



ASSET REPORT

SEPTEMBER 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.



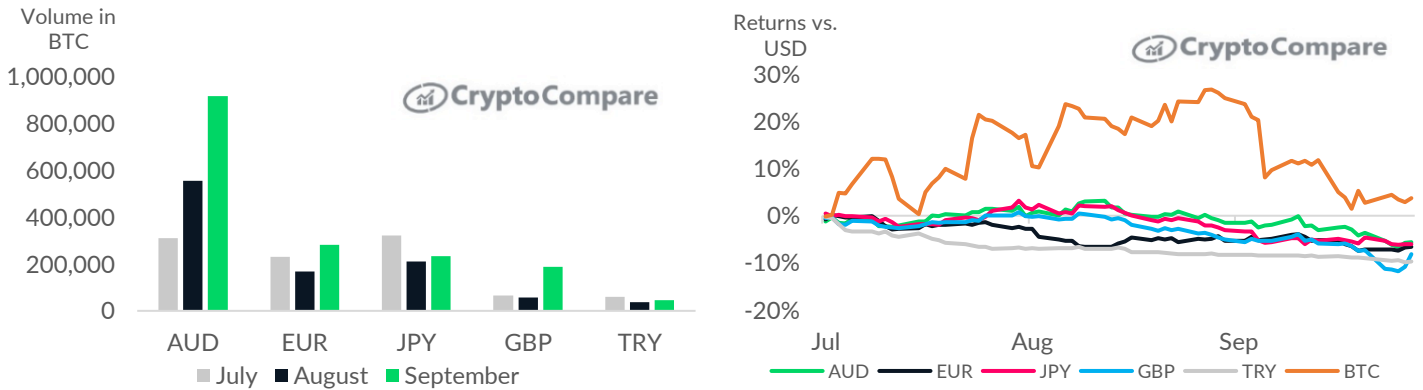
Latest News

TOPIC	STORY	DATE
Cardano	Cardano gets listed on Robinhood but ADA bulls are running out of steam	Sep 1
Ethereum	Norwegian Central Bank Uses Ethereum to Build National Digital Currency	Sep 12
Ethereum	Ether Price Trades Flat After Successful Ethereum Merge	Sep 15
Bitcoin	MicroStrategy Adds another 301 Bitcoins to its Holdings	Sep 20
Solana	Helium Community Approves Crypto Wireless Network's Migration to Solana	Sep 22
Cardano	Cardano's Vasil Upgrade Marks an Important Milestone in the Blockchain's Evolution	Sep 22
Cardano	What Cardano's Vasil hard fork means for the blockchain	Sep 26
Bitcoin	Strike Closes \$80 Million Funding Round For Its Bitcoin Payments Revolution	Sep 27
Bitcoin	Bitdeer Sets Up \$250M Fund to Acquire Assets From Financially Distressed Bitcoin Miners	Sep 29
Solana	Solana Says Successfully Completed Cluster Restart After Outage	Oct 1

Key Market Insights – Bitcoin

BTC Trading Volume Spikes Against Weakening Currencies:

BTC Trading Volume Against Weak Currencies, July – August 2022



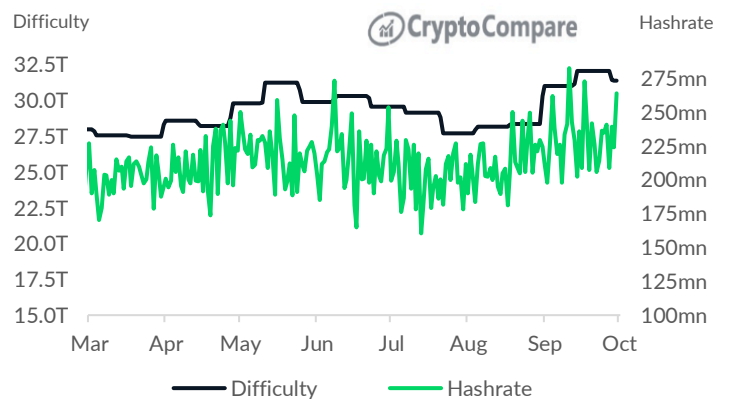
As the global economy continues to reel from high inflation and energy crisis, several currencies have seen their purchasing power and value decline against US Dollars. BTC trading volume against these has spiked in recent months, including the BTC-GBP pair, which rose 233% in September after the reserve currency fell to an all-time low of £1.03 against USD. The abnormal jump in trading volume suggests investors and traders could be hedging their weakened currencies with Bitcoin as well as stablecoins.

