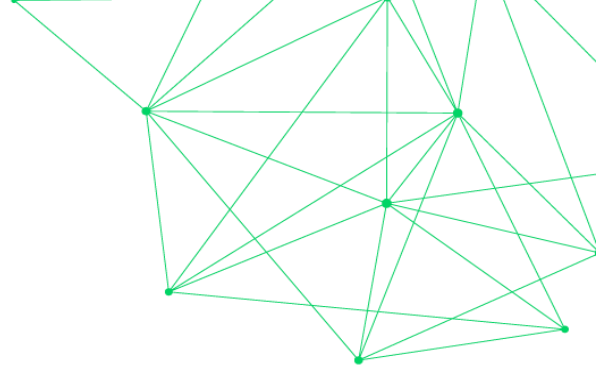




ASSET REPORT

JANUARY 2023



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 14 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.

The data used in this report was collected up to February 9th, 2023.

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Featured Currencies

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.

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.

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.

ADA



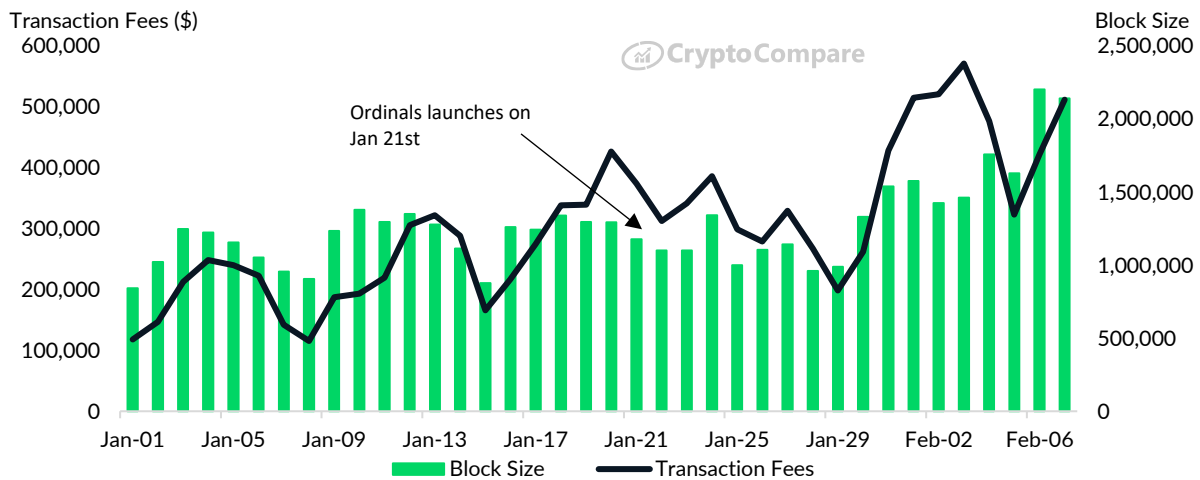
ADA is the cryptocurrency of the Cardano blockchain network, which was launched in 2017 by Charles Hoskinson, a co-founder of Ethereum. It is one of the largest PoS blockchains, which validates transactions by selecting validators on the blockchain proportionally to the amount of ADA they own and stake.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

Latest News

Jan 3 rd	Ethereum Grayscale Ethereum Trust Trades at Record 60% Low Against Ethereum
Jan 4 th	Solana Fake Solana NFTs Are Being Sold on Magic Eden in 'Massive' Exploit
Jan 12 th	Bitcoin El Salvador Opens the Door to Bitcoin Bonds
Jan 13 th	Cardano Cardano Developer IOG Deploys Sidechain Toolkit to Boost Blockchain
Jan 18 th	Solana Solana co-founder sees potential for devs to lead its network in 2023
Jan 23 rd	Cardano Cardano recovers from an outage on 50% relay and block-producing nodes
Jan 23 rd	Ethereum Latest Ethereum 'Shadow Fork' Brings Blockchain's Shanghai Upgrade Closer to Reality
Jan 27 th	Ethereum DeFi Lender Aave Deploys Version 3 on Ethereum Network
Jan 30 th	Bitcoin NFTs Coming to Bitcoin Sparks Handwringing About Crypto Purists
Jan 30 th	Bitcoin Binance and Mastercard Launch Bitcoin Rewards Card in Brazil

