



ASSET REPORT

OCTOBER 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.

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 15th, 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	How The Cardano Foundation Supported Launch Of This Hybrid NFT Project	Oct 7
Solana	Solana DeFi Trading Platform Mango Markets Loses \$100M in Hack	Oct 12
Cardano	Cardano Creator Charles Hoskinson Reveals 'Next Level' Plans for ADA and Other Crypto Assets	Oct 14
Bitcoin	Binance Announces \$500 Million Funding for Bitcoin Mining	Oct 15
Bitcoin	Bitcoin Fails to Produce 1 Block for Over an Hour	Oct 17
Ethereum	Shanghai Upgrade is Coming: Etheruem Pulls Off Shandong Testnet	Oct 19
Ethereum	Google Introduces Cloud-Based Blockchain Node Service for Ethereum	Oct 27
Cardano	Charles Hoskinson Invites Dogecoin to Migrate to Cardano for Free	Oct 29
Bitcoin	Bitcoin Miner Argo Blockchain Shares Plunge 40% as \$27M Raise Called Off	Oct 31

Asset Performance & Market Metrics

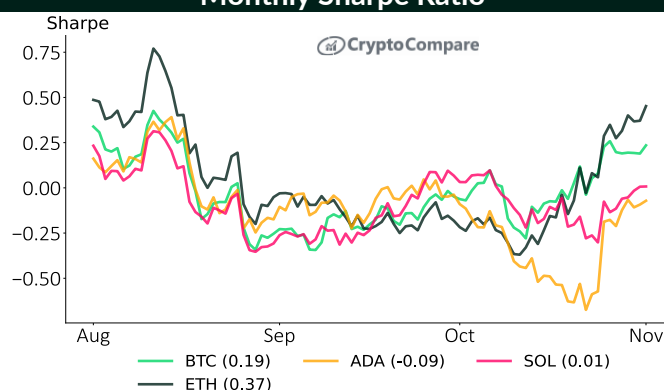
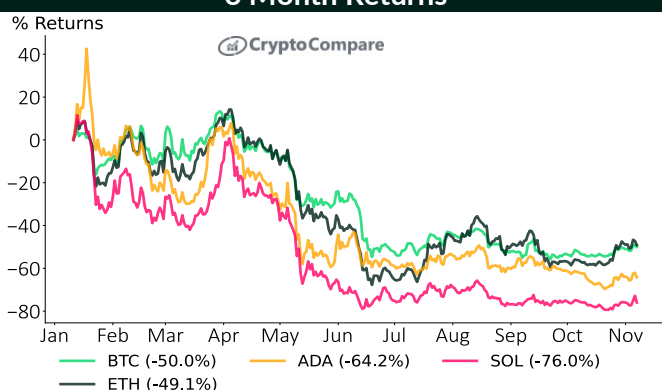
Summary

In October, the performance of digital and traditional assets was mixed. ETH was one of the best performers with an 18.4% return, while BTC rose 5.49% after breaking a \$20,000 resistance level, giving hope that October continues to be one of the best performing months for cryptocurrencies. However, not all fared well – with ADA and SOL experiencing negative results of 6.71% and 0.93% respectively. S&P 500's and NASDAQ's prices increased by 5.26% and 1.56% respectively, signalling slight stability in the macro environment.

	BTC	ETH	ADA	SOL	GOLD	S&P500	NASDAQ
EoM Price	\$20,492	\$1,572	\$0.42	\$32.6	\$1,640	\$3,872	\$10,988
Market Cap	\$393bn	\$192bn	\$13.7bn	\$12.2bn	\$11.1tn	-	-
Monthly Return	5.49%	18.4%	-6.71%	-0.93%	-3.60%	5.26%	1.56%
YTD Return	-55.6%	-57.2%	-68.2%	-80.8%	-8.97%	-19.3%	-29.8%
Monthly Volatility	32.2%	53.6%	61.6%	57.5%	19.58%	33.6%	39.8%