Bitcoin Hashrate Soars to All-Time Highs:

Hashrate and Network Difficulty, March – September 2022

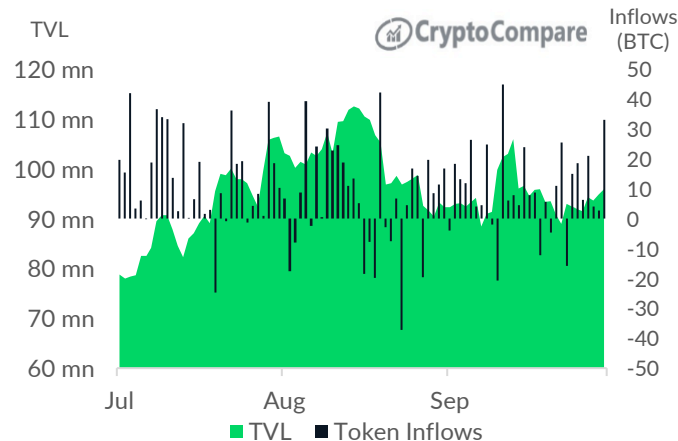
Bitcoin mining benefitted from Ethereum’s long-awaited Merge to transition from Proof of Work consensus to Proof-of-Stake, as it set a new all-time high hashrate of 282mn TH/s on September 11th. The average hash rate per month rose 6.87% to 227mn TH/s. This recorded the largest monthly rise since January, hinting at the migration of Ethereum miners to Bitcoin mining pools.

Meanwhile, the network difficulty, which is adjusted every two weeks to constrain the average time between each block to remain at 10 seconds, fell 2.14% to 31.4tn. This was the first recorded decline in network difficulty since July.



Lightning Labs Release ‘Taro’ Upgrade on Bitcoin Testnet:

Lightning Network TVL and Token Inflows, July – September 2022



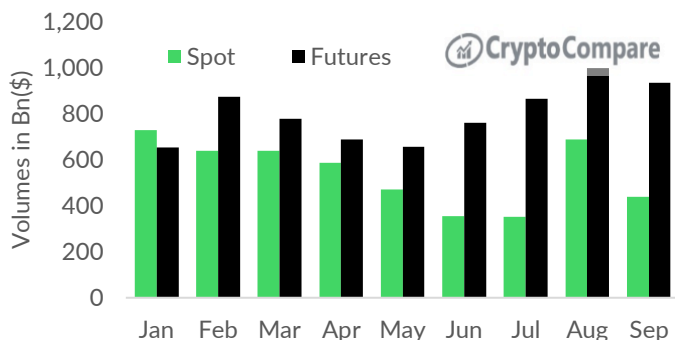
On September 28th, Lightning Labs announced the alpha release of Taproot Asset Representation Overlay, dubbed ‘Taro’, on the Bitcoin testnet. Taro allows developers to issue, send and receive assets like stablecoins, a vital step in bringing fundamental elements of DeFi to the Bitcoin Network. The Lightning Network can then be used to transact those assets at a low cost.

The layer 2 solution has seen its total value locked (TVL) fall 4.00% to \$95.9mn in September. On the other hand, BTC inflows rose 6.28% to 4,912 BTC. The Taro upgrade will enable new assets in the Bitcoin network, encouraging the growth of TVL in the Lightning Network ecosystem.

