cfbenchmarks
a kraken company

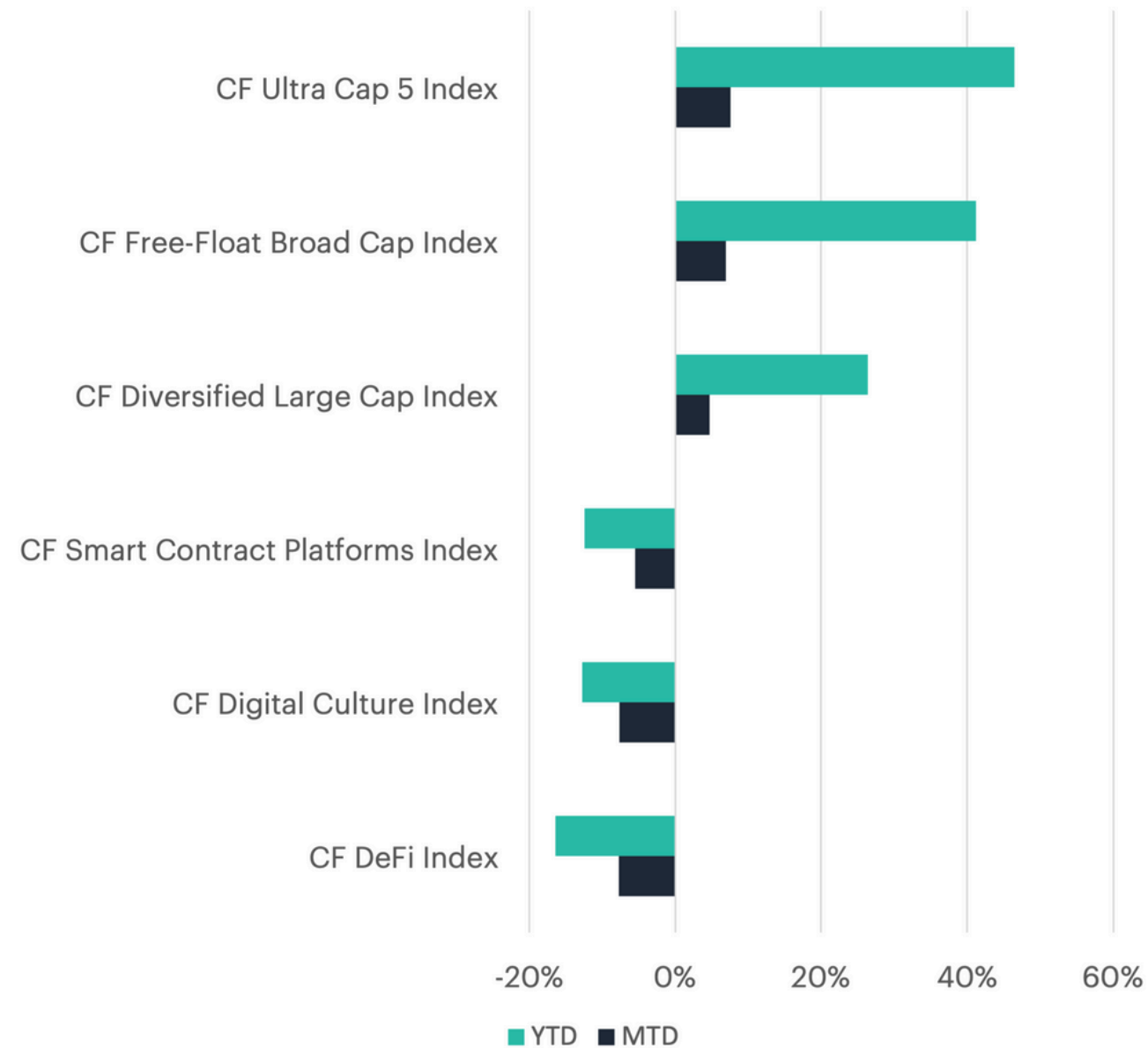# Monthly Market Recap

*October 2024*

BLOOMBERG <CFBX> GO

# Market Performance

# Vote of Confidence: Bitcoin Rallies on Election Shifts

## Benchmark Performance



- CF Ultra Cap 5 Index
- CF Free-Float Broad Cap Index
- CF Diversified Large Cap Index
- CF Smart Contract Platforms Index
- CF Digital Culture Index
- CF DeFi Index

-20%  0%  20%  40%  60%

■ YTD ■ MTD

All index performance is rebased to 100.
Source: CF Benchmarks, Bloomberg, as of October 31, 2024

## Market Summary

Investors continued to focus on the upcoming U.S. presidential election, with former President Trump now holding a double-digit lead over Vice President Harris in decentralized prediction markets, although polling data still shows a much tighter race. This political backdrop, along with expectations of a potentially more accommodative regulatory framework and increased government spending, has been perceived positively for Bitcoin and the digital asset industry, contributing to the highest fund inflows ($5.4 billion) since February's spot Bitcoin ETF launch. Meanwhile, record-high CME futures open interest helped drive Bitcoin near its all-time high.

Performance breadth remained narrow, with most asset pairs finishing the month in negative territory. The CF Ultra Cap 5 Index led, rising +7.55%, followed by the CF Free-Float Broad Cap Index at +6.90% and the CF Diversified Large Cap Index at +4.68%. Meanwhile, the CF Smart Contract Platforms Index declined -5.49%, while both the CF Digital Culture Index and CF DeFi Index saw similar losses of approximately -7.65% and -7.71% respectively, indicating notable underperformance in these areas of the cryptocurrency market.

**Gabe Selby, CFA**
Head of Research

**Mark Pilipczuk**
Research Analyst

# Major Crypto-Pairs

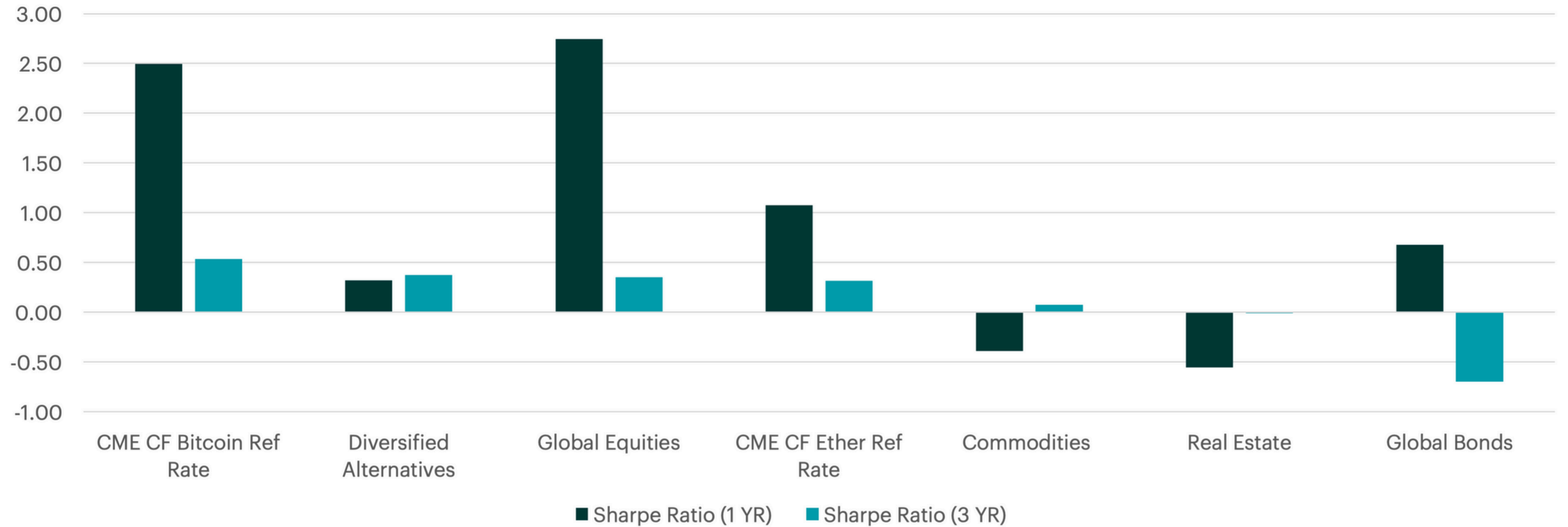| Name | Category | Sub-Category | Segment | 1 Month | 3 Month | 1 Year | 30 D Volatiltity |
|---|---|---|---|---|---|---|---|
| Dogecoin | Settlement | Non-Programmable | Store Of Value And Payment | 32.6% | 29.2% | 129.8% | 75.03 |
| Apecoin | Sectors | Culture | Social | 27.7% | 30.6% | -24.2% | 232.20 |
| Solana | Settlement | Programmable | General Purpose Smart Contract Platforms | 10.9% | -1.3% | 340.7% | 46.97 |
| Bitcoin | Settlement | Non-Programmable | Store Of Value And Payment | 9.6% | 8.3% | 101.8% | 35.27 |
| Bitcoin Cash | Settlement | Non-Programmable | Store Of Value And Payment | 2.7% | -14.5% | 45.0% | 49.60 |
| Litecoin | Settlement | Non-Programmable | Store Of Value And Payment | 2.1% | -1.9% | -0.1% | 40.45 |
| Uniswap | Sectors | Finance | Trading | -0.7% | 5.0% | 82.3% | 70.86 |
| Ether | Settlement | Programmable | General Purpose Smart Contract Platforms | -3.7% | -21.8% | 38.7% | 43.16 |
| Decentraland | Sectors | Culture | Vr And Ar | -4.9% | -7.0% | -21.0% | 69.01 |
| Chainlink | Services | Utility | Oracles | -5.1% | -10.8% | 0.4% | 54.59 |
| Ethereum Classic | Settlement | Programmable | General Purpose Smart Contract Platforms | -6.1% | -14.9% | 7.1% | 39.57 |
| Stellar | Settlement | Non-Programmable | Store Of Value And Payment | -6.5% | -8.4% | -24.0% | 24.84 |
| Aave | Sectors | Finance | Borrowing & Lending | -8.1% | 32.2% | 74.2% | 56.37 |
| Fantom | Settlement | Programmable | General Purpose Smart Contract Platforms | -8.8% | 57.6% | 169.8% | 76.12 |
| Curve DAO Token | Sectors | Finance | Trading | -9.4% | -3.8% | -47.7% | 37.54 |
| Cardano | Settlement | Programmable | General Purpose Smart Contract Platforms | -10.1% | -12.1% | 16.1% | 41.12 |
| Filecoin | Services | Utility | Information & Data Management | -10.2% | -16.4% | -8.4% | 55.22 |
| Chiliz | Sectors | Culture | Social | -10.4% | -9.1% | -7.7% | 80.10 |
| Avalanche | Settlement | Programmable | General Purpose Smart Contract Platforms | -10.5% | -3.4% | 118.9% | 53.20 |
| Stacks | Services | Infrastructure | Computing | -11.0% | -5.3% | 163.0% | 60.57 |
| Cosmos | Settlement | Programmable | General Purpose Smart Contract Platforms | -11.3% | -28.1% | -45.6% | 68.12 |
| Tezos | Settlement | Programmable | General Purpose Smart Contract Platforms | -11.3% | -14.9% | -14.9% | 36.20 |
| Internet Computer | Settlement | Programmable | General Purpose Smart Contract Platforms | -13.2% | -14.2% | 97.8% | 53.49 |
| Polkadot | Settlement | Programmable | General Purpose Smart Contract Platforms | -13.5% | -26.6% | -11.9% | 43.22 |
| Algorand | Settlement | Programmable | General Purpose Smart Contract Platforms | -15.0% | -15.9% | 4.5% | 44.46 |
| Synthetix | Sectors | Finance | Derivatives | -16.7% | -3.8% | -46.8% | 73.08 |
| EOS | Settlement | Programmable | General Purpose Smart Contract Platforms | -16.9% | -24.5% | -30.8% | 42.61 |
| Ripple | Settlement | Non-Programmable | Store of Value and Payment | -18.6% | -18.6% | -15.5% | 36.79 |
| Hedera | Settlement | Programmable | General Purpose Smart Contract Platforms | -19.9% | -26.9% | -12.4% | 55.14 |
| Maker | Sectors | Finance | Stablecoin Issuance & Management | -19.9% | -55.5% | -8.0% | 51.81 |
| Polygon | Services | Infrastructure | Scaling | -20.9% | -35.4% | -49.9% | 39.63 |

