Pokes Fun at Gemini After Alleged Data Leak</a>	Dec 30
Ethereum	<a href="#">Ethereum Name Service Recorded Over 2.8M Domain Registration in 2022</a>	Jan 4

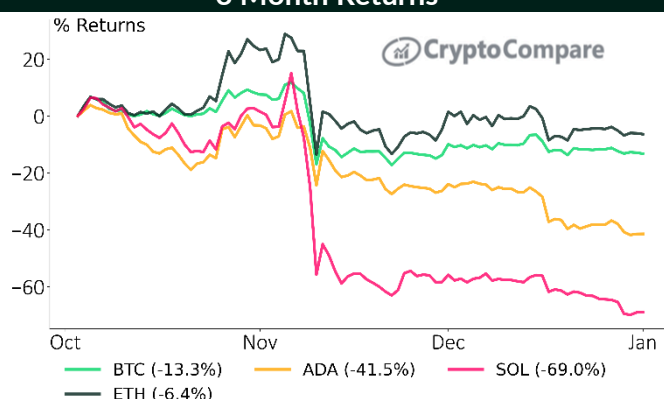
# Asset Performance & Market Metrics

## Summary

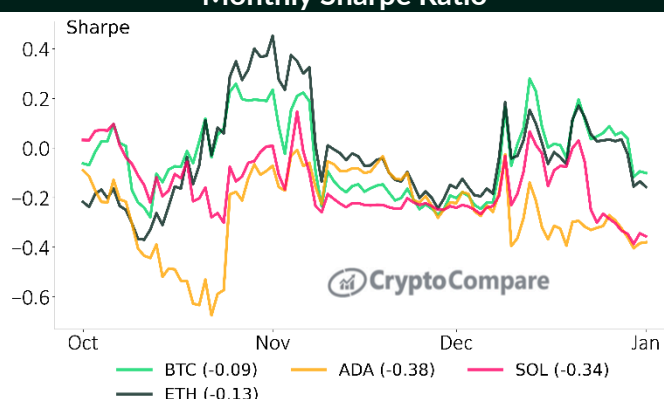
Digital assets continued their downward trajectory in December, albeit with significantly less volatility than the month prior. BTC closed the year down 64.2%, its second worst annual performance in its 13 year history. However, it still outperformed other crypto assets, with ETH and SOL down 67.5% and 94.1% respectively in 2022. Traditional asset classes also saw negative performances, with the S&P 500 and NASDAQ down 5.90% and 8.37% respectively. December also saw significantly lower volumes than the months prior, with BTC recording a 42.6% month-on-month decline in USDT volumes across centralised exchanges.

	BTC	ETH	ADA	SOL	GOLD	S&P500	NASDAQ
<b>EoM Price</b>	\$16,531	\$1,195	\$0.25	\$9.95	\$1,820	\$3,840	\$10,466
<b>Market Cap</b>	\$318bn	\$146bn	\$8.53bn	\$3.65bn	\$12.4tn	-	-
<b>Monthly Return</b>	-3.68%	-7.72%	-23.0%	-29.7%	4.22%	-5.90%	-8.37%
<b>YTD Return</b>	-64.2%	-67.5%	-81.2%	-94.1%	-0.57%	-19.6%	-36.0%
<b>30-day Volatility</b>	27.9%	47.3%	57.0%	76.7%	18.5%	17.7%	22.5%

## 3 Month Returns



## Monthly Sharpe Ratio

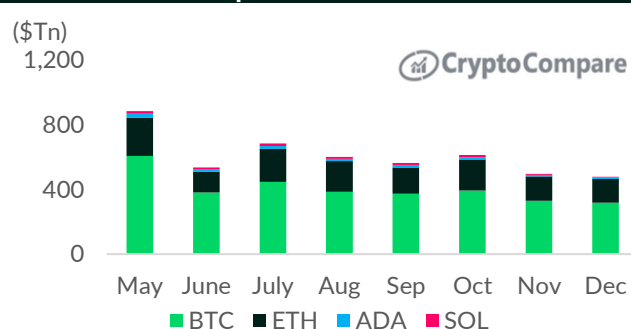


In December, all four crypto assets had negative risk-adjusted returns and saw significant declines in price. Over the last three months, BTC and ETH have outperformed both in absolute returns, and in risk-adjusted returns, as per the charts above.