Key Market Insights – Ethereum

ETH Futures Volumes Continue to Dominate Spot:

Spot and Futures Volumes Action, 2022

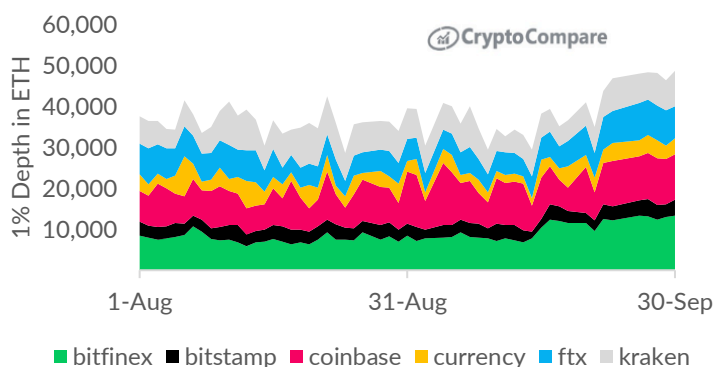


After the Merge, the price of Ethereum plummeted to \$1,300 levels, trading below its 50-day moving average while volatility also increased.

This led to a 36.2% decline in spot volumes to \$439bn. Future volumes also saw a fall of 6.52% to \$932bn, showing continued relative strength against spot markets. As futures allow market participants to bet against an asset more easily, it is unsurprising these volumes have remained elevated compared to spot.

ETH 1% Depth Grows Amid the Merge:

ETH Orderbook Data Following the Merge, August – September 2022



In September, liquidity for ETH increased across top exchanges, illustrated by a rising 1% order book depth from 30,405 ETH at the start of the month to 48,602 ETH by month end.

The increase came in line with a spike in volatility for the asset, and more attention over recent weeks as the largest Layer-1 smart contract blockchain transitioned to Proof of Stake.

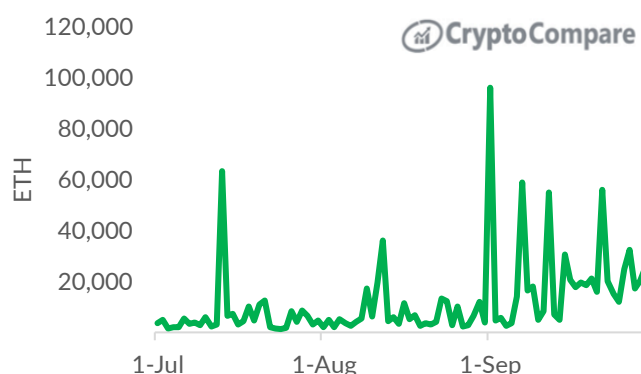
ETH Tokenomics Experiences Change Following the Merge:

Ethereum Daily Issuance, June - September 2022



As expected, the daily issuance of Ethereum has significantly dropped after the Merge, leading the annual issuance rate to fall below 0.5% p.a. Moreover, the issuance rate has continued its decline since the Merge, reaching a negative figure of -142.65 ETH on the 27th of September.

Daily Staked ETH, July – September 2022

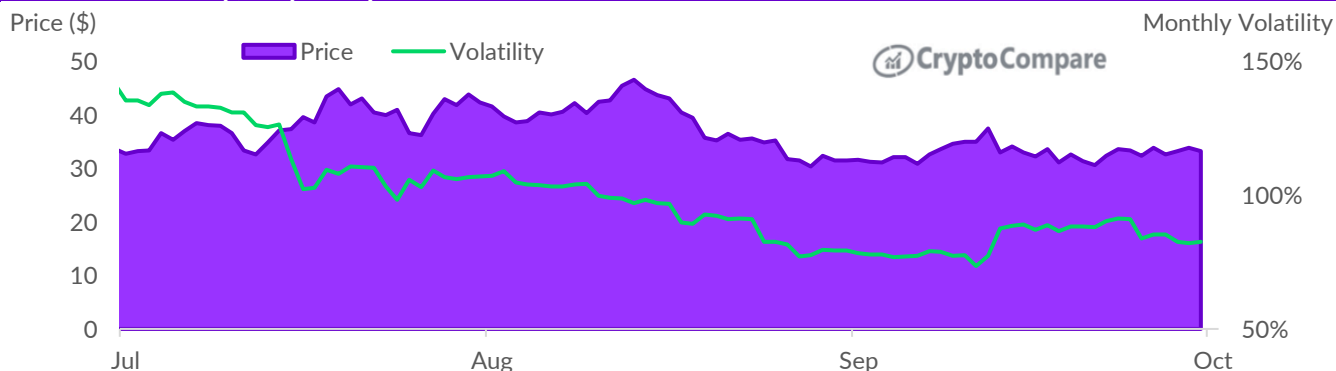


After the Merge, daily staked ETH has increased from an average of 11,650 ETH from 1st of August to September 15th to an average of 22,950 from September 15th to the end of the month, an increase of 97.0%.