3 Month Returns

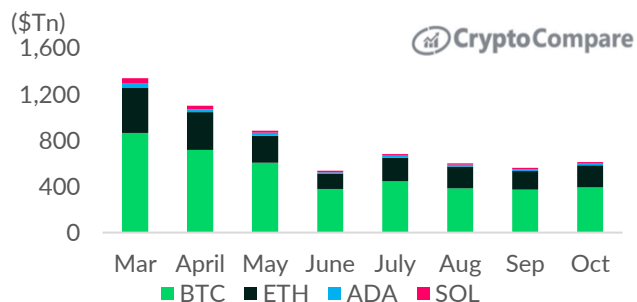
Monthly Sharpe Ratio



Monthly Sharpe ratios for SOL and ADA dropped sharply in October after SOL outperformed all assets' Sharpe ratios in September. ETH's Sharpe ratio rose following an 18.4% price appreciation for the asset, now only marginally underperforming Bitcoin's YTD return – the largest cryptocurrency has fallen 55.6% so far this year, compared to ETH's 57.2% decline.

Volatility

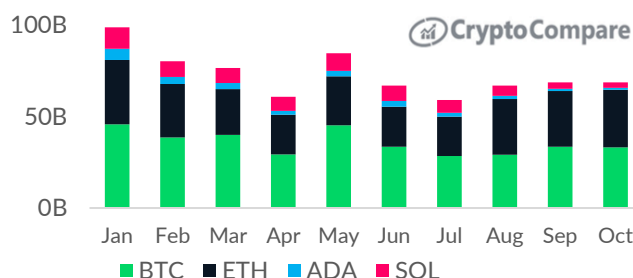
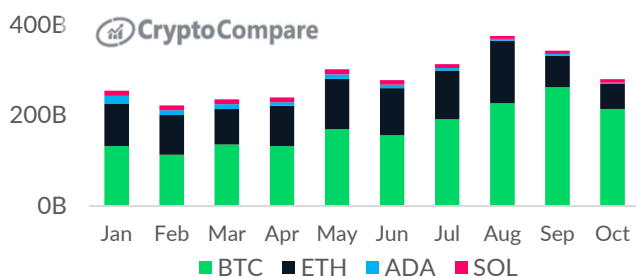
Market Capitalisation Dominance



Monthly volatility saw a sharp decline in October, recording a yearly low volatility for most cryptocurrencies. Bitcoin recorded a monthly volatility of 32.2%, a figure that was lower than the S&P500 and NASDAQ's recorded volatility. This puts Bitcoin in a strong position against traditional asset classes and suggests a long-term shift to a less volatile asset in the years to come.

Direct USDT Volume

Direct USD Volume

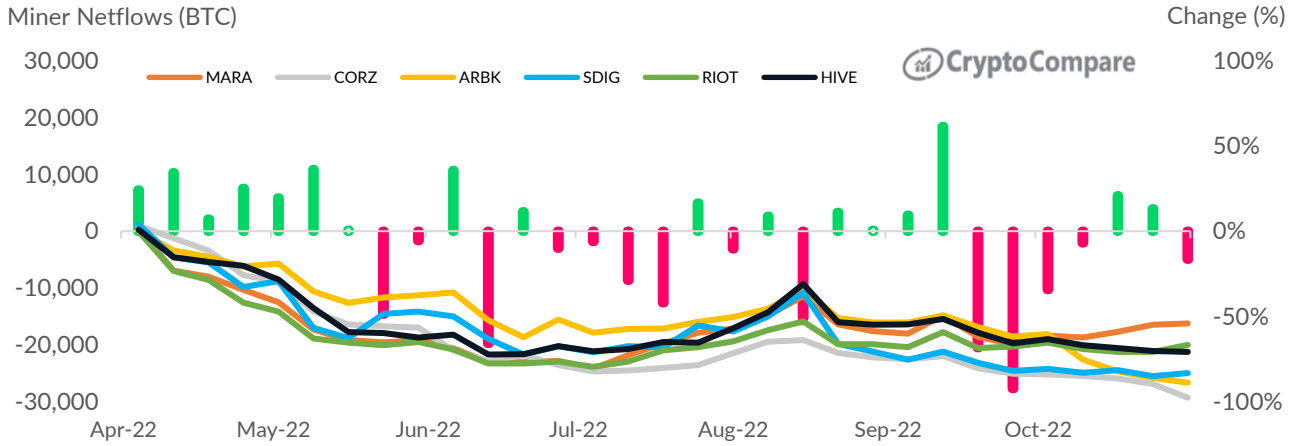


In October, USD volumes saw slight decline of 0.23%, compared to USDT volumes that recorded a sharp decline of 18.4%. ETH-USD volumes exceeded BTC-USD volumes in October for the second time this year, the first being in August.