## Volatility

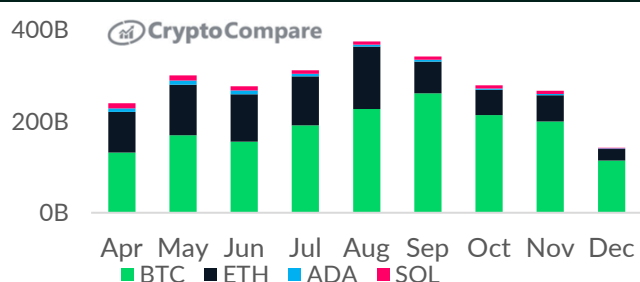


## Market Capitalisation Dominance

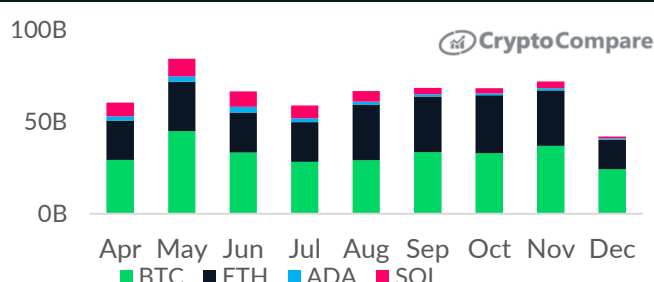


Volatility returned to normal levels in December, after soaring to record-breaking highs in November. BTC was the least volatile asset during this period, closing the year with a 27.9% 30-day volatility, marginally above its annual low of 26.8%. Total market capitalisation across these four assets fell to an aggregate of \$477mn, down 66.2% from the year prior.

## Direct USDT Volume



## Direct USD Volume

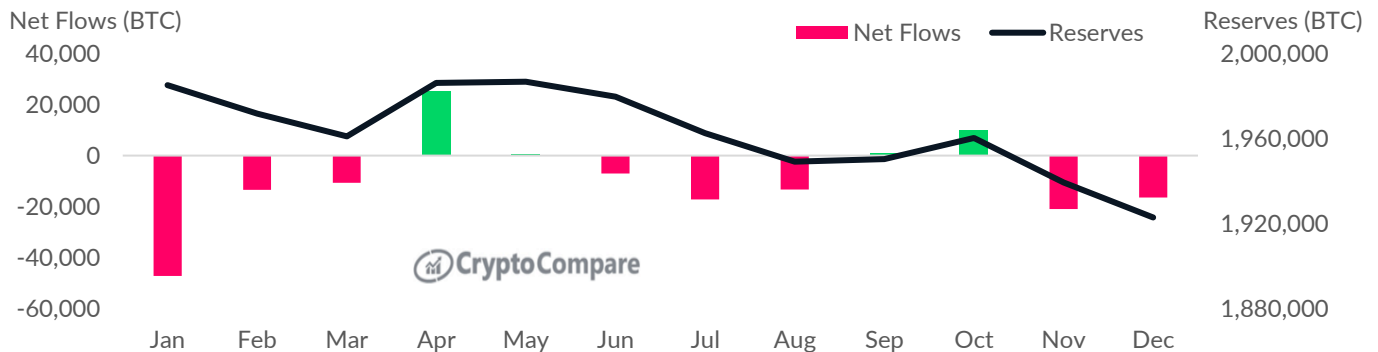


In December, volumes declined by the largest amount in over a year. Most notably, SOL-USDT volumes fell 80.6% to \$1.42bn from November, while BTC-USDT and ETH-USDT volumes also fell 42.6% and 57.0%, respectively, to \$114bn and \$24.9bn.