Key Market Insights – Solana

SOL Volatility Levels off Near 80%:

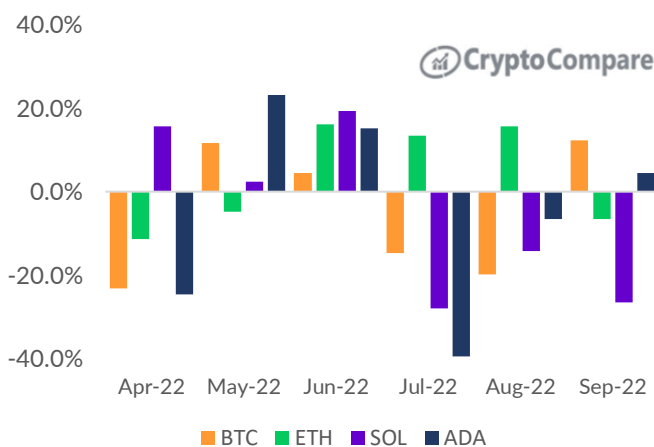
Price vs. Volatility, July – September 2022



In the third quarter of the year, SOL's price has remained relatively steady, ranging from \$30 to \$47. During this period, volatility has declined from levels above 100%, to a quarter close of 82.6%. This was a marginal increase from a 79.4% close in September. However, the increase in volatility also came with a 5.59% appreciation in the asset, thereby being the best performer in the month compared to the other assets featured in this report. While Solana has its major headwinds, it benefits from a large user base who value the speed of the blockchain and the lack of transaction fees.

SOL Futures Volumes sees Third Month of Declines:

Cryptocurrency Future Volumes Monthly Growth Rate, April – September 2022

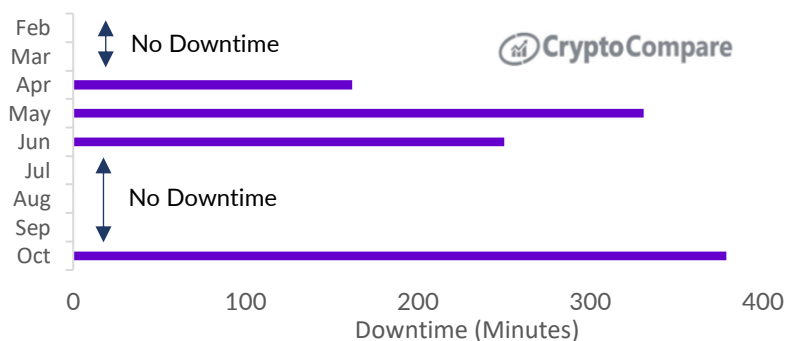


In September, SOL futures volumes across eight major exchanges declined 26.6%, the third month of consecutive declining activity in derivative markets. Trading activity among BTC, ETH, and ADA markets have been relatively stronger, as each of these has had its own narrative – hedge against fiat currency declines, the Merge, and the Vasil hard fork respectively.

SOL futures volumes totalled \$43.6bn in September, compared to \$1.09tn, \$932bn, and \$25.0bn for BTC, ETH, and ADA respectively.

Solana Experiences First Outage of Q4:

Solana Network Downtime, February – 1st October 2022



On October 1st, the Solana network experienced yet another outage, lasting 6 hours and 19 minutes, the longest single outage since January 22nd.