## Leaders

Dogecoin's DOGE token (+32.6%) and ApeCoin's APE token (+27.8%) were the top performers in October. DOGE surged on Musk-Trump campaign rumors, and APE rallied after a major cliff unlock of 15.6 million tokens, representing approximately 1.56% of total supply.

## Laggards

Polygon's POL token (-20.9%) and Maker's MKR token (-19.9%) remained the worst performers. Both protocols experienced declining network activity, with notable drops in user engagement, transaction volume, and total deposit activity.

Source: Returns are based in USD terms, CF Benchmarks, Bloomberg, as of October 31, 2024

# Trailing Risk-Adjusted Returns



Chart: Sharpe Ratios across asset classes

Y-axis: 3.00, 2.50, 2.00, 1.50, 1.00, 0.50, 0.00, -0.50, -1.00

Categories: CME CF Bitcoin Ref Rate, Diversified Alternatives, Global Equities, CME CF Ether Ref Rate, Commodities, Real Estate, Global Bonds
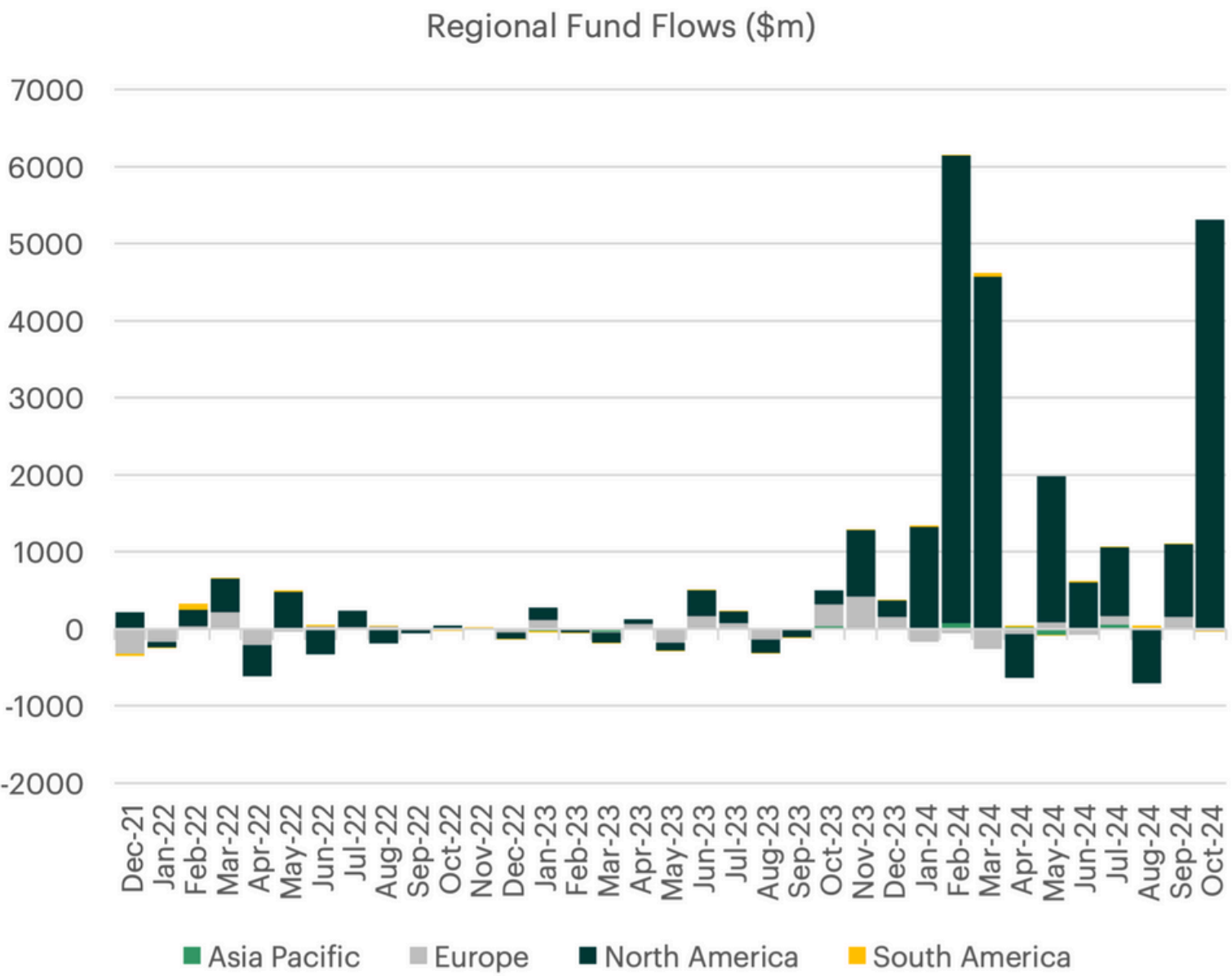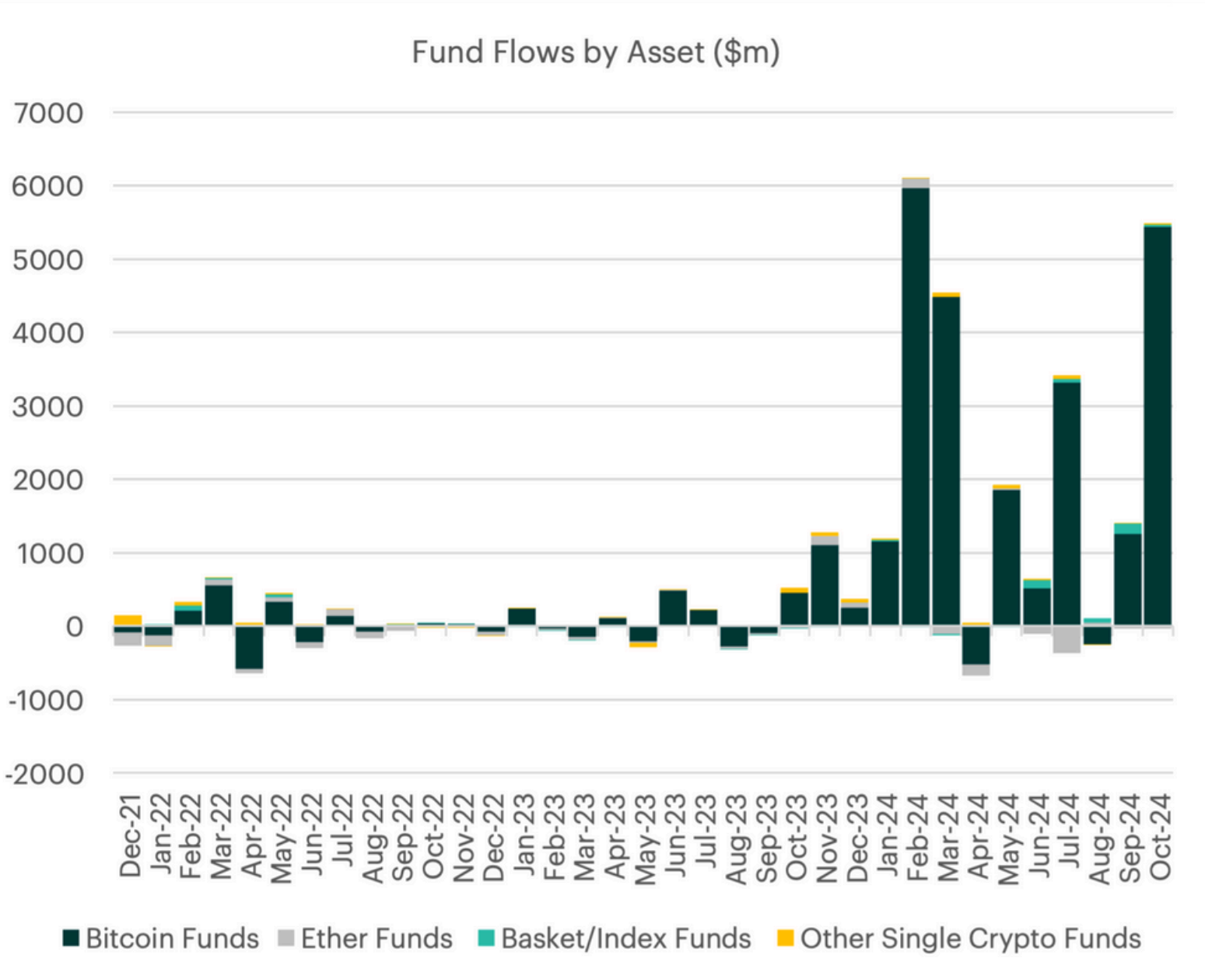
Legend: ■ Sharpe Ratio (1 YR)  ■ Sharpe Ratio (3 YR)

- When compared to traditional asset classes, both Bitcoin and Ether have delivered above average risk-adjusted performance over both shorter and longer time horizons.

Source: CF Benchmarks, Bloomberg, total return indices are referenced in USD, as of October 31, 2024

# Investor Activity & Sentiment Positioning

# Currency of Flows



Fund Flows by Asset ($m)

Legend: Bitcoin Funds, Ether Funds, Basket/Index Funds, Other Single Crypto Funds



Regional Fund Flows ($m)

Legend: Asia Pacific, Europe, North America, South America

- Bitcoin recorded its highest monthly fund flows since February's spot ETF launch, attracting $5.4 billion in inflows, while Ether recorded minor outflows of $35 million.

- From a regional perspective, fund inflows were heavily concentrated in North America ($5.3 billion), while Europe, Asia Pacific, and South America collectively recorded $33 million in outflows.