## Key Market Insights – Bitcoin

### Miner Capitulation Continues in December:

Bitcoin Mining Pools: Monthly Reserves and Netflows, 2022



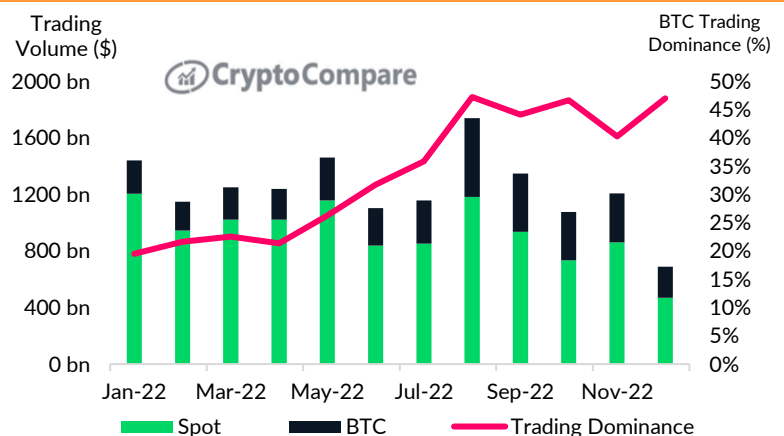
Miner capitulation was a consistent trend in 2022 due to the declining price of Bitcoin and rising energy costs. This continued in December with mining pools seeing 16,446 BTC in net outflows. As a result, Bitcoin reserves for mining pools declined 0.85% to 1.92mn BTC, the lowest reserves recorded in BTC since February 2010. In USD terms, the mining reserves fell 0.70% to \$43.8bn, the lowest reserves recorded since February 2021. Public mining companies have also continued to suffer this year with Core Scientific filing for bankruptcy and Argo Blockchain requiring bailout from Galaxy Digital in December.

### BTC Trading Dominance Nears Yearly Highs:

BTC Trading Dominance, 2022

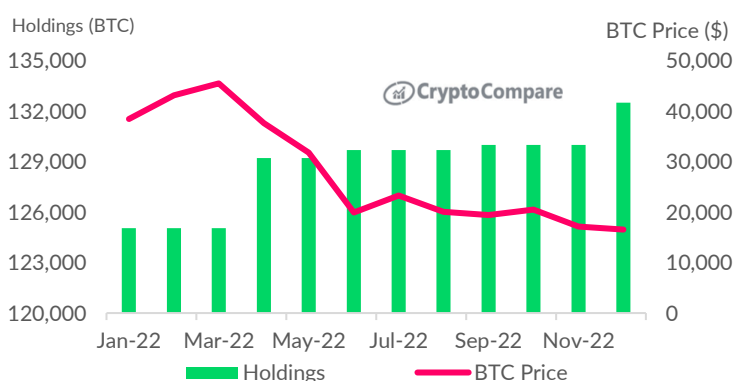
Bitcoin trading volume represented 47.0% of the total spot volume on centralised exchanges in December, the second highest dominance this year, 0.20% behind the market share in August.

In 2022, the price of bitcoin fell 64.2% to \$16,531, recording its second largest yearly decline in its history. However, the low downside volatility and the stronger relative performance of Bitcoin against other cryptocurrencies has made it the preferred asset for traders and investors this year.



### MicroStrategy Doubles Down on its Bitcoin Thesis:

MicroStrategy BTC Holdings, 2022



MicroStrategy, the biggest corporate holder of Bitcoin, increased its holdings by 2,500 BTC to 132,500 BTC in December. The latest purchase of 2,395 BTC comes after it was revealed in its 8-K SEC filing that the company also sold 704 BTC in December for tax benefits. This was the first sale the company has made since it started to hold Bitcoin in its treasury in November 2020.

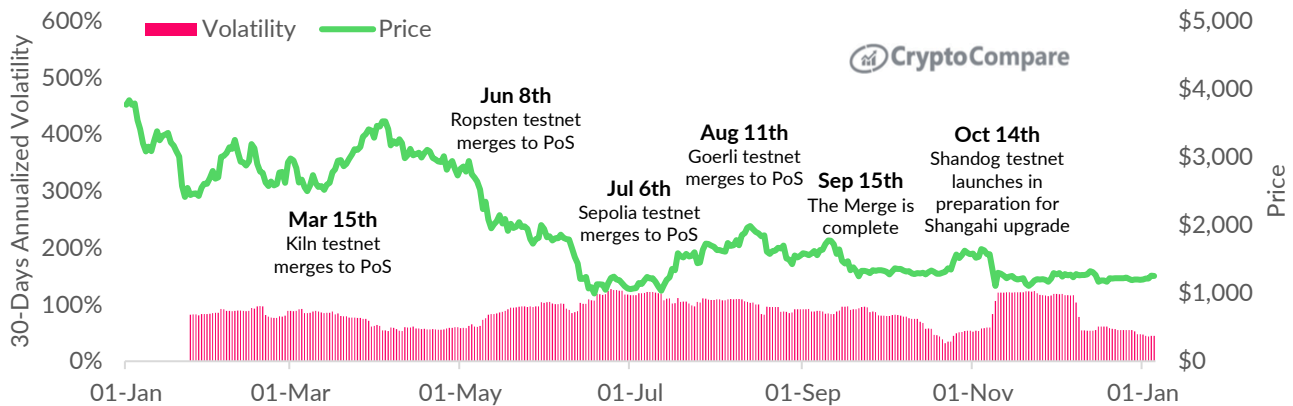
The company's average price per BTC currently stands at \$30,362, implying a loss of 45.6% after the fall in Bitcoin price this year. This represents a loss of \$1.84bn as of the end of 2022.