Key Market Insights – Bitcoin

Bitcoin Community Divided Over On-Chain NFT Ordinals



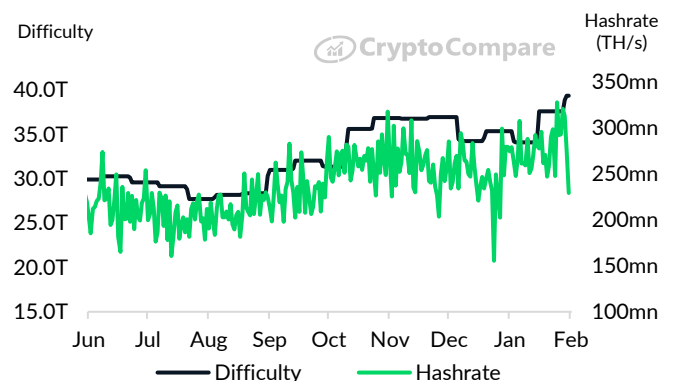
The age-old debate over whether the Bitcoin blockchain should be used for functions other than financial transactions has been revived with the launch of a Bitcoin on-chain NFT protocol named Ordinals, which launched on January 21st. Using a design quirk in the Taproot upgrade, Ordinals allows digital assets such as images to be inscribed on Satoshis on the Bitcoin blockchain.

Critics have argued that these inscriptions could delay the confirmation of other financial transactions as they occupy larger amounts of Bitcoin block space. The Bitcoin network has seen a steady increase in block size since the launch of Ordinals, recording an all-time high of 2.20 MB on the 6th of February. The blockchain has also seen a rise in transaction fees as a result, recording daily fees of \$572k on the 3rd of February, the highest since November 2022.

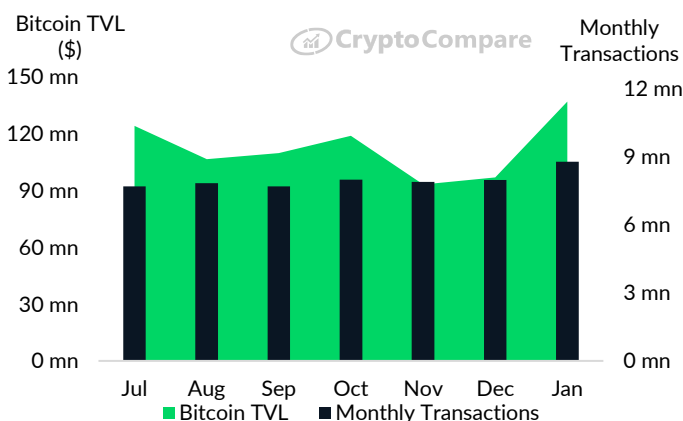
Hashrate and Network Difficulty Reaches All-Time Highs

On January 25th, the Bitcoin hashrate climbed to an all-time high of 327mn TH/s, the seventh time the metric has breached the 300mn TH/s landmark in the last twelve months. The average hashrate per month rose 10.3% to 275.4mn TH/s, resulting in the highest electricity intensive month for the Bitcoin network in its history.

The network difficulty also rose 11.3% to 39.4tn, recording an all-time high for the metric. The recent rally in January gave miners much-needed relief, after twelve months of a downtrend in Bitcoin prices and elevated energy costs. This has resulted in a net inflow of 9,651 BTC to miner reserves in January.