Source: CF Benchmarks, Bloomberg, as of October 31, 2024

# Futures Positioning and Open Interest



CF Bitcoin Reference Rate Index

CME CF BTC Net Futures Positioning (RHS)



CME CF BTC Open interest (# of contracts)

CME CF ETH Open interest (# of contracts, RHS)
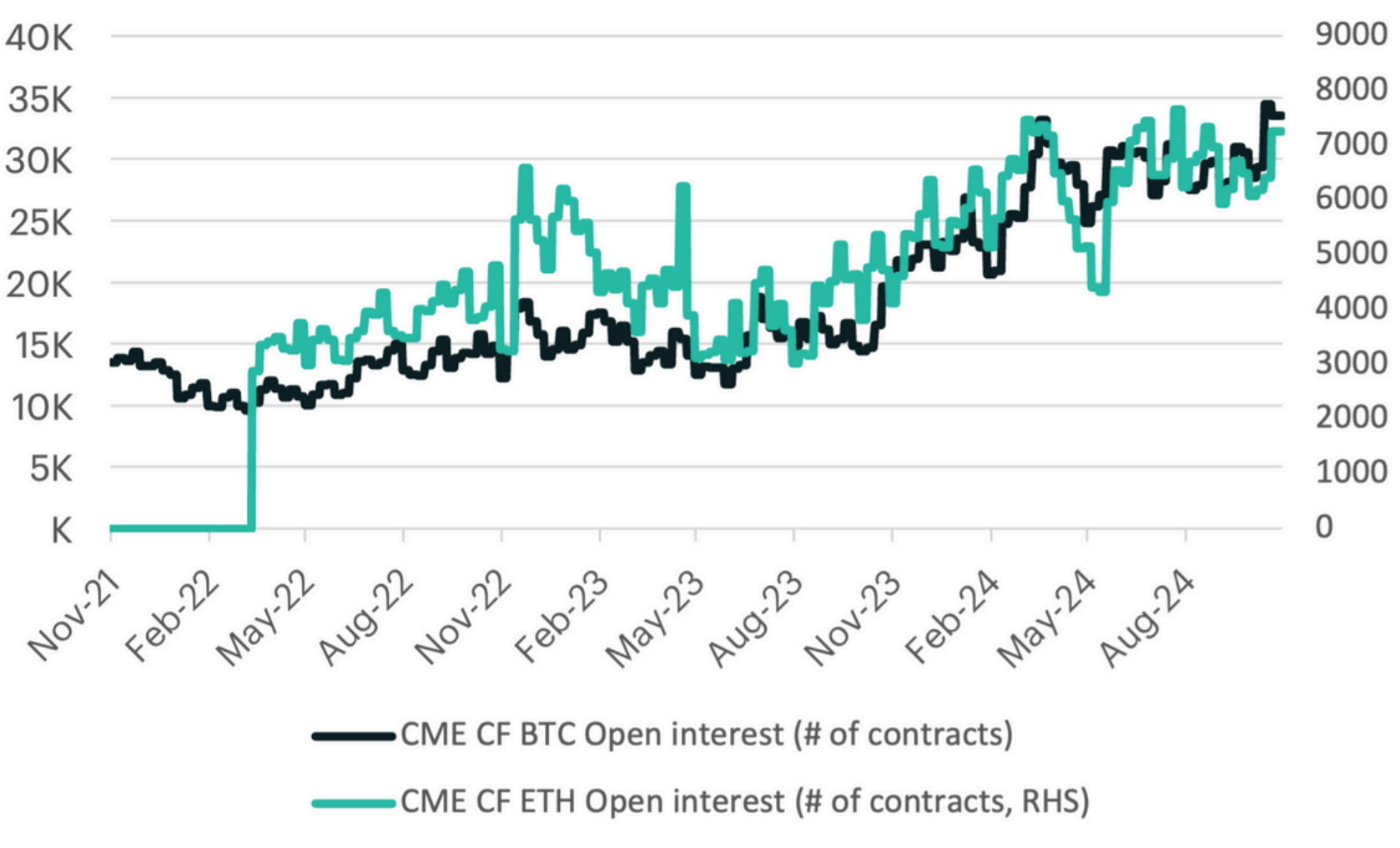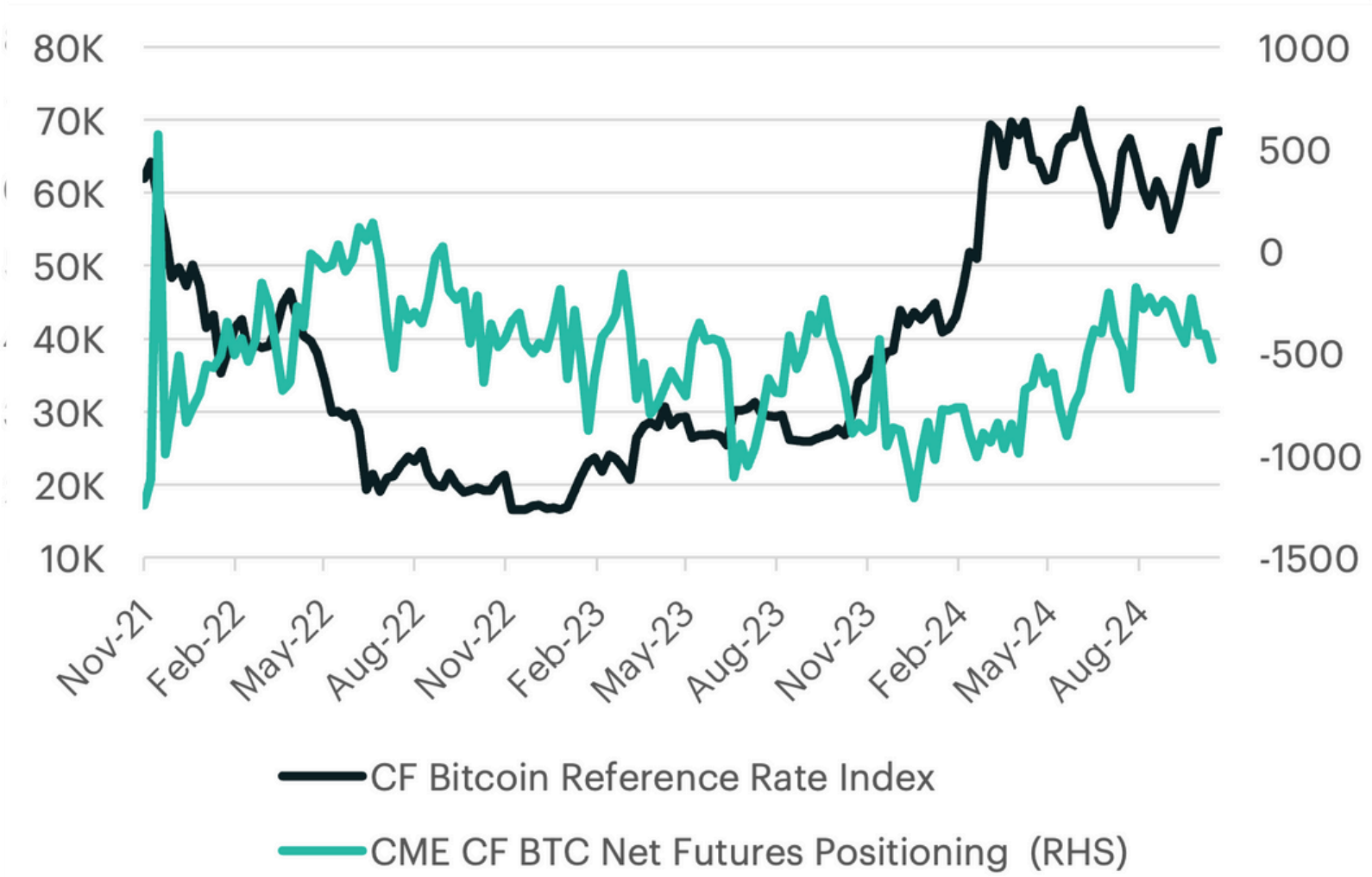
- Net sentiment positioning in Bitcoin decreased in October, with short positions outpacing longs. This resulted in net futures positioning on the CME decreasing to -348 from -216 contracts.

- Total open interest for CME Bitcoin futures grew 9.9% from the previous month, reaching new all-time highs, while Ether futures saw an 11.9% increase.

Source: CF Benchmarks, CFTC, Bloomberg, as of October 31, 2024

# CF Bitcoin Volatility Index (BVX)
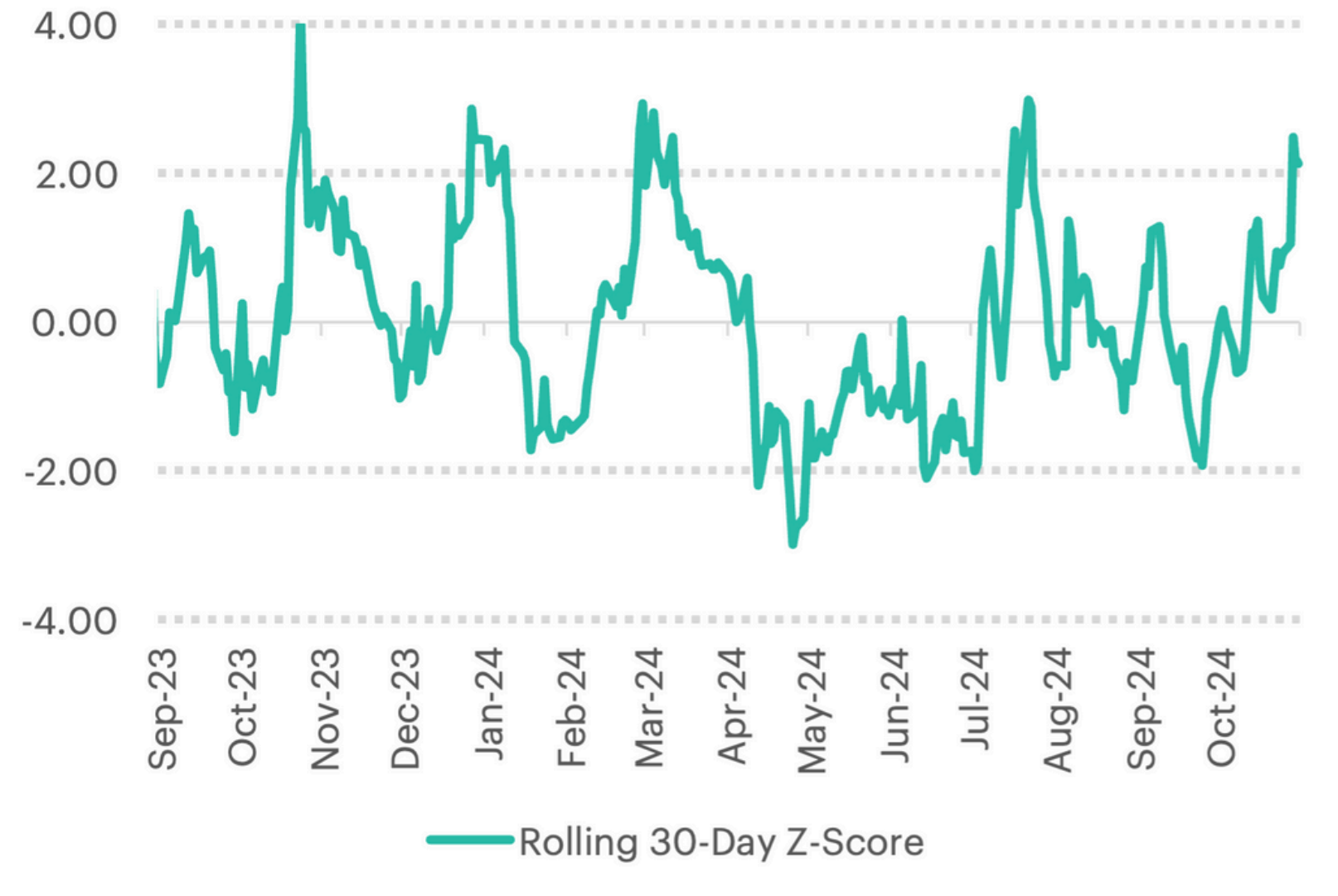


- The CF Bitcoin Volatility Index Settlement Rate (BVXS) is a once a day benchmark representing a forward looking, 30-day constant maturity measure of implied volatility based on CFTC regulated Bitcoin option contracts traded on the CME. The BVX represents the fair strike of a variance swap.