## Key Market Insights – Ethereum

### 2022 Was the Year of The Merge:

#### Ethereum Development During 2022



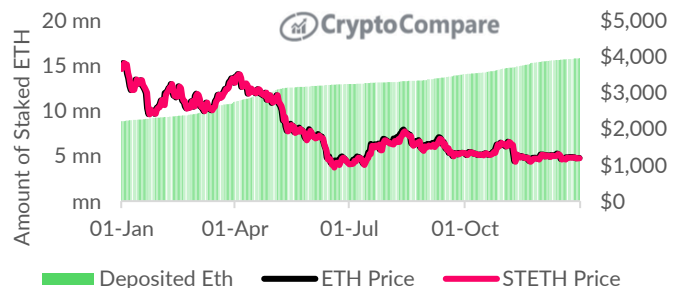
In 2022, the Ethereum Merge was a major catalyst for the entire cryptocurrency industry and was the most significant achievement during a tumultuous year full of major drawbacks and catastrophic events. The price of ETH was largely affected by broader market trends and macroeconomic conditions, resulting in a 68.3% decline in price for the year. The next anticipated upgrade for Ethereum is the Shanghai upgrade, which is expected to enable the withdrawal of staked ETH. In December, Ethereum developers announced that the upgrade is scheduled for March 2023, but despite this news, the price of ETH continued to decline, finishing the month at \$1,195 with a negative return of 7.72%. Additionally, Ethereum's volatility in December was 71.5%, which was lower than both the previous month's volatility (103%) and its average for the year (86.4%).

### Rise of 'Staked ETH' Narrative Going Into 2023:

#### ETH Price vs. New Staked ETH, 2022

In December, Staked ETH deposits decreased by 47.2%, recording the lowest number of deposits since August 2022, according to Dune Analytics. This decrease correlates to the decline in end-of-year activity and the concerns surrounding the delay in the Shanghai upgrade.

However, throughout 2022, staked ETH has deposits increasing by 79.1%, totalling 15.9 million ETH, and representing 13.0% of the total supply. This is a strong narrative for staking-related protocols, and we expect this trend to continue in 2023.

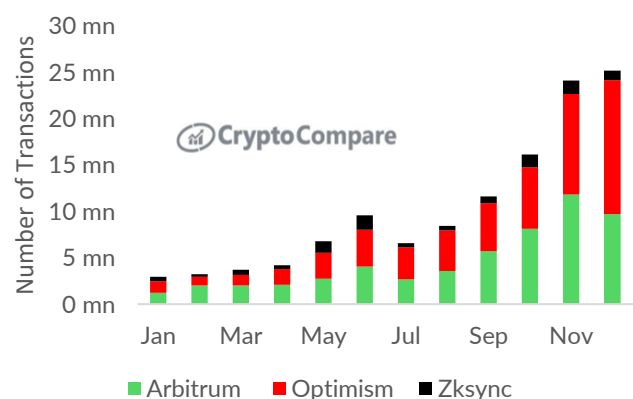


### Layer 2 Protocols Continues to Grow:

#### Layer 2 Protocols' Number of Transactions

Following the Ethereum Merge, another important narrative that has arisen is the scaling of Ethereum via layer 2 protocols. In 2022, the layer 2 protocol ecosystem experienced significant growth due to the increased adoption of rollups and the improved robustness of ZKproofs.