Bitcoin Network Activity Hits Two-Year Highs

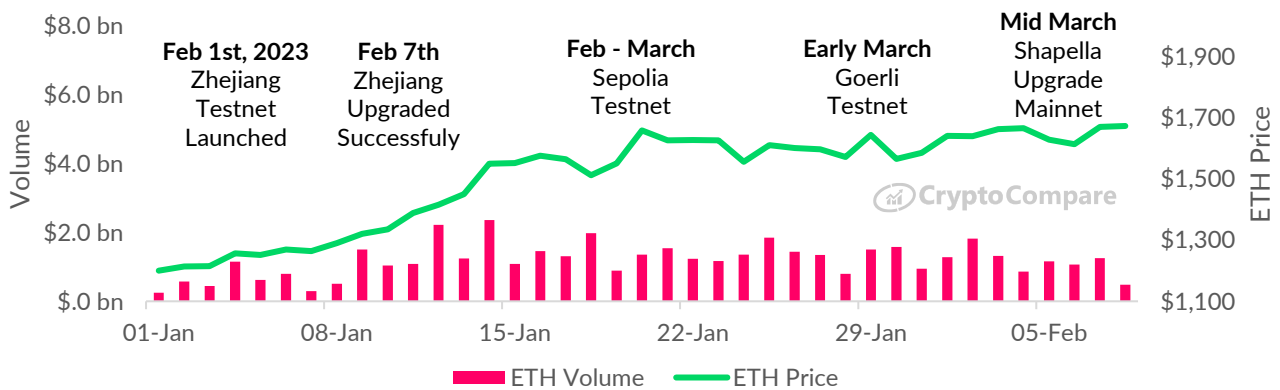


In January, total monthly BTC transactions rose 10.1% to 8.76mn, recording the highest network activity by transactions since March 2021. The recent launch of Ordinals NFT, which has seen around 35,000 mints as of February 9th, has led to the 7-day average transactions hitting 313k transactions, the highest since February 2021.

Meanwhile, the total value locked in the Bitcoin ecosystem rose 41.3% to \$137mn as BTC recorded its best-performing month since October 2021. The Lightning Network, which accounts for 88.4% of TVL in the Bitcoin ecosystem, saw its TVL rise 41.8% to \$121mn, the highest since June 2022. The Lightning Network capacity also rose 6.19% to 5,312 BTC in January, recording an all-time high for the metric.

Key Market Insights – Ethereum

Ethereum Developers Are Keeping Busy

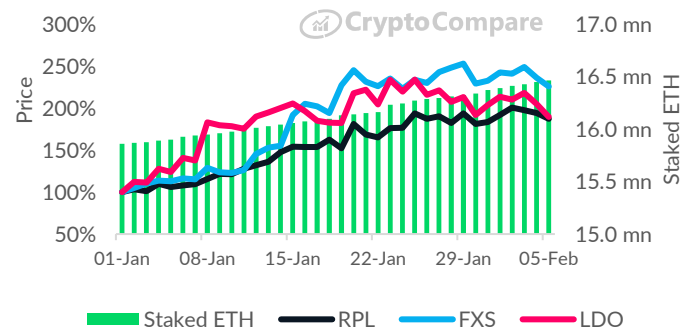


In January, the price of ETH rose 32.7% to \$1,585, its highest monthly close since July 2022. The bullish price action can be attributed to an overall upward trend in crypto markets and the excitement surrounding the upcoming Capella and Shanghai upgrades, coined 'Shapella'. On February 1st, Ethereum developers launched 'Zhejiang', a public testnet that allows validators to simulate staked ETH withdrawals. The launched testnet deployed successfully on the 7th of February. The network upgrade will be activated on the Sepolia testnet over the coming weeks, followed by a final test on the Goerli testnet, before the upgrades are deployed on the Ethereum mainnet in mid-March.

The Shanghai upgrade is primarily meant to enable staked ETH withdrawals from the consensus layer to the execution layer, while the second Capella upgrade is responsible for the functionality of withdrawal on the consensus layer. Two types of withdrawals are expected to be available by Capella, a partial withdrawal which enables validators to automatically withdraw any staked ETH amount above the 32 effective balance, and the full withdrawal which will enable validators to totally exit the beacon chain.

Liquid Staking Derivative Tokens Outperform

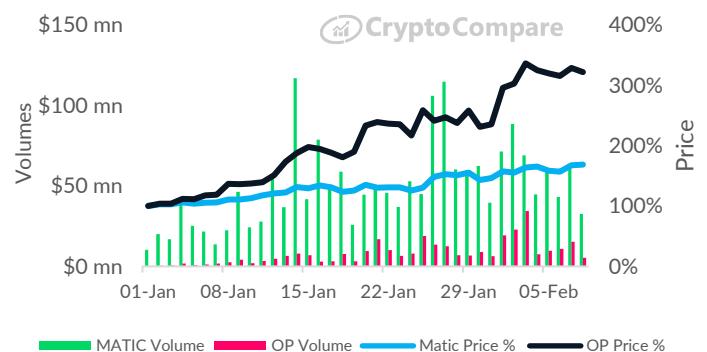
News surrounding Ethereum's upgrades has caused a surge in the price of Liquid Staking Derivatives (LSDs), including FXS, LDO and RPL. The three tokens have witnessed a significant increase of 286%, 239% and 208%, respectively, from the beginning of January to the 7th of February. After the successful implementation of the Shapella upgrades, Ethereum has two more upgrades in the pipeline, namely Proto-Danksharding and EVM. These upgrades are expected to further enhance Ethereum's scaling capabilities and contribute to the network's growth.