- The BVX ranged from a low of 53.91 to a high of 62.23 over the most recent month. This period saw notable volatility expansion, with the index posting a positive 2.48-sigma move (as measured by our rolling 30-day z-score) near month-end, reaching its peak on October 29th.

Source: CF Benchmarks, Bloomberg, as of October 31, 2024

# Network & On-chain Updates
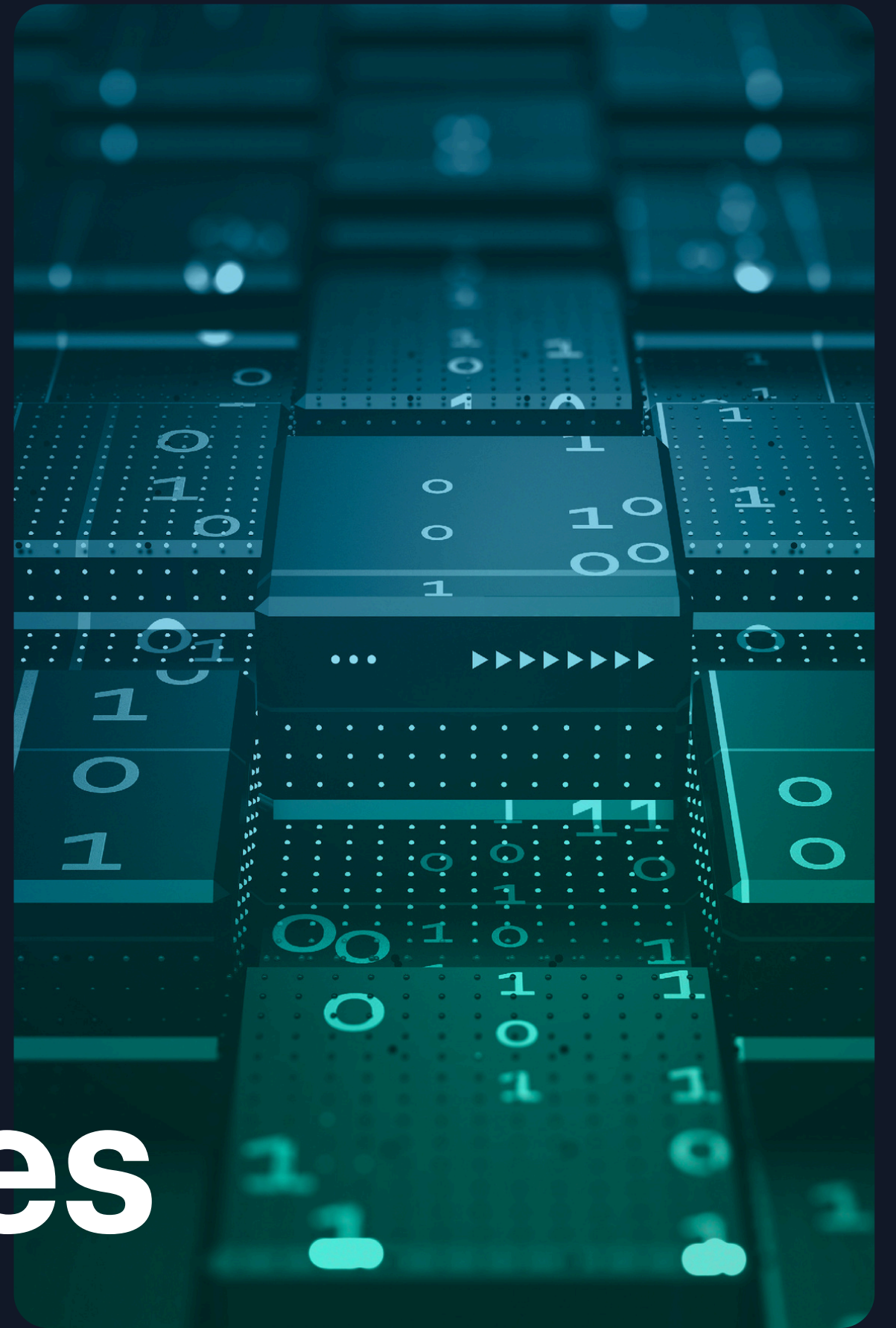
# Total Value Locked (TVL) in DeFi Protocols



Total Value Locked (USD)

Rolling 30-Day Z-Score
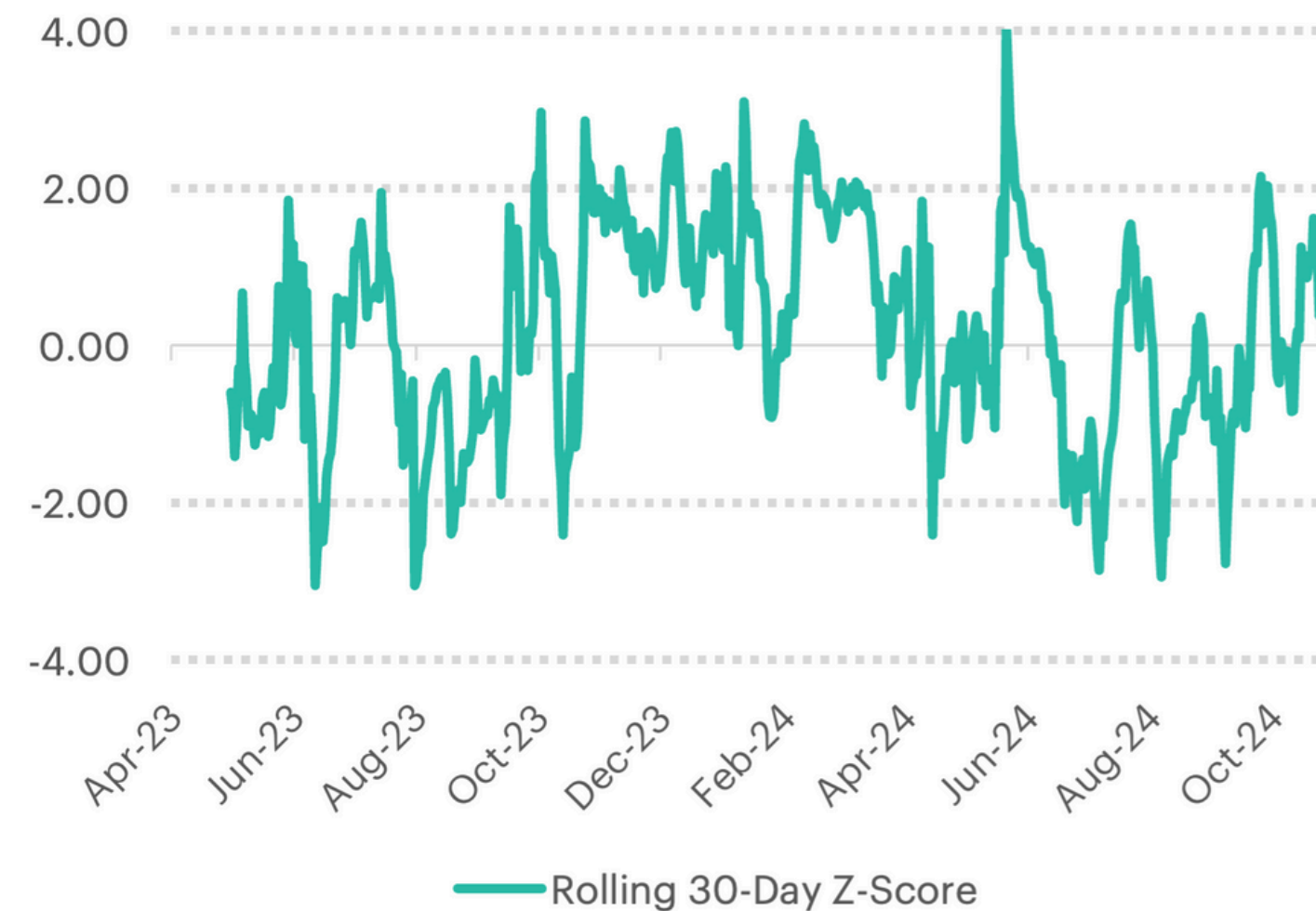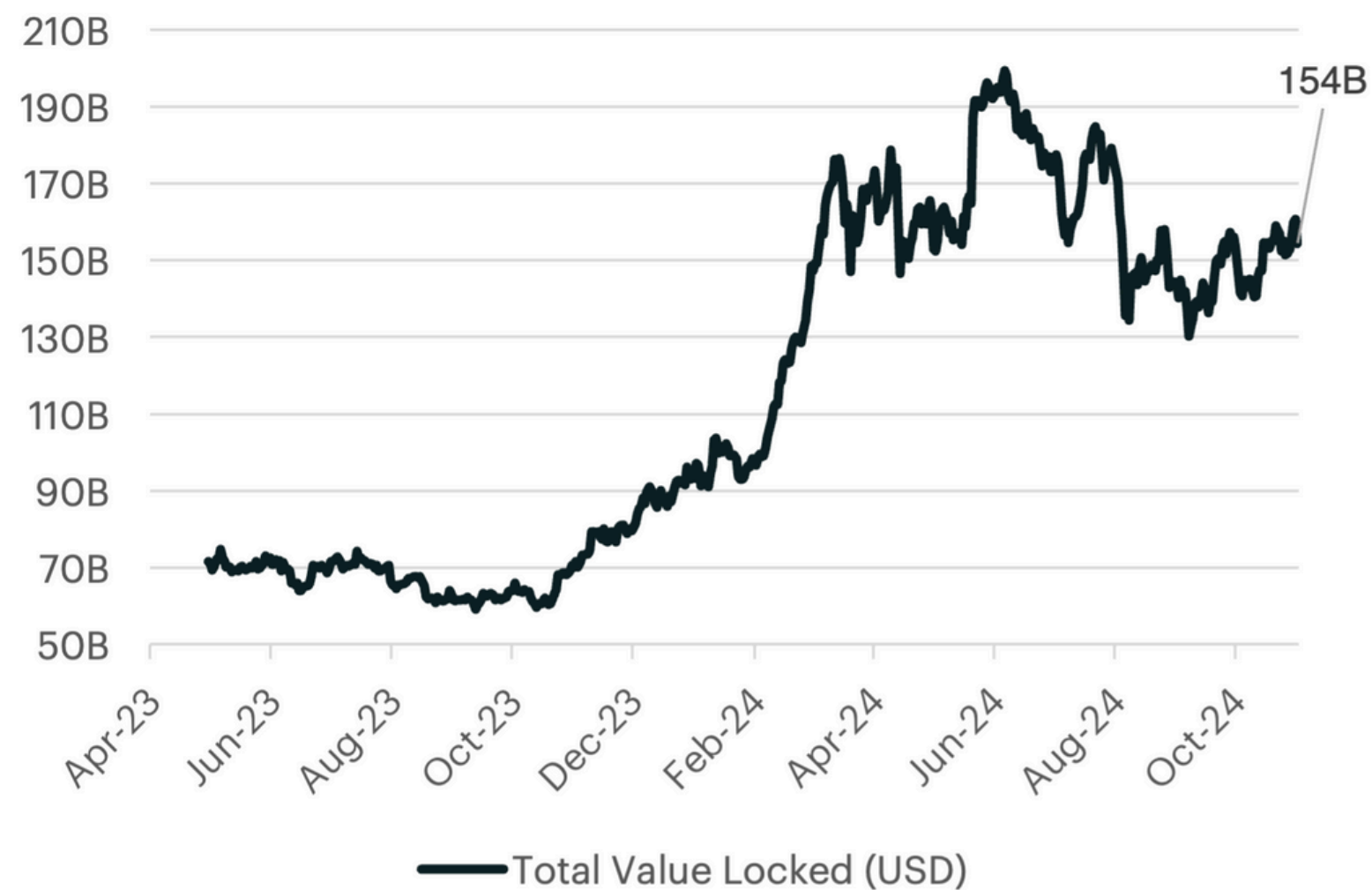
- TVL (Total Value Locked) in DeFi represents the total amount of assets deposited in decentralized finance protocols expressed in USD. It serves as a key metric to gauge the health and growth of the DeFi ecosystem.