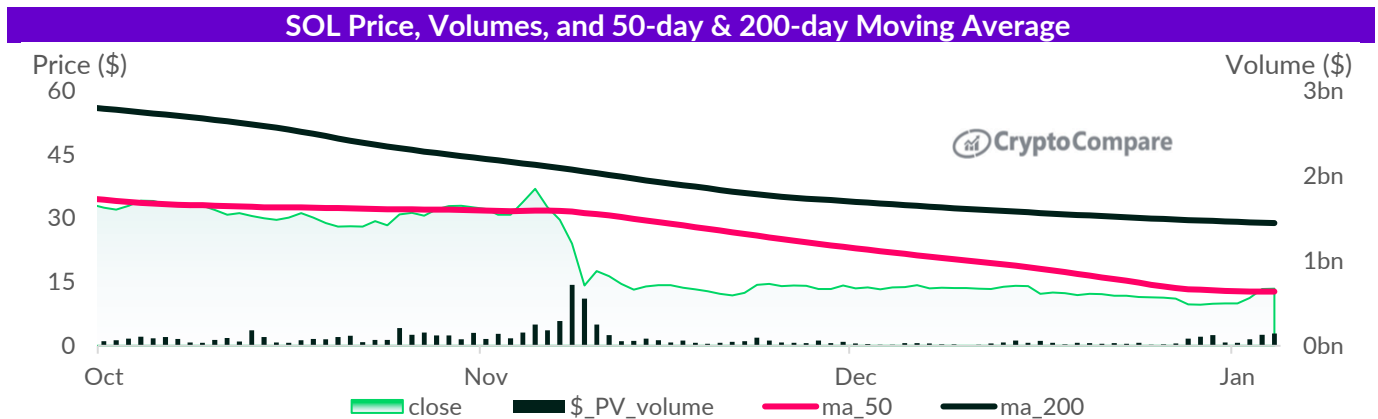
In December, the number of daily transactions on some of the top layer 2 protocols saw an increase of 4.43%, with a significant 758% year-on-year increase in 2022. This growth was also reflected on layer 2 token prices, with Optimism's OP recording 53.4% annual returns: the second-best return for any crypto asset in 2022.





## Key Market Insights – Solana

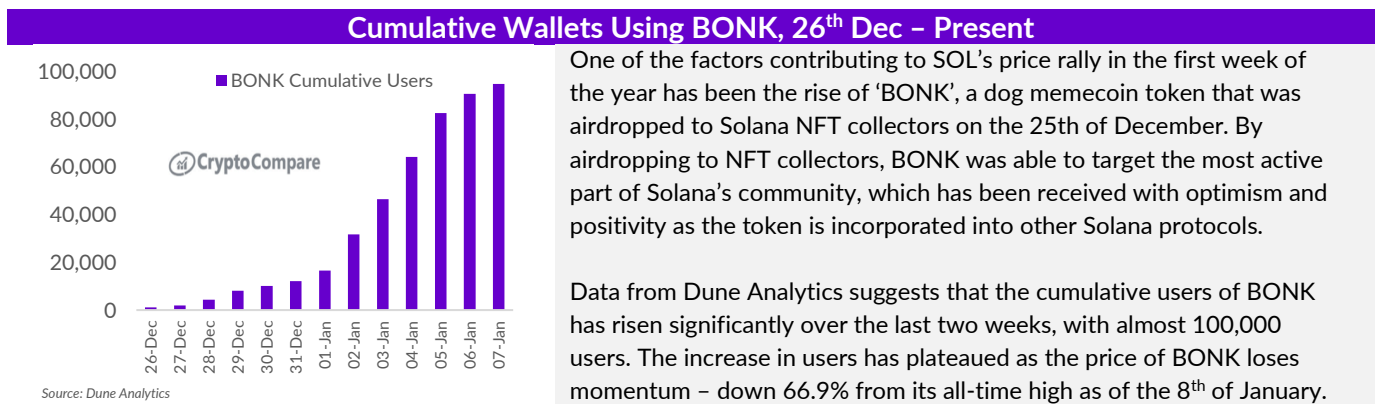
### SOL Price Remains at Supressed Levels:



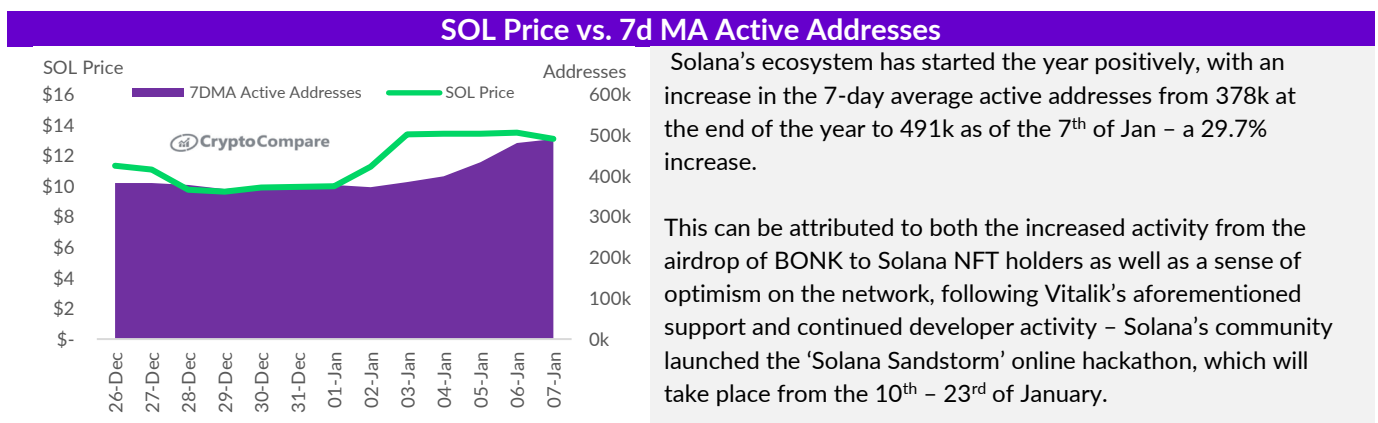
The price of SOL has remained well below its 200-day and 50-day moving averages since the collapse of FTX in early November, which saw the protocols token decline 61.5% in just four days. SOL closed the year at \$9.95, while the 50-day and 200-day moving average sat at \$12.9 and \$29.3 respectively.

Having said this, SOL has rebounded significantly from its lows after Vitalik Buterin, the founder of Ethereum, expressed his support for the chain in December 29<sup>th</sup>. In fact, SOL has been one of the best performers so far in 2023, with a 35.0% rally to \$13.4 as of the 4<sup>th</sup> of January. It has since crossed its 50-day moving average which has acted as a key resistance level over the last few months.