Layer 2 Scaling Solutions Continue to Grow

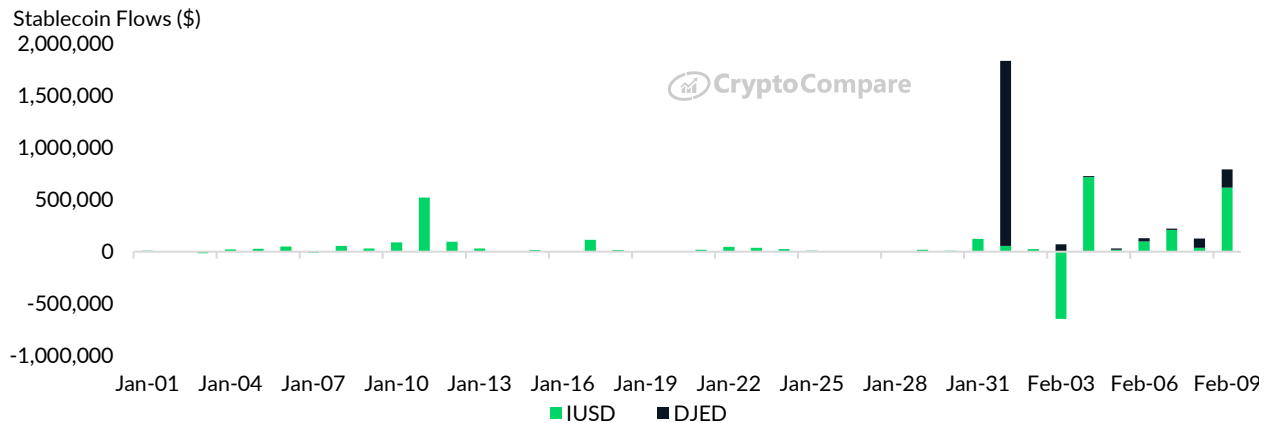
Layer-2 scaling solutions have also performed well following the developments with the latest Ethereum upgrades. OP, the native token of Optimism, rose 136% in January after the scaling solution announced its first network upgrade 'Bedrock' – a rollup architecture that is expected to improve transaction speed and lower fees, potentially making Optimism the cheapest rollup on Ethereum. The upgrade is expected to be implemented in March.

MATIC also witnessed a 46.4% gain in January after implementing a hardfork to reduce gas spikes and improve transaction finality.



Key Market Insights – Cardano

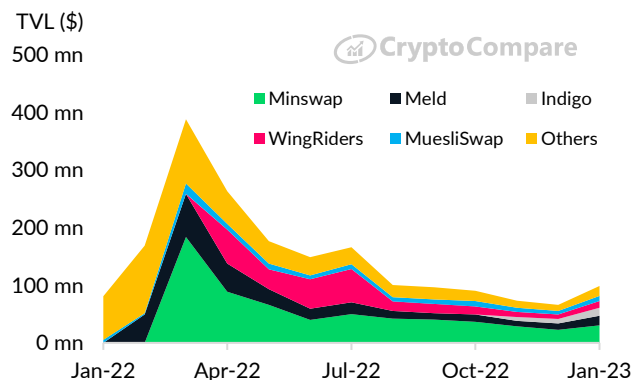
'Djed' Stablecoin Launches on Cardano and Depegs Momentarily



On February 1st, the much-awaited Djed stablecoin launched on the Cardano blockchain, with a circulating supply of \$1.78mn. The market capitalisation of the stablecoin has since increased to \$2.17mn, suggesting some adoption of the pegged asset. The over-collateralised stablecoin, which is backed by ADA and a reserve coin SHEN, targets to maintain its collateral ratio of over 400%. However, the stablecoin depegged momentarily on the 2nd of February, falling as low as \$0.98.

The stablecoins market cap on the Cardano network has been increasing steadily in the past few months, rising 49.6% to \$4.16mn in January. Indigo protocol's rival stablecoin, IUSD, dominates the stablecoin market cap on the Cardano blockchain currently, with a market share of 70.3% as of February 9th.