- Total Value Locked (TVL) in decentralized finance (DeFi) protocols trended sideways over the past month, ending at approximately $154 billion. Increased decentralized exchange activity and liquid restaking deposits were offset by Ether's price depreciation.

Source: CF Benchmarks, DeFiLlama, as of October 31, 2024

# Weekly NFT Sales by Blockchain
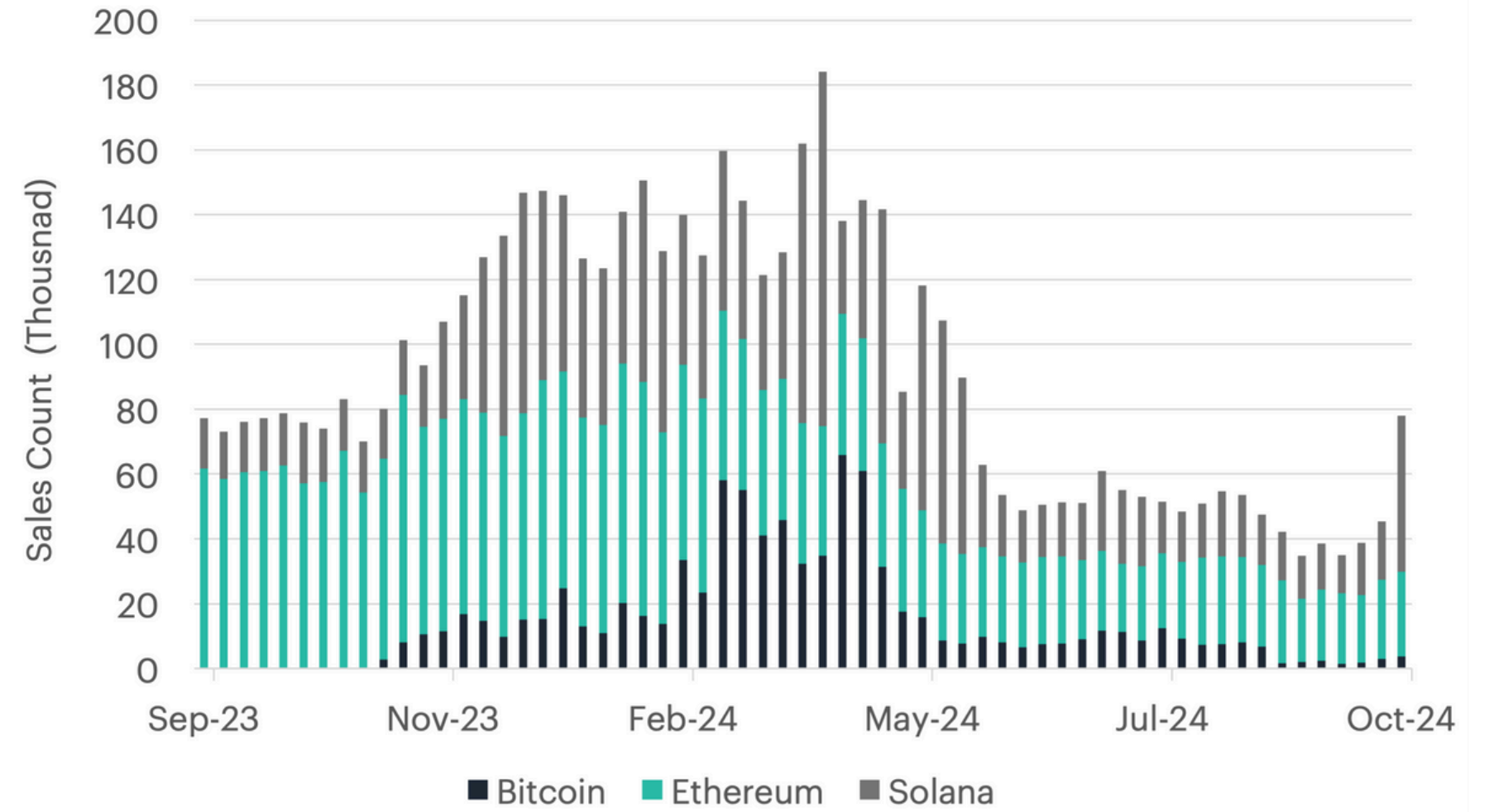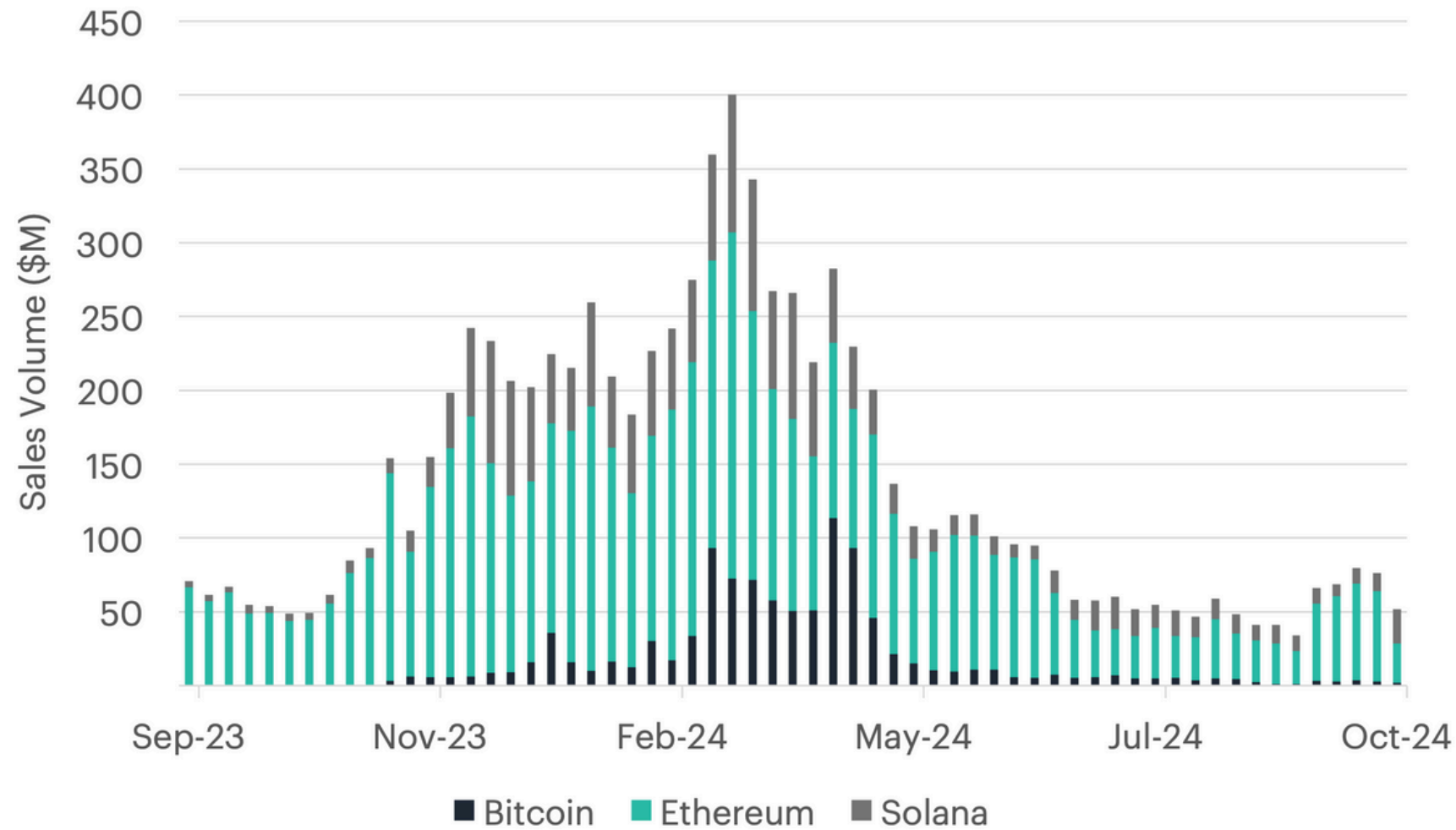


- Ethereum claimed the top position on the NFT sales volume leaderboard in October, with a 61.9% increase in sales as transaction counts rose by 1.1%.

- Additionally, both Bitcoin and Solana experienced growth in sales volume. Bitcoin's sales volume grew by 37.9%, despite a 21% decrease in Ordinals transactions. Meanwhile, Solana saw a 23% increase in sales, with volumes surging by 61%.