### Solana's New Memecoin:



### Solana's Increase in Active Addresses in January:



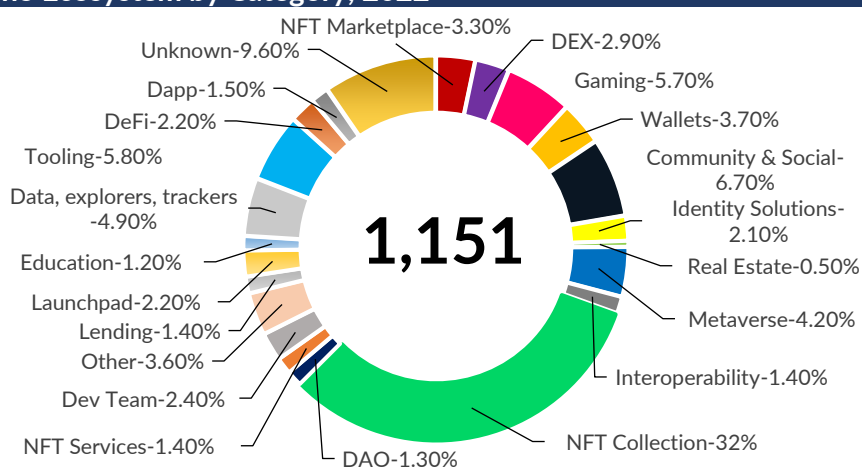
## Key Market Insights – Cardano

### NFT Collections Dominate Cardano Ecosystem:

#### Cardano Ecosystem by Category, 2022

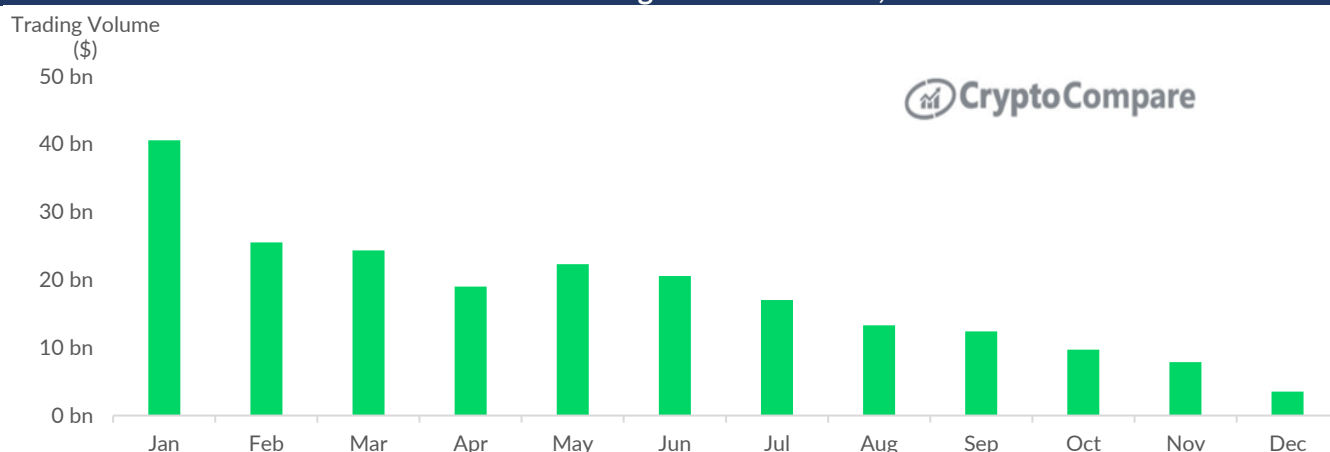
The Essential Cardano's Guide to the Ecosystem, an open-source research report endorsed by the Cardano Foundation, gave insights into the current projects building on Cardano. As of December, the report estimates that there are around 1,151 projects on Cardano, with 32% of them being projects related to NFT collections.

Community and Social dApps, and projects related to developer tools are the next biggest sector with a market share of 6.70% and 5.80% respectively.



### Cardano Trading Volumes on CEXs Hit Record Lows:

#### ADA Trading Volume on CEXs, 2022



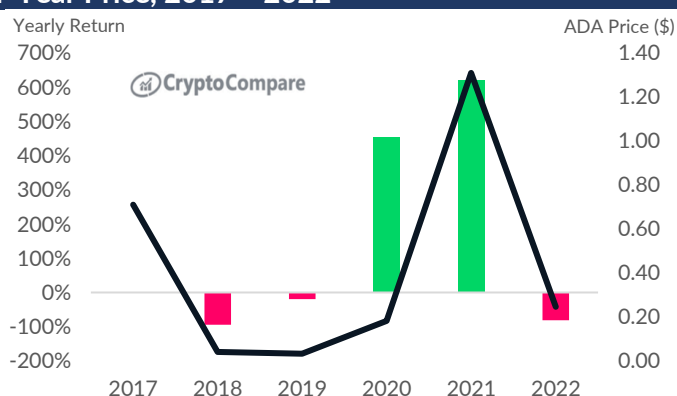
Driven by the poor market conditions, the ADA spot trading volume on top-tier exchanges fell 55.4% to \$3.52bn in December, recording the largest drop in monthly volume since February 2018. This also recorded the lowest monthly trading volume since October 2020. The drop in trading volume highlights the current market sentiment of traders and investors who are still reeling from the steep decline in crypto asset prices this year.

### Cardano Records Second Largest Drawdown in History:

#### ADA Yearly Return and End-of-Year Price, 2017 – 2022

Cardano ended the year 2022 at \$0.25, falling 81.2% from the start of the year. This recorded the second largest drawdown in its history, behind the 94.3% drop during the 2018 bear market, when Cardano fell from \$0.71 to \$0.04. This also marked the third decline in yearly performance for the asset in its history.

Cardano has been one of the many Layer-1s that have performed poorly this year in comparison to the MVIS CryptoCompare Digital Assets 100 Index (MVDA), which fell 65.0% this year. The dismal macroeconomic conditions and the idiosyncratic events in the industry have been the driving factor behind the fall in prices of crypto assets this year.