Cardano TVL Rises for the First Time in Six Months



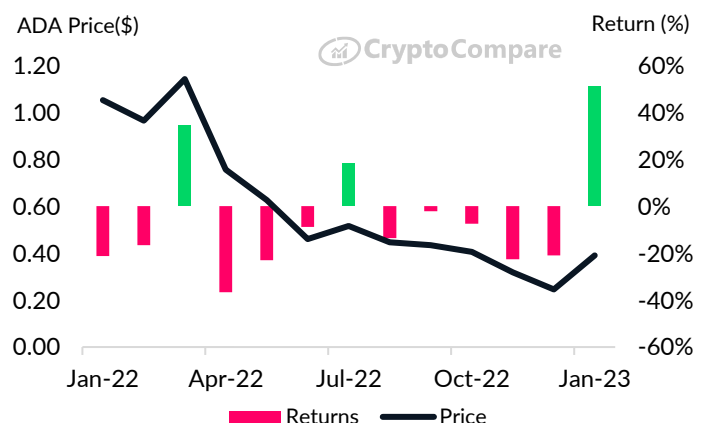
In January, the Total Value Locked (TVL) on the Cardano blockchain rose 49.9% to \$99.0mn, recording the first TVL increase in six months. This was the highest recorded TVL on the Cardano network since August 2022. Decentralised exchange *Minswap* remains the largest protocol in the ecosystem with a TVL of \$30.7mn. However, because of the launch of new protocols and the rising popularity of other dApps, its dominance continued to slide in January, falling to 31.0% from 42.0% in August 2022.

On the other hand, the lending protocol *Meld* and the synthetic asset protocol *Indigo* saw their TVL rise 48.4% and 76.5% to \$36.7mn and \$16.5mn, respectively. Decentralised exchanges *WingRiders* and *MuesliSwap* followed, rising 50.2% and 42.3%

Cardano Records its Highest Returns Since August 2021

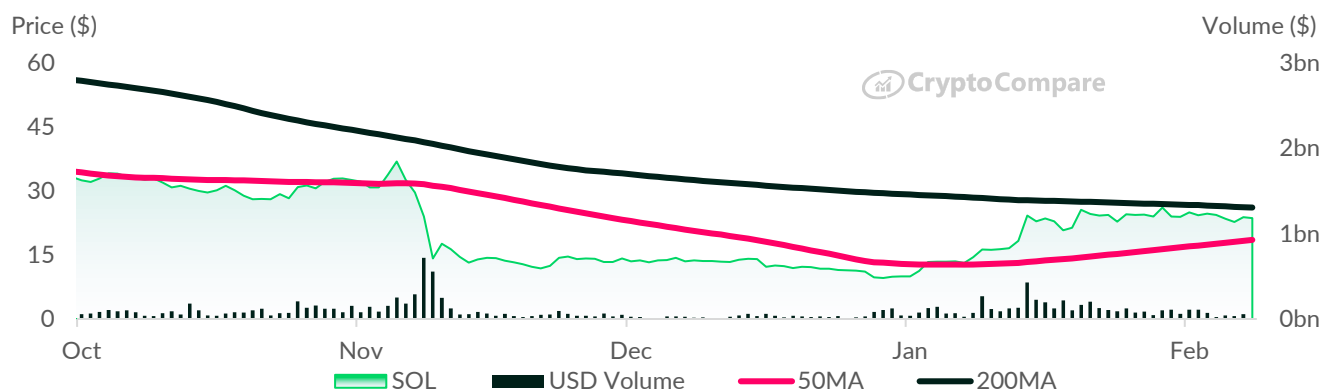
With the crypto markets starting the new year with much optimism, Cardano benefitted from the positive rally, as its price rose 58.9% to \$0.39 in January. This was the best-performing month for the asset since August 2021. Cardano was also amongst the stronger assets this month, outperforming the MVIS CryptoCompare Digital Assets 100 Index (MVDA), which recorded a return of 31.7%.

The price action was accompanied by a spike in trading activity, as volumes on centralised exchanges rose 158% to \$9.87bn. This was the first increase in trading volume for the asset in thirteen months, a much-needed rebound after hitting the lowest monthly trading volume since October 2020 in December 2022.