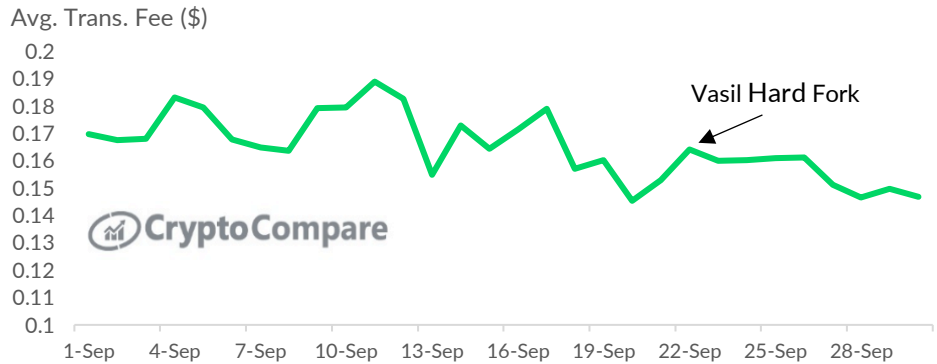
The Solana network has been heavily criticised for the constant outages it experiences. However, these are usually caused by high levels of activity which halt the Blockchain, typically relating to NFT or DeFi transactions.

Key Market Insights – Cardano

Transaction Fees Decline Following Vasil Hard Fork:

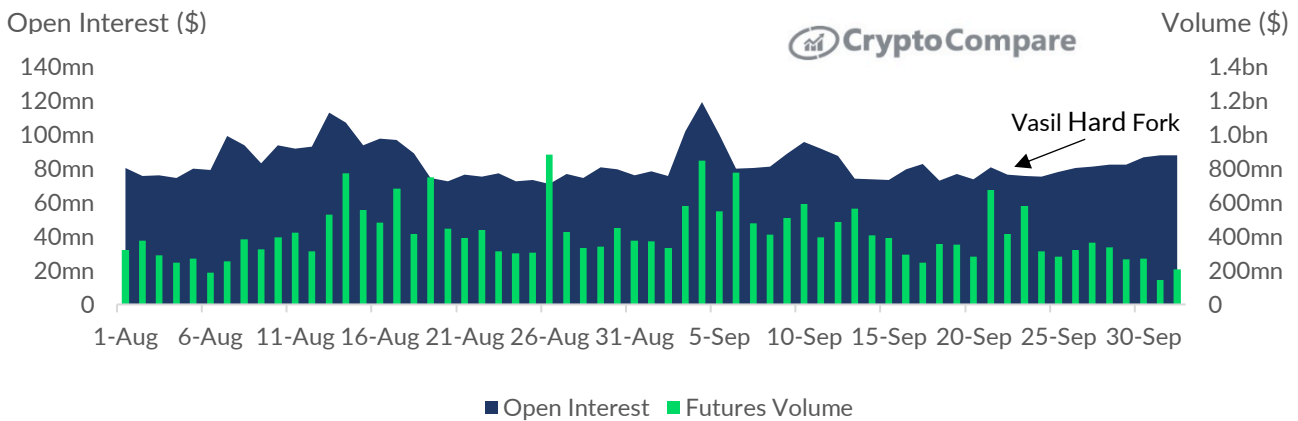
Cardano Transaction Fees, September 2022

The Vasil hard fork, implemented on September 22nd, brought in several improvements to the Cardano blockchain. One of these improvements has been a reduction in transaction fees. The daily average transaction fee dropped from \$0.16 on the day of the hard fork to \$0.14 a few days after. As a result, the average daily transaction fee for the month fell 9.10% from August to September, from \$0.18 to \$0.16.



ADA Futures Activity Falls After Vasil Hard Fork:

ADA Futures Volumes and Open Interest, August – September 2022

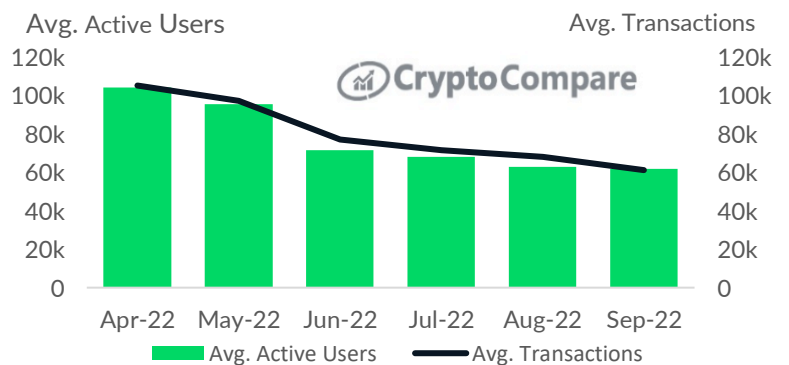


The Vasil hard fork was first expected to be implemented in June 2022 but has experienced several delays over the summer, causing speculation via derivatives contracts. The hard fork was finally implemented at the end of September. Since then, we have seen a drop off in Cardano futures volumes. Futures volumes were at the largest in the run up to the hard fork. Interestingly, we have seen a slight uptick in open interest, showing an increase in flows to Cardano derivatives contracts since the hard fork.

Cardano On-Chain Activity Continues to Decline in September:

Average Daily Active Users and Transactions, April – September 2022

The Vasil hard fork was hoped to ignite more activity in the Cardano chain, which has seen activity steadily decline over the last 6 months. Using data on transaction count and active daily users, we can see that the Vasil hard fork has so far failed at increasing activity on the chain. The number of active users has decreased by 40.1% over a 6-month period from April to September, and 1.72% from August to September. Similarly, the number of transactions has decreased 41.9% over a 6-month period, and 9.94% from August to September.



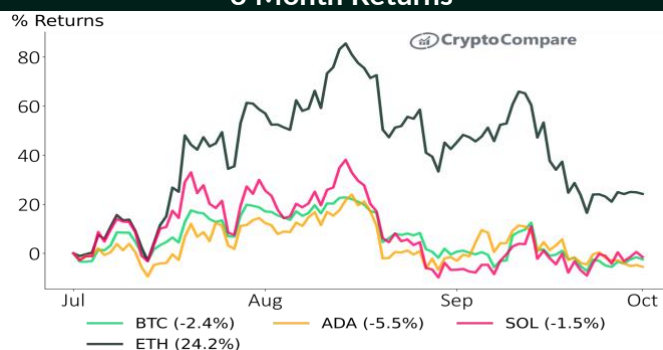
Asset Performance & Market Metrics

Summary

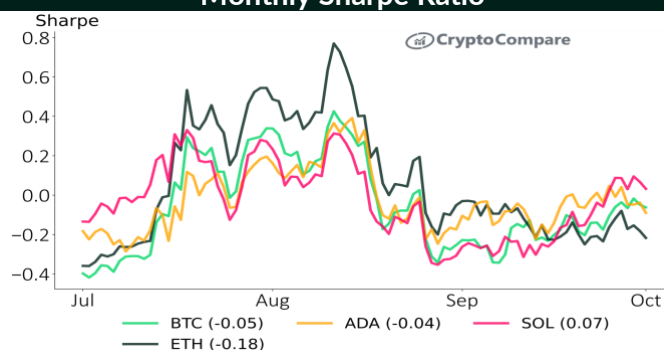
Traditional and crypto markets saw a major fall in September as macroeconomic conditions continued their bearish sentiment. The total market capitalization for the four assets tracked has fallen 6.43% this month, reflecting the risk-averseness of the market. BTC remains the least volatile asset and the most dominant across major cryptocurrencies. In September BTC outperformed both the S&P500 and NASDAQ which saw negative returns of 9.34% and 10.5% respectively, seeing negative returns for the second month in a row. ETH was the worst performer, after the long-awaited Merge proved to be a 'buy the rumour, sell the news' event.