Source: CF Benchmarks, Dune Analytics, as of October 31, 2024

# Mining
# Metrics
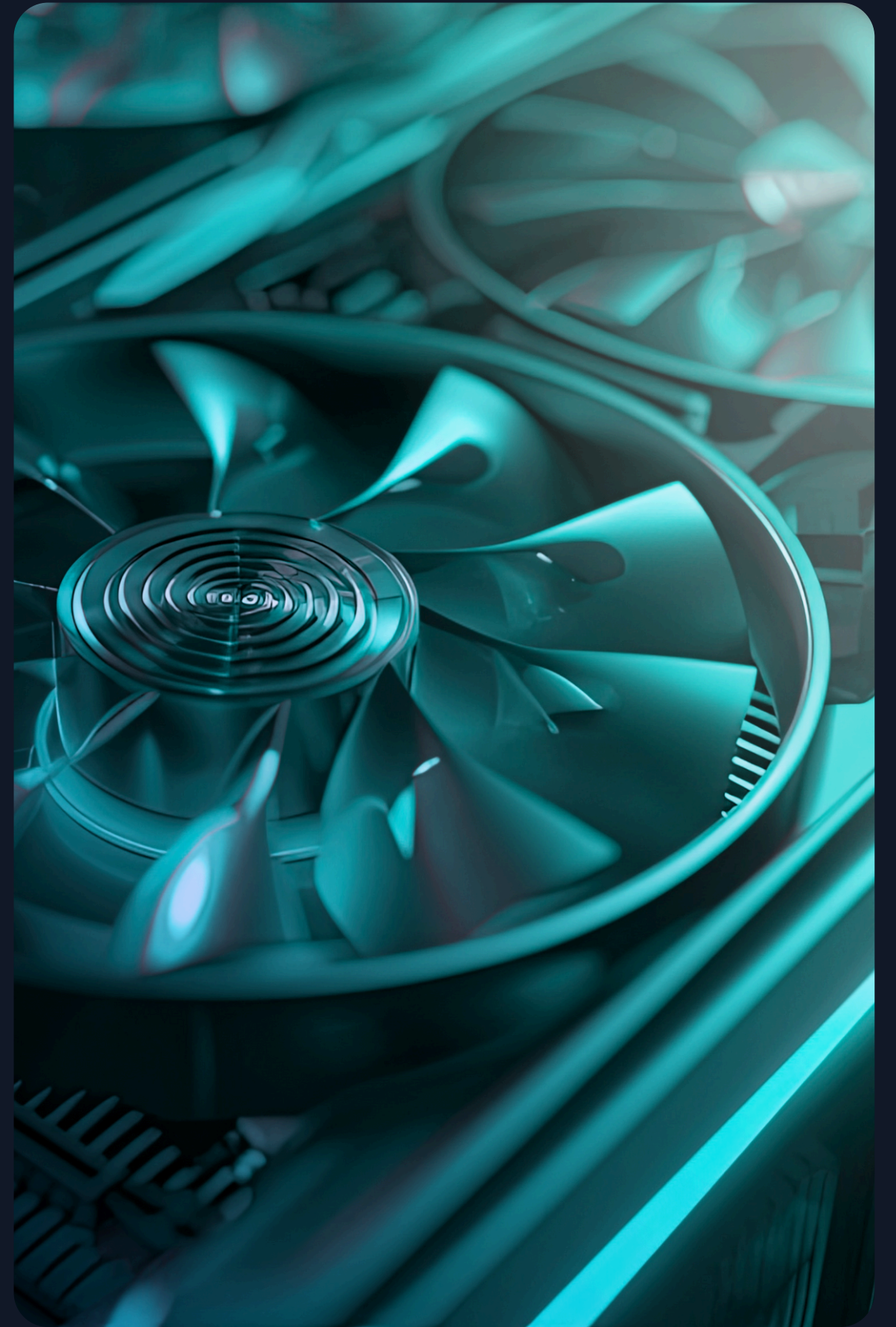
# Bitcoin's Hash Rate & Mining Revenue



Hash Rate and Difficulty



Bitcoin Mining Revenues By Month
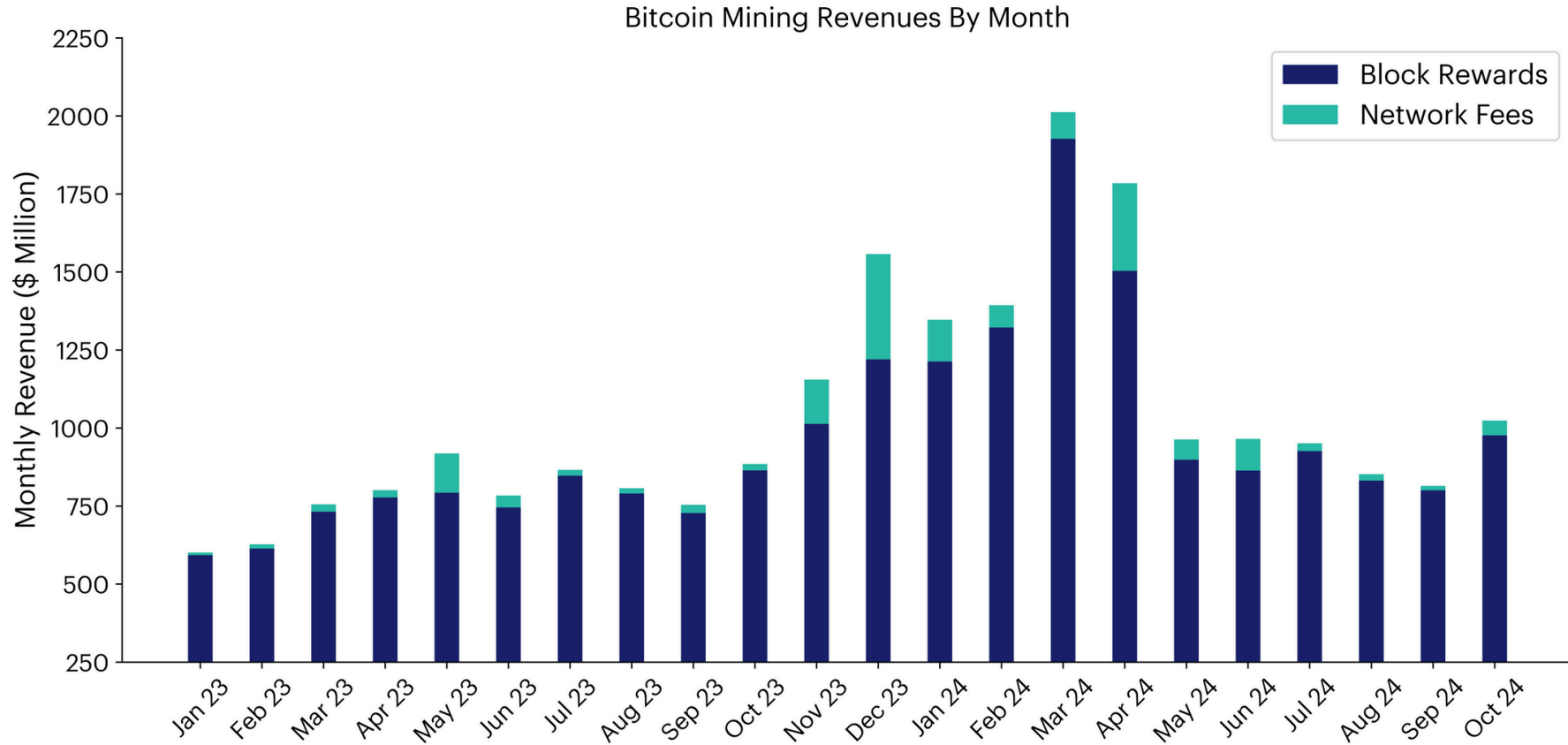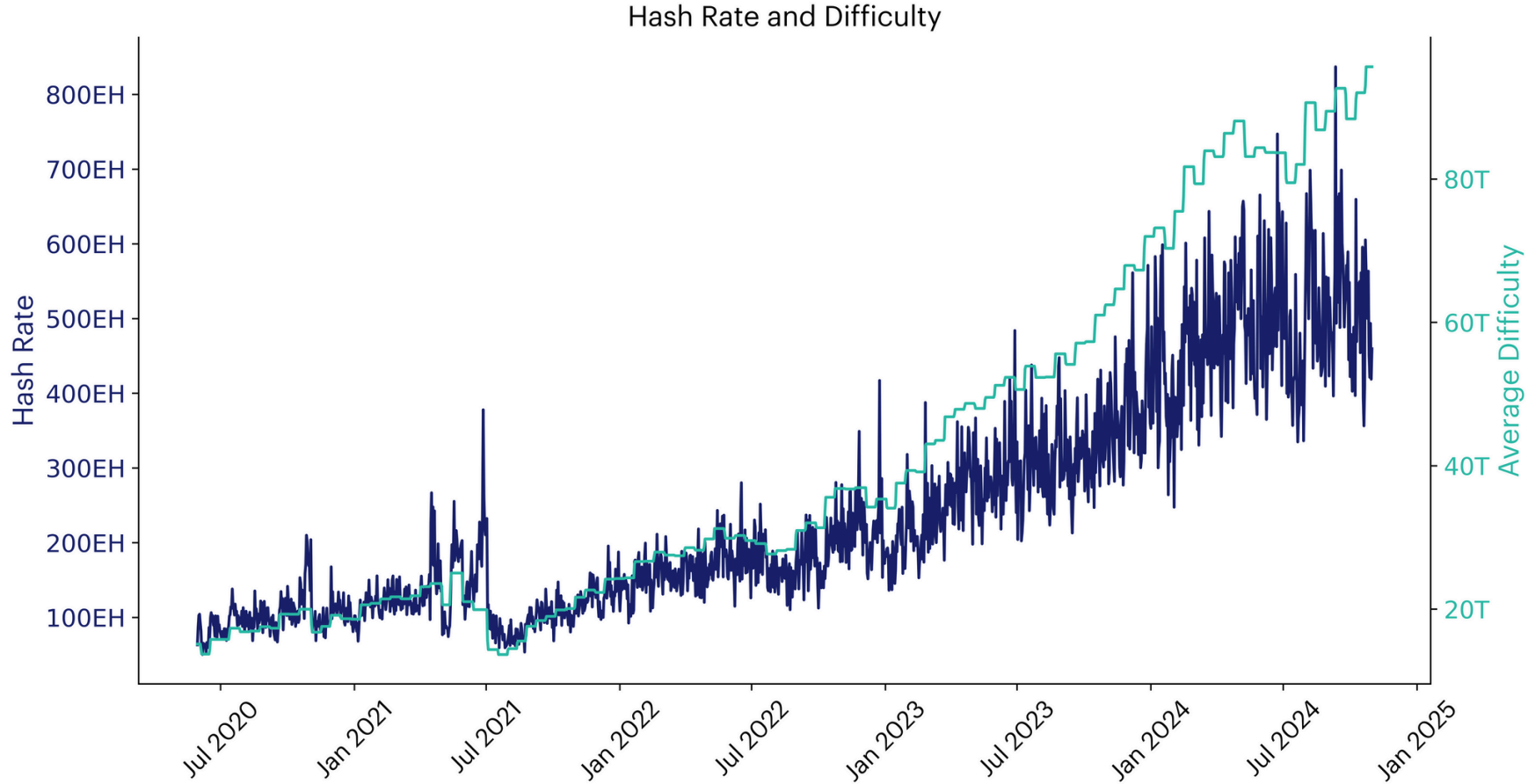
- Bitcoin's average monthly hash rate declined in October, dropping 12.3% to 486 exahashes per second. Mining difficulty, which measures the effort required to find a new block and adjusts to maintain a consistent block creation time, rose by 8.2% over the month. The next difficulty adjustment is expected in the first week of November, with a projected increase of 9.1%.