Key Market Insights – Solana

SOL Rebounds and Nears 200-Day Moving Average

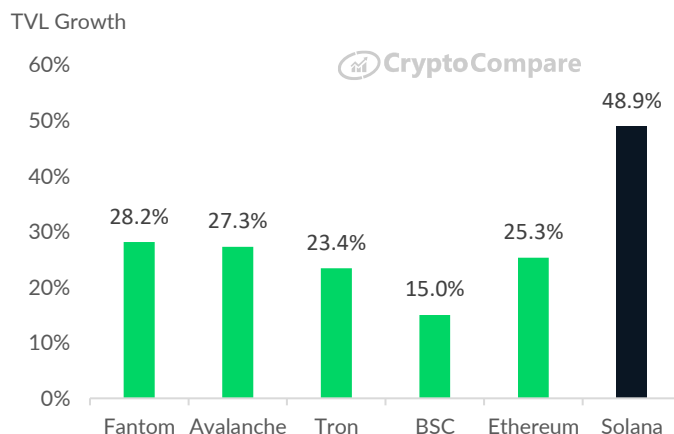


SOL was one of the best performing assets in January, returning 140% as it closed the month at \$23.9. With an opening price of \$36.9 on the 6th of November, the token is still recovering from its decline caused by the fall of FTX. Despite this, SOL crossed its 50-day moving average at the start of January, and is nearing its 200-day moving average, which closed the month at \$26.1. Based on technical analysis, a move above the 200-day moving average would suggest continued upside for Solana's native token – Solana has been below its 200-day moving average since the 19th of January 2022.

Solana's USD TVL Rises at Fast Pace Relative to Other Layer-1s

Total Value Locked (TVL) in the Solana ecosystem grew 48.9% in January to \$560mn, the fastest growth in TVL compared to most other major Layer-1 Blockchains. This is a welcomed move for the Solana ecosystem, which has lost TVL market share relative to competitors – out of the six blockchains analysed on the right, Solana has the lowest TVL.

The increase in the price of SOL is likely a determining factor in this development. Accounting for this by assessing TVL in SOL terms, total TVL in Solana has decreased 37.9% - from 37.7mn SOL to 23.4mn SOL. Only Fantom saw its TVL in native token terms decline by a wider margin – a 52.5% fall from 2.51bn FTM to 1.19mn FTM.



Solana Protocols Experience Major Headwinds

Over the last month, several Solana-based decentralised applications have either shut down or moved to an alternative blockchain, putting some concern on the long-term adoption of Solana. There are three main examples of this over the last month:

- On January 17th, Xternity, a web3 gaming development platform, announced it would migrate its Synergy Land game from Solana to Polygon. The move is likely due to Polygon being an EVM chain, allowing it access to the Ethereum ecosystem and user base. Polygon is a long-term advocate of crypto gaming and has built a strong team to expand in this field, for example with Ryan Wyatt, the former head of Youtube Gaming, acting as the CEO of Polygon Studios.
- On January 27th, the decentralised portfolio management platform 'Friktion' announced it would shut down its user platform. At the time, it had \$5.62mn in TVL, compared to a peak of \$164mn in April 2022. While the reasons for this decision have not been made clear, a year full of headwinds in the form of the Luna and FTX collapse, and multiple Solana outages likely contributed.
- On February 1st, the decentralised yield & loan aggregator 'Everlend' announced it would close down its application. The team announced it still had some runway, but saw increasingly difficult months ahead with a dried up borrowing and lending market. The team also announced that all raised and unused funds would be returned to third parties within two weeks of the announcement.