## Access More Of Our Research and Insights

As the digital asset markets continue to grow, so does the need for high-quality research that brings greater clarity and transparency to this rapidly evolving industry. CryptoCompare's suite of research reports provides market participants with trusted, high-quality data and analysis.

### Recurring Reports:

Report	Description
<b>Exchange Review</b>	Captures key developments within the cryptocurrency exchange market — providing readers with an in-depth analysis of exchange volumes, trading activity, and derivatives open interest.
<b>Digital Asset Management Review</b>	Tracks and provides analysis of the most innovative institutional products in the industry, assessing volumes, assets under management (AUM), and product flow trends.
<b>Exchange Benchmark</b>	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.
<b>Asset Report</b>	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.
<b>Market Outlooks</b>	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
<b>Liquidity Report</b>	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.
<b>UST's Fall From Grace</b>	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.

# Glossary

METRIC	Definition/Methodology	Report Section	Factsheets
Block Rewards	The total amount of ETH rewarded to miners.	-	ETH
Block Size	Average size of a block in terms of data storage. Standard unit is megabytes (MB).	Proof of Work Metrics	BTC, ETH
Block Time	Average time taken for the next block to be mined, measured in seconds.	Proof of Work Metrics	BTC, ETH
Blocks Burnt	The total number of ETH burnt following transactions on the Ethereum blockchain. This was an update caused by the London Fork, which took place on the 5th of August 2021.	-	ETH
Cruiser	An investor who has been holding the underlying asset between 1 month and 1 year.	-	BTC, ETH, SOL
Difficulty	How difficult it is for miners to mine the next block in the blockchain. As difficulty increases, a higher hashrate is required to have the same probability of mining the next block.	Proof of Work Metrics	BTC, ETH
Github Stargazers	The number of likes/bookmarks the asset's Github repository has received.	-	ALL
Hashrate	The computational power used in mining operations. Standard unit is terahashes per second (TH/s).	Proof of Work Metrics	BTC, ETH
Hodler	An investor who has been holding the underlying asset for over 1 year.	-	BTC, ETH, SOL
Lightning Network Capacity	Measures the total number of Bitcoin that can be transacted via the lightning network at any one point in time.	-	BTC
Monthly Volumes	Monthly volumes represents the USD CCCAGG market volumes, as per CryptoCompare's aggregate index methodology.	-	ALL
Market Cap	This refers to circulating market capitalization rather than a project's fully diluted valuation.	Asset Performance & Market Metrics	ALL
Max Drawdown	Percentage difference between the monthly high and monthly low price for a given asset.	Asset Performance & Market Metrics	ALL
No. of Nodes	The number of computers that are currently running on the Bitcoin network and storing the entire historical blockchain.	-	BTC
No. of Open Channels	The number of open passages between Bitcoin nodes that allows for transactions to take place within that channel.	-	BTC
NVT Ratio	Ratio of an asset's market capitalization to the daily transaction volume of that asset, where daily transaction volume is equal to daily transaction count* daily average transaction value*close price.	Asset Performance & Market Metrics	ALL
Sharpe Ratio	30-day returns in excess of the risk-free rate per unit of volatility. Risk-free rate is assumed to be 0.	Asset Performance & Market Metrics	ALL
Staking Rate	The annualized return for an individual who stakes (participates in transaction validation) his/her tokens. It is a feature of Proof of Stake (PoS) cryptocurrencies.	Proof of Stake Metrics	ETH, SOL, ADA
Total Commits	The number of individual changes made to the underlying code.	-	ALL
Total Contributors	The number of individuals who have contributed to a project, but do not have collaborator access.	-	ALL
Total Forks	The number of copies made of the original code. It allows Github users to make changes to a project without affecting the original repository.	-	ALL
Total Value Locked	The total monetary value of assets deposited in a decentralised finance blockchain or protocol.	DeFi and On-Chain Activity	ETH, SOL
Trader	An investor who has been holding the underlying asset for under 1 month.	-	BTC, ETH, SOL
Volatility	Annualized, rolling 30-day standard deviation of log returns. Daily figures obtained by dividing this by square root of the days in month.	Asset Performance & Market Metrics	ALL

Additional Data Sources include: Etherscan.io, DeFi Llama, Messari.io, stakingrewards.com, bitcoinvisuals.com, Into The Block, Solana Beach