- An increase in both Bitcoin's price and network fees contributed to a 25.6% growth in mining revenues in October. Of the miner rewards during the month, 4.6% came from fees, up from 1.7% in September. As on-chain activity rose in October, Bitcoin miners' earnings exceeded $1 billion for the first time since the halving in April.

Source: CF Benchmarks, Dune Analytics as of October 31, 2024

# Bitcoin Network Fees
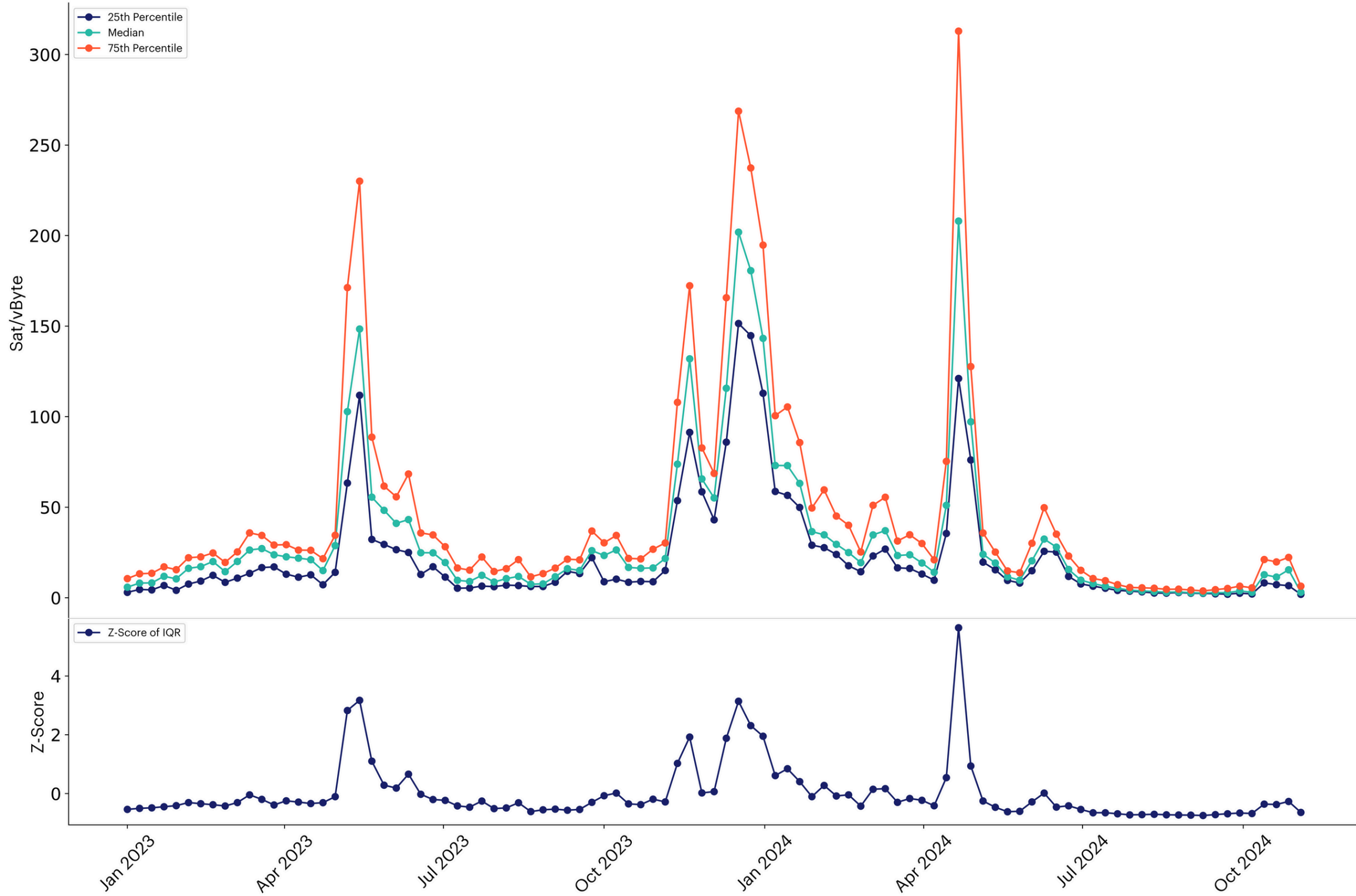
- As Bitcoin's block subsidy decreases, network fees make up a larger share of miners' revenue. The behavior of these fees, especially during periods of high demand for block space, can provide insights into the sustainability of fee increases.

- The data shows that during periods of high demand, the 75th percentile transaction fees surge significantly higher than the median and 25th percentile fees, indicating a subset of transactions paying much higher fees to ensure prompt inclusion in blocks.

- When the Z-score of the interquartile range exceeds 2, it signals substantial increases in the 75th percentile relative to the 25th percentile, highlighting times of significant network congestion and temporarily elevated fees.

# Bitcoin Mining Matrix

| Efficiency (Watts /TH) | Bitcoin Price (USD) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | $57,349.37 | $60,367.76 | $63,545.01 | $66,889.48 | $70,409.98 | $73,930.48 | $77,627.00 | $81,508.35 | $85,583.77 |
| 34.0 | $52.85 | $55.64 | $58.56 | $61.65 | $64.89 | $68.14 | $71.54 | $75.12 | $78.88 |
| 29.5 | $60.92 | $64.12 | $67.50 | $71.05 | $74.79 | $78.53 | $82.46 | $86.58 | $90.91 |
| 24.0 | $74.88 | $78.82 | $82.97 | $87.33 | $91.93 | $96.53 | $101.35 | $106.42 | $111.74 |
| 21.5 | $83.58 | $87.98 | $92.61 | $97.49 | $102.62 | $107.75 | $113.14 | $118.79 | $124.73 |
| 18.5 | $97.14 | $102.25 | $107.63 | $113.30 | $119.26 | $125.22 | $131.48 | $138.06 | $144.96 |
| 17.5 | $102.69 | $108.09 | $113.78 | $119.77 | $126.07 | $132.38 | $139.00 | $145.95 | $153.24 |
| 15.0 | $119.80 | $126.11 | $132.75 | $139.73 | $147.09 | $154.44 | $162.16 | $170.27 | $178.78 |
| 13.5 | $133.11 | $140.12 | $147.50 | $155.26 | $163.43 | $171.60 | $180.18 | $189.19 | $198.65 |

- The following sensitivity table illustrates the revenue a miner will generate per megawatt hour consumed at the current difficulty, considering different levels of miner efficiency and varying Bitcoin prices, providing a comprehensive view of potential earnings under different market conditions. The table is color-coded to reflect profitability based on the 10th percentile industrial electricity rate in the United States of $65.50 per MWh, as reported by the EIA in August 2024.
- This table helps miners compare revenues under various operational conditions, aiding in evaluating the useful life of their equipment. By comparing projected revenues at different Bitcoin prices to electricity costs, miners can determine whether they can continue running their current fleet or if they need to upgrade to maintain profitability.
- As income per MWh increases, miners are more likely to fund additional capital expenditures, which can increase the overall network hashrate. However, this increase in hashrate can subsequently reduce the income each individual miner earns.