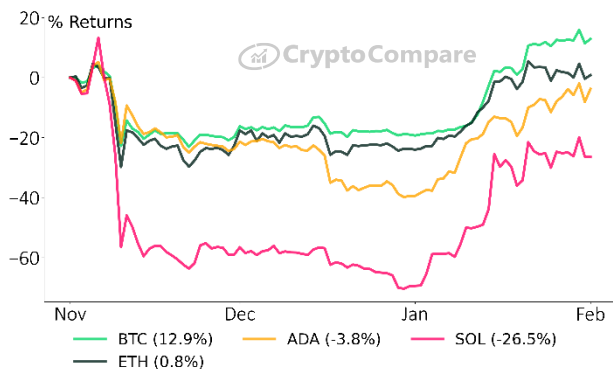
Asset Performance & Market Metrics

Summary

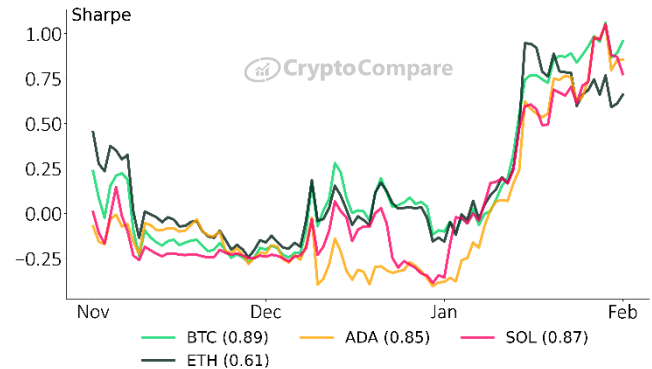
Crypto markets had a strong start to the year, with Bitcoin leading the rest of the market with a 39.9% increase to \$23,130. Layer-1 blockchain native tokens like SOL and ADA outperformed heavily, returning 58.9% and 140%, while some assets not included in this report proved to be the biggest gainers, such as Aptos – the recently launched layer-1 blockchain – which returned 386% in the first month of the year. Traditional asset classes also saw positive performances – the NASDAQ 100, which is comprised by high-beta technology stocks, lead equities with a 10.7% return.

	BTC	ETH	ADA	SOL	GOLD	S&P500	NASDAQ
EoM Price	\$23,130	\$1,585	\$0.39	\$23.9	\$1,930	\$4,077	\$10,575
Market Cap	\$446bn	\$194bn	\$13.5bn	\$8.90bn	\$12.4tn	–	–
Monthly Return	+39.9%	+32.7%	+58.9%	+140%	+6.03%	+6.18%	+10.7%
YTD Return	+39.9%	+32.7%	+58.9%	+140%	+6.03%	+6.18%	+10.7%
30-day Volatility	44.0%	52.6%	66.0%	160%	10.5%	16.2%	20.9%

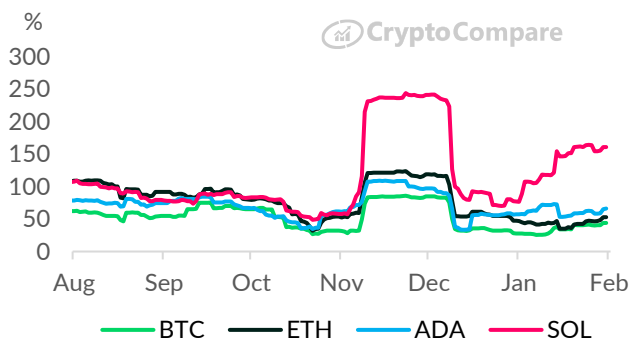
3 Month Return



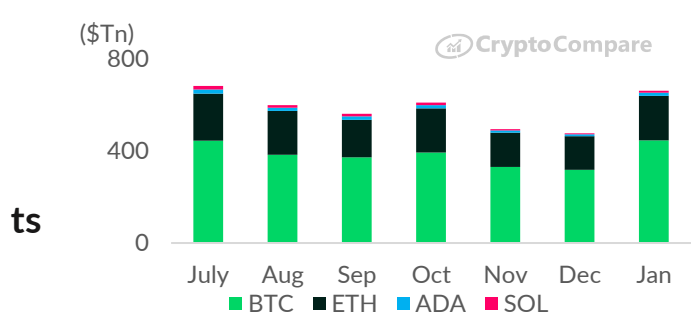
Monthly Sharpe Ratio



Volatility



Market Capitalisation Dominance



Summary

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

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.
MARKETS OUTLOOK	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.
STABLECOINS AND CBDCs	Captures the key developments within the stablecoins and CBDCs sector – providing analysis relating to the market capitalization and trading volume of stablecoins, segmented by their type based on collateral.

Topic Deep Dives

CENTRALISED EXCHANGES RETROSPECTIVE	Created in collaboration with Bybit — it includes a retrospective analysis of the centralised exchange landscape and the key trends to look out for this year following the collapse of FTX in November 2022.
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
Sharp Ratio	30-day returns in excess of the risk-free rate per unit of volatility.	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	30 The number of individuals changes made to the underlying code.	-	All

Glossary (Cont.)

METRIC	DEFINITION/METHODOLOGY	REPORT SECTION	FACTSHEETS
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 block-chain or protocol.	DeFi and On-Chain Activ-ity	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 & Mar- ket Metrics	BTC, ETH, SOL

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