	BTC	ETH	ADA	SOL	GOLD	S&P500	NASDAQ
EoM Price	\$19,426	\$1,329	\$0.43	\$33.3	\$1,672	\$3,585	\$10,575
Market Cap	\$372bn	\$163bn	\$15.0bn	\$12.1bn	\$11.5tn	-	-
Monthly Return	-3.11%	-14.5%	-2.51%	+5.59%	-2.87%	-9.34%	-10.5%
YTD Return	-58.0%	-63.9%	-66.8%	-80.4%	-7.23%	-25.3%	-32.4%
Monthly Volatility	65.0%	80.0%	67.1%	82.6%	17.4%	28.0%	33.0%

3 Month Returns

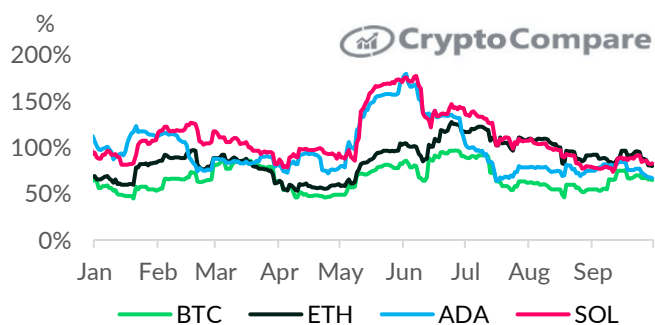


Monthly Sharpe Ratio

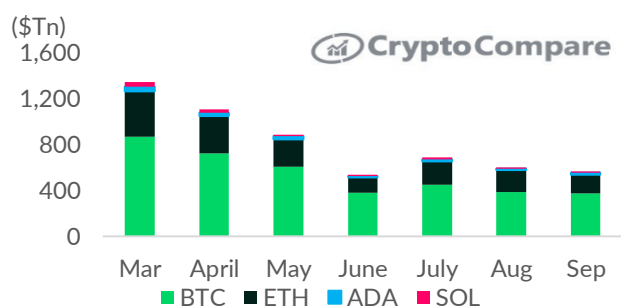


Monthly Sharpe ratios suggest that SOL provided the best risk-adjusted returns in September, with a Sharpe ratio of 0.07; the only positive Sharpe ratio among all tracked assets and the first positive Sharpe ratio in four months. ETH, which recorded the best risk-adjusted returns in August, saw the biggest decline, recording a Sharpe ratio of -0.18.

Volatility

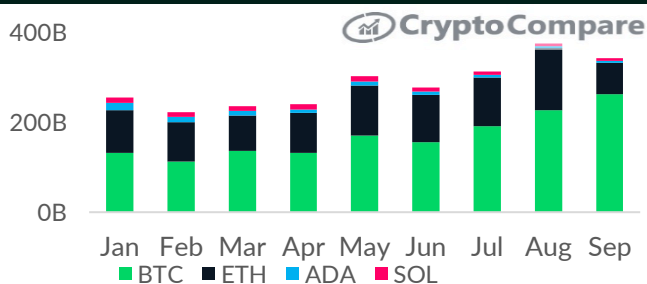


Market Capitalisation Dominance

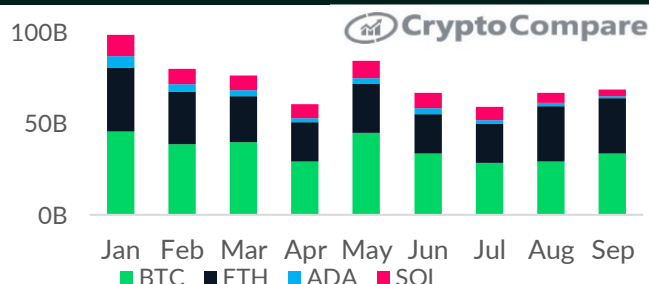


Volatility across cryptocurrency markets saw a slight increase in September amid the interest rates spikes and the unstable macro environment. ETH and SOL continued to be the most volatile assets, with 30-day volatility of 80.0% and 82.6% respectively. Bitcoin's volatility rose 19.2% in September breaking a declining trend that started in June.

Direct USDT Volume



Direct USD Volume



While most volumes declined in September, both USDT and USD volumes for BTC increased by 15.4% and 15.1% respectively, suggesting market participants are piling into BTC following recent volatility in fiat currencies, including the British Pound and Japanese Yen. USDT volumes for ETH saw a big drop of 49.4%, amid its transition to Proof of Stake. ADA and SOL saw declines in USD volumes, while SOL saw a noticeable rise of 10.5% in USDT volumes in September.

[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