Key Market Insights – Bitcoin

Public Miners Capitulation: A New Contagion Risk?

Miner Flows and Performance of Public Mining Companies, Q2 – Oct 2022



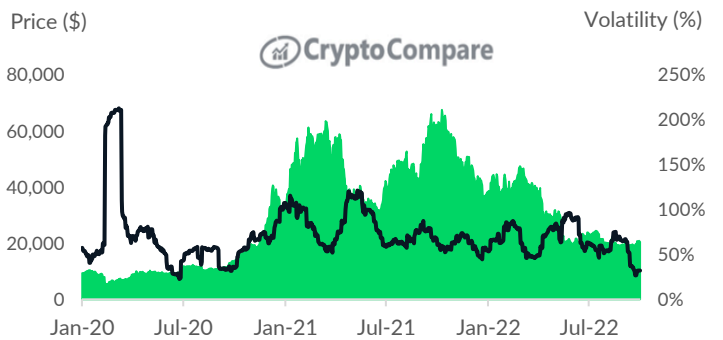
Bitcoin mining companies have struggled this year, with the fall in price of the largest cryptocurrency and rising energy prices (and operating costs) leading to a decline in revenue. As a result of this, mining firms have been heavily selling their underlying holdings, leading to significant net outflows over the last six months. In October alone, Bitcoin mining companies recorded net flows of -7056 BTC. Crypto mining companies Core Scientific (CORZ) and Argo Blockchain (ARBK) have warned investors of a potential bankruptcy filing. As this threat looms over other mining companies with large bitcoin holdings, such as Marathon Digital Holdings, capitulation of public mining companies could be the next contagion risk for the crypto industry to face. In 2022, the stock prices of the largest mining companies have declined by 50% - 90%.

Bitcoin Volatility Hits New Lows:

BTC Annualised 30-Day Volatility, Jan 2020 – Oct 2022

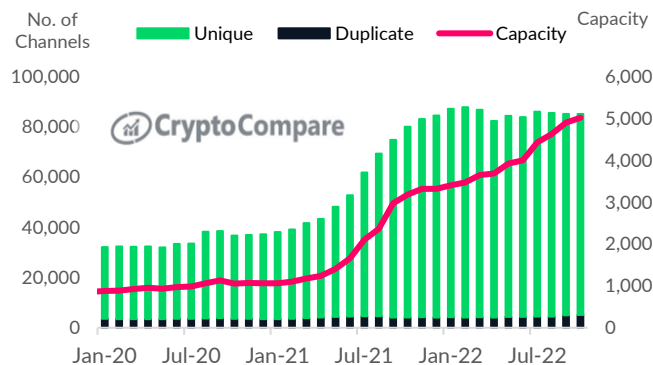
As the price of Bitcoin continue to stay rangebound between the key price points \$19,000 and \$21,000, 30-day volatility has dropped to levels last seen in 2020. On October 22nd, the annualised volatility of Bitcoin hit 26.6%, recording the lowest figure since July 2020.

The low levels of volatility highlight the risk-off nature of traders under uncertain macroeconomic conditions and a possible decline of interest from retail, who are still recovering from the downtrend price action this year.



Anonymous Developer Disrupts Lightning Network Twice in 30 Days:

Lightning Network: Number of Channels and Capacity

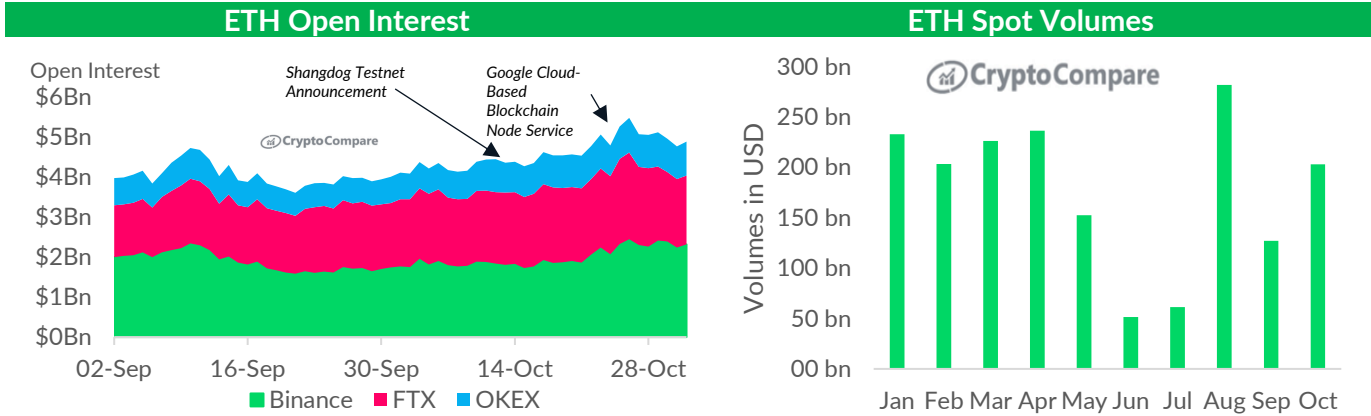


On October 9th, a developer dubbed 'Burak' on Twitter triggered a validation bug which caused the Lightning Network (LN) to malfunction and prevented users from closing new Lightning channels. The same developer successfully attacked the LN nodes again on November 2nd.

Both the bugs were resolved by Lightning Labs. The number of Lightning channels rose for the first time in three months to 84,914 BTC, while the LN capacity reached a new all-time high of 5,003 BTC at the end of October.

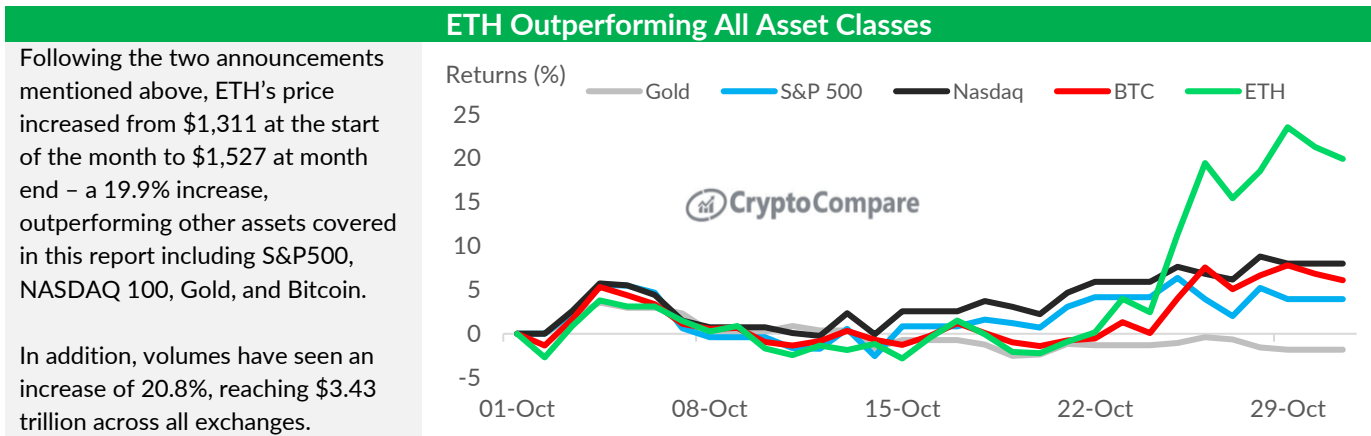
Key Market Insights – Ethereum

ETH Speculation Recovers After Major Announcements:

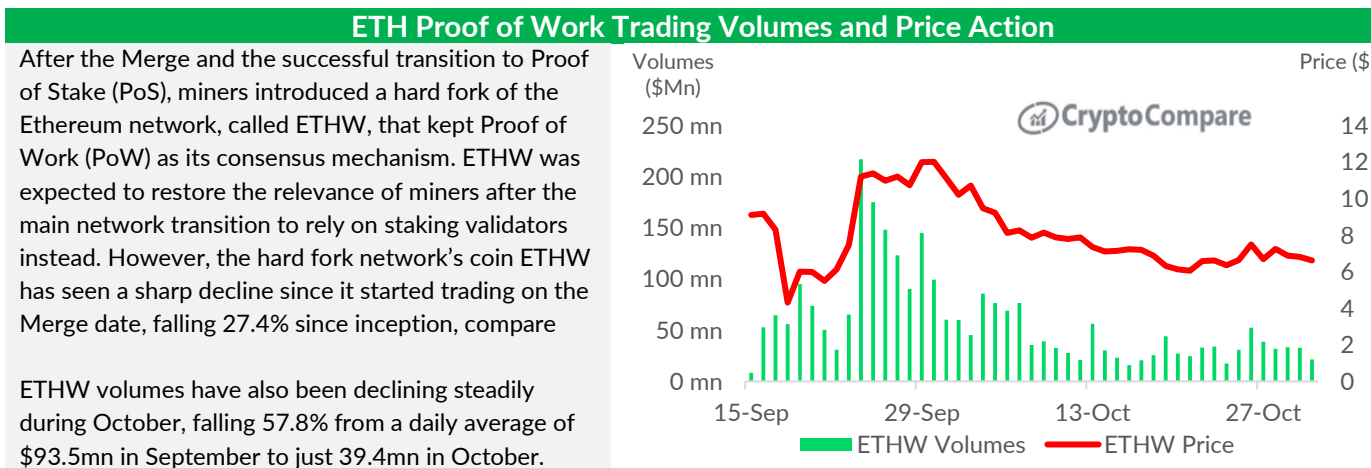


Despite the macro environment, October was a positive month for Ethereum, particularly after two major events. First, Ethereum developers announced the launch of “Shandong”; a testnet for the next Ethereum upgrade “Shanghai”. Shandong is an experimental testnet that allows developers to test a set of selected Shanghai-considered improvements. Some of the proposed improvements in the Shanghai upgrade include the ability to withdraw staked ETH from the Beacon chain and the implementation of *proto-danksharding*; a step on the path towards sharding. Second, on October 27th Google Cloud announced the launch of Cloud-Based node services for Ethereum, showcasing the increased interest in digital assets from web2 firms.

ETH Outperforms in October:



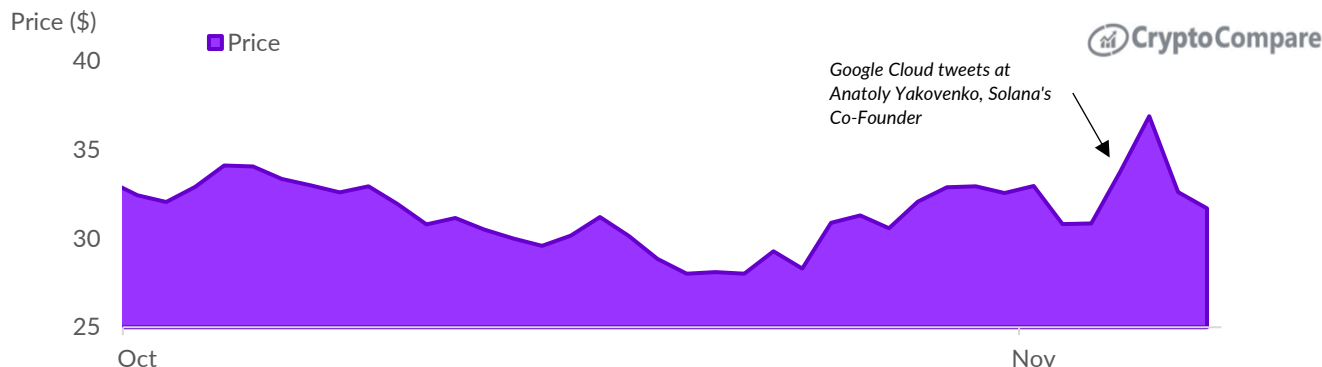
ETH Proof of Work Continues to be an Outdated Narrative



Key Market Insights – Solana

SOL Sees Return of Volatility at the Start of November:

Price, October – 7th November 2022

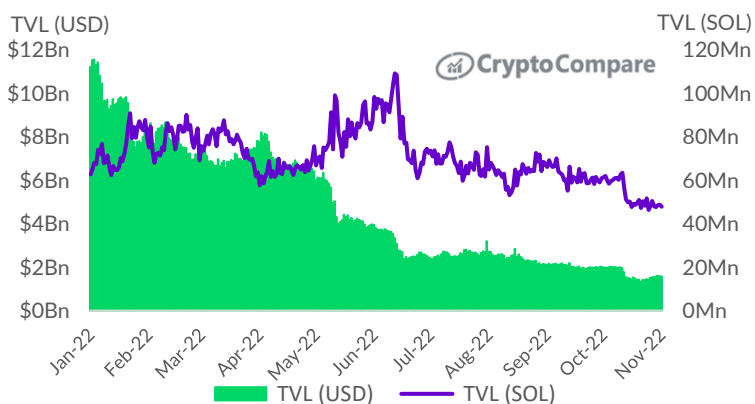


October was a rather quiet month for the Solana ecosystem, with volatility falling to 48.7% on October 22nd, the lowest 30day volatility so far this year. However, while we are only one week into November, we have already seen important events take place that have impacted SOL's price. First, on November 5th, Google Cloud tweeted at Anatoly Yakovenko in anticipation of a [partnership](#) between Google Cloud and Solana – with the former running block-producing validator nodes on the network.

On November 7th rumours surrounding the potential insolvency of Alameda Research, a crypto native trading firm ran by SBF, began to circulate social media. SBF is heavily linked to Solana due to his past support for the layer-1 blockchain, and as a result, SOL was one of the worst performing assets on the day, falling 9.78% compared to BTC's 2.55% decline.

Solana TVL Continues To Decline, Even in SOL terms:

TVL in the Solana Ecosystem, 2022

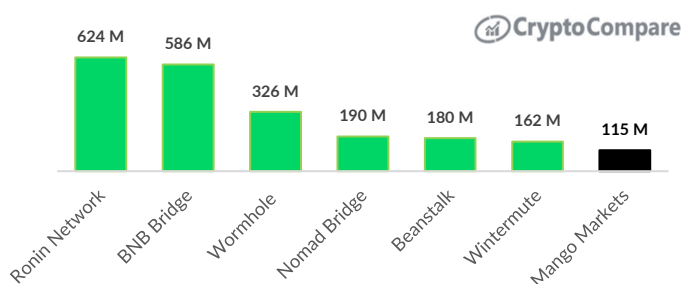


TVL across the DeFi space has been hard hit so far this year, predominantly as a result of declining prices. The chart illustrates the decline in TVL in USD terms in the Solana ecosystem – down 85.9% in the first 10 months of the year.

Importantly, TVL is also decreasing in SOL terms, suggesting market participants are withdrawing SOL from the ecosystem for other opportunities. October saw the largest monthly decline in TVL in SOL terms so far this year – a 19.9% decline from 60.9mn SOL to 48.8mn SOL.

Solana's Mango Protocol Gets Exploited:

Largest DeFi Hacks/Exploits of 2022



On October 10th, Mango Markets, a borrowing and lending protocol on the Solana network, got exploited for 115mn. The exploiter manipulated the price of MNGO, the underlying asset of the protocol, due to its low liquidity. By placing short and long trades, the protocol's liquidity was wiped out as the price manipulation led to a payout on the underlying trades. The exploit was this year's 7th largest exploit in DeFi.

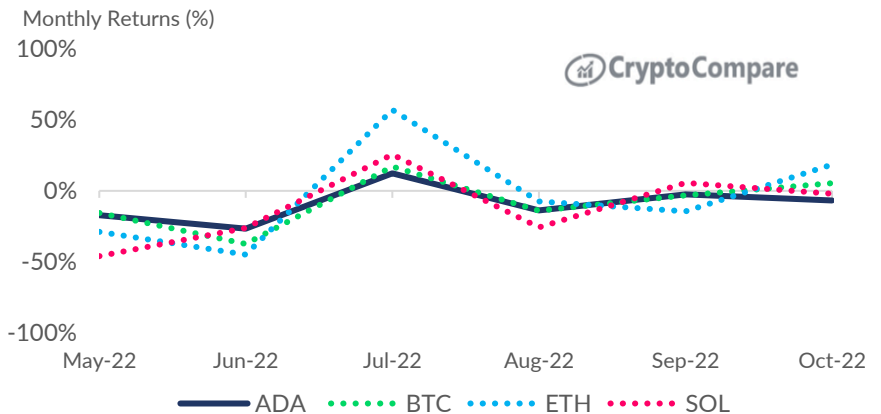
Key Market Insights – Cardano

ADA Records Fifth Negative Return in Six Months:

Monthly Returns: ADA vs Other Layer 1s

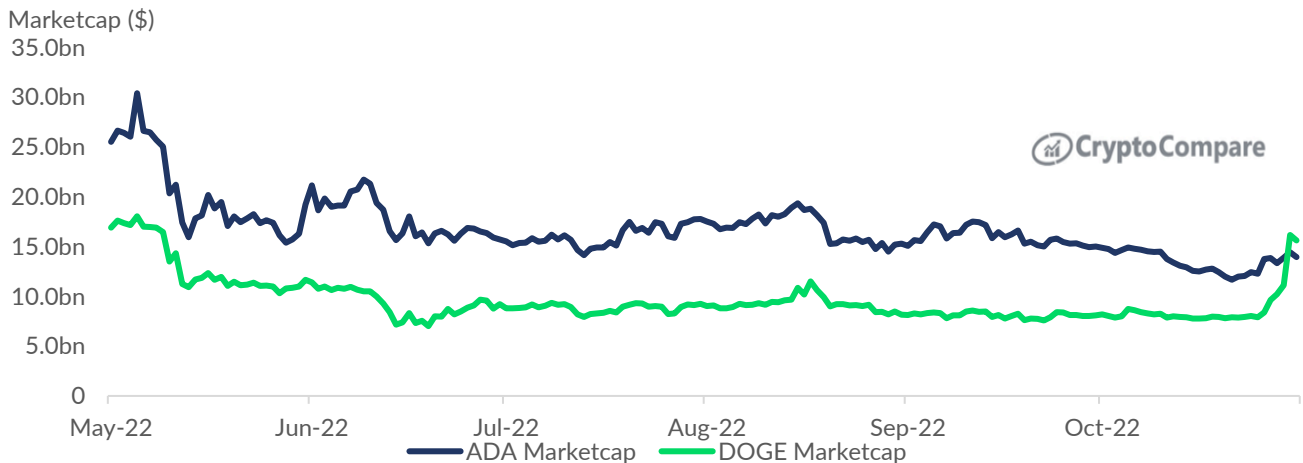
Cardano fell to its lowest price level since February 2021 in the month of October.

This comes at a time when macroeconomic conditions are directing the price action of cryptocurrency markets. ADA has now recorded its fifth negative monthly return in a six-month time span. The Vasil network upgrade failed to convince buyers to return to the market, with ADA falling 11.4% since the update was implemented.



DOGE Overtakes ADA as 6th Largest Crypto by Market Cap:

Market Capitalisation: Cardano vs Dogecoin



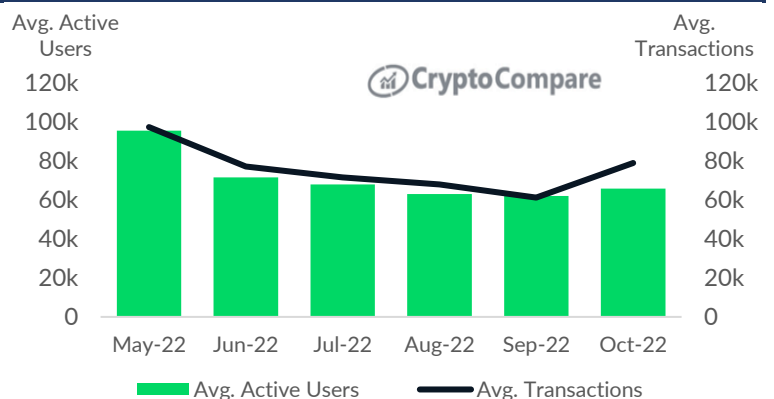
The Vasil hard fork has failed to act as a catalyst for the price of ADA in ways that was previously hoped before the update. The price of Cardano's token fell by 6.80% in October as other coins made gains. DOGE on the other hand, which has skyrocketed in price since the twitter takeover by Elon Musk, increased 113% in October. The faltering price movement of ADA and increasing value of DOGE has meant that DOGE has now overtaken the Layer 1 coin as the 6th largest cryptocurrency by market capitalisation.

On Chain Activity Spikes in October:

Cardano: Active Users and Transactions

The network activity on the Cardano blockchain rose in October. Both the average active users and transactions on the chain increased for the first time in 6 months. After a slow start to the Vasil hard fork, the Vasil update's effects are being seen as Cardano dApps experienced a rise in user engagement. The Cardano chain is now ranked third for NFT activity, too.

Average daily users increased by 6.19% from September to October whilst transactions increased by 28.9%.



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
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.

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