# Network Fundamentals & Reward Rates
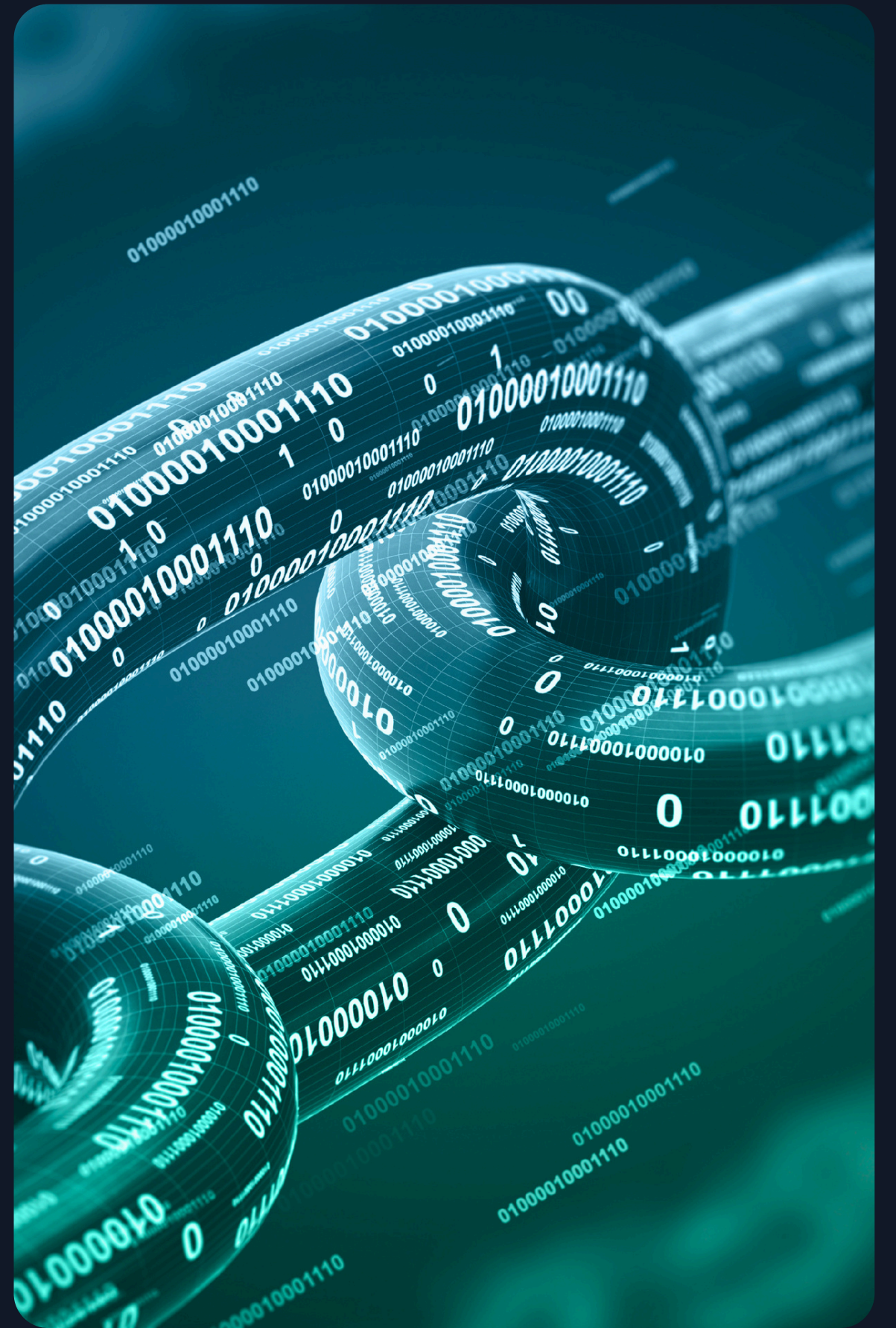
# Ethereum Network Fees & Revenue



Source: CF Benchmarks, Dune Analytics as of October 31, 2024
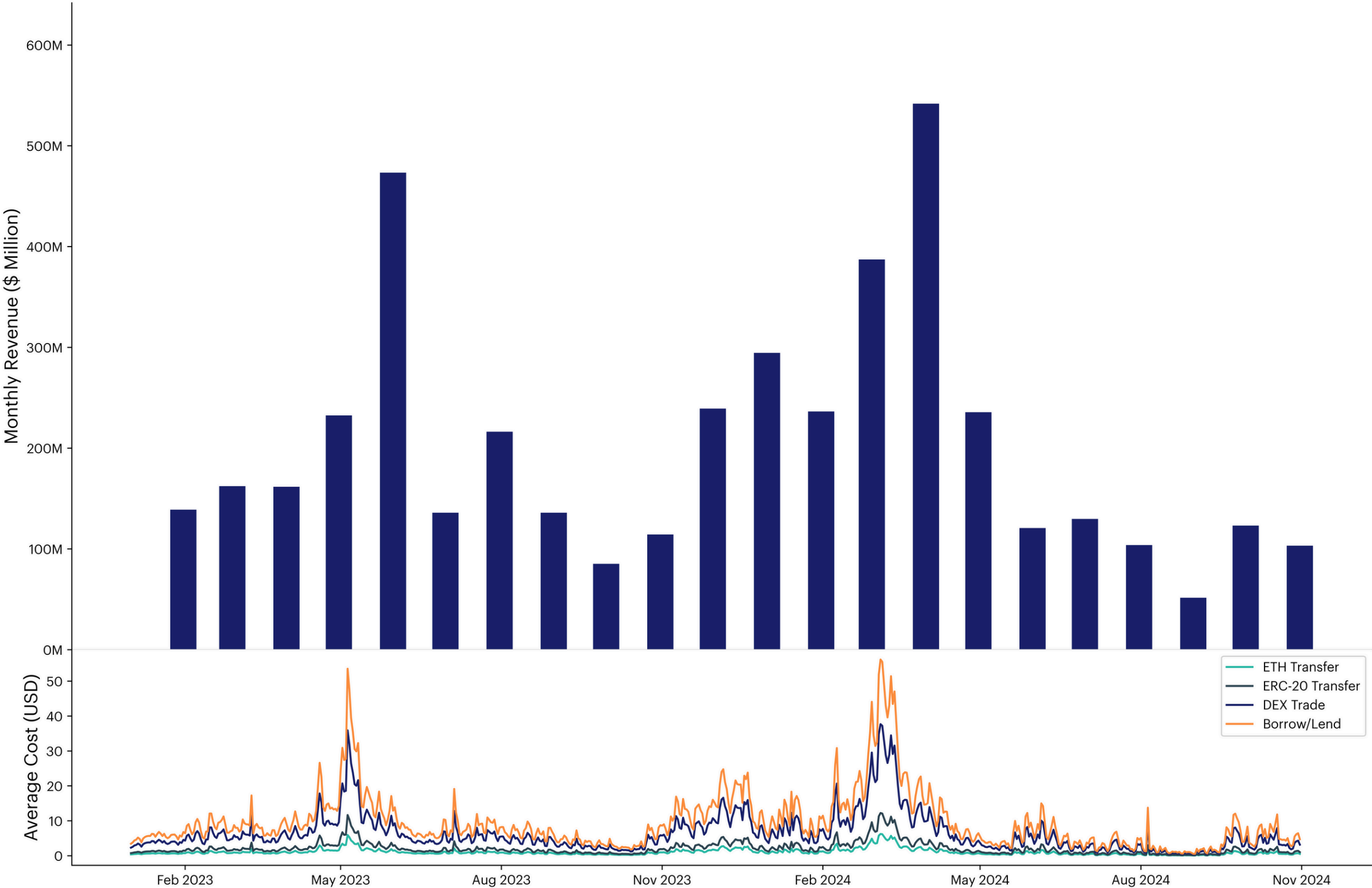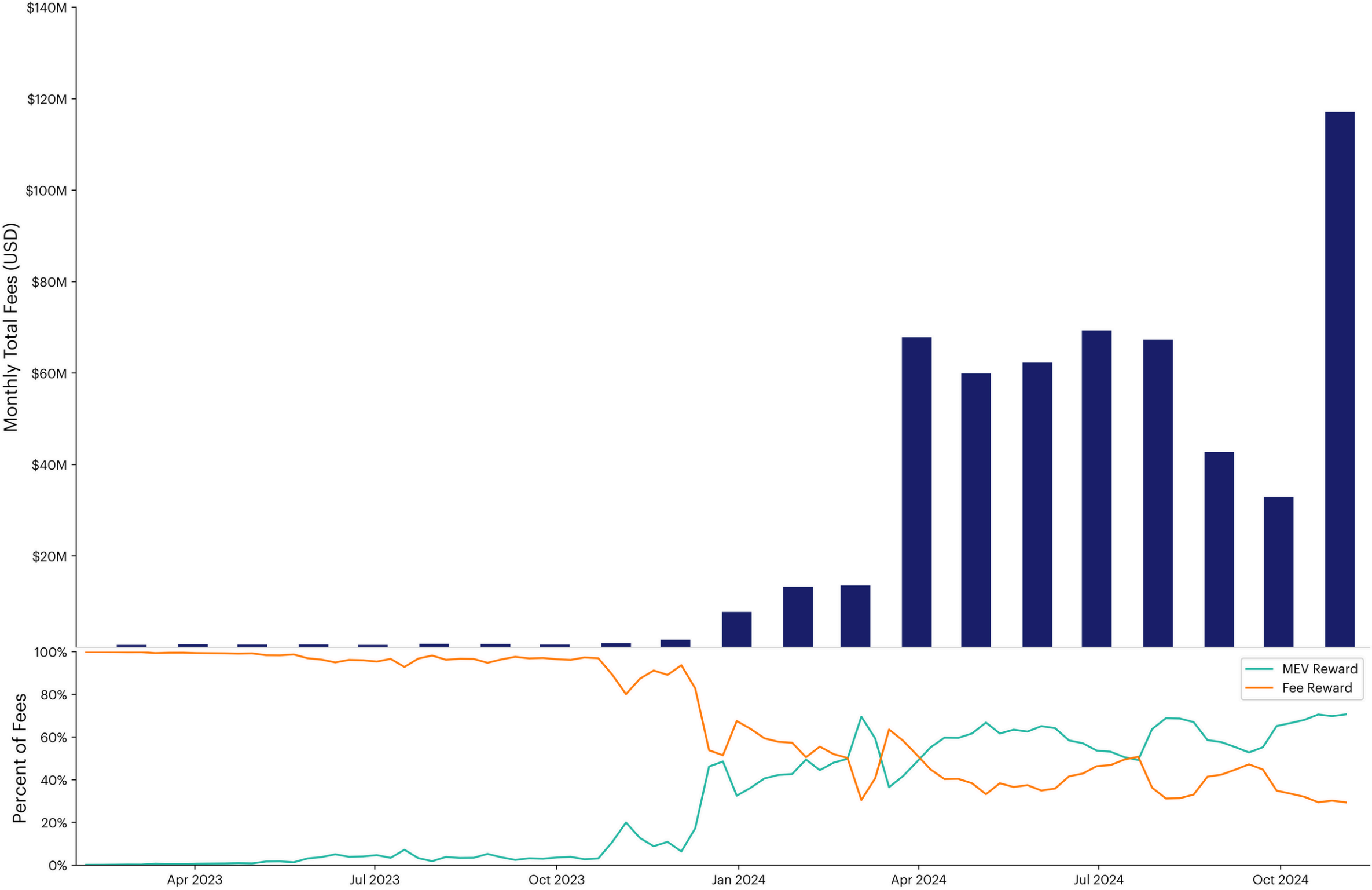
- Ethereum's block space is the capacity to include transactions in each block. When more transactions are posted to the blockchain than can be processed, fee rates increase as users compete to have their transactions included in the next block.
- By comparing average fee rates to total fee revenue, we can evaluate Ethereum's scalability. If fee rates remain low while total revenue remains stable or increases, it indicates effective scaling.
- In October, total fees paid on the Ethereum network decreased by 16.4% from the previous month to $103.2 million. The average fee per interaction with the network declined by 11%, indicating reduced competition for Ethereum's limited block space

# Solana Network Fees & Revenue



- Solana's block space is the capacity to include transactions in each block. When more transactions are posted to the blockchain than can be processed, fee rates increase as users compete to have their transactions included in the next block.
- By analyzing the percentage of fees derived from MEV (Maximum Extractable Value) versus base fees, we can gauge the health of Solana's fee market. A higher proportion of MEV fees may indicate increasing competition and demand for block space.
- In October, total fees paid on the Solana network rose 256% from the previous month to $117.1 million. MEV accounted for approximately 69.3% of the total fees, reflecting high demand for block space and suggesting that competitive, value-extractive activities continue to drive network usage.

# Staking Rewards & Inflation Rates

| Network | Staking Reward Rate | Inflation Rate | Participation Rate | Real Reward Rate |
|---|---|---|---|---|
| Ethereum | 2.96% | 0.45% | 28.77% | 2.51% |
| (1-Month Change) | 0.22% | -0.23% | 0.26% | 0.45% |
| Solana | 7.23% | 4.37% | 68.06% | 2.86% |
| (1-Month Change) | 0.11% | 0.02% | 0.05% | 0.09% |
| Cardano | 2.79% | 2.18% | 64.82% | 0.61% |
| (1-Month Change) | 0.01% | -0.11% | 1.78% | 0.12% |

- The reward rate for a Proof of Stake (PoS) blockchain represents the annual return validators earn for staking their tokens, often expressed as a percentage. This rate is determined by factors such as the total number of staked tokens, the network's overall staking yield, and any additional incentives provided by the blockchain protocol.

- Inflation rate and staking participation rate significantly influence real staking rewards. A higher inflation rate typically increases the nominal reward rate but can dilute the value of staked tokens, resulting in lower real returns. The staking participation rate, which is the proportion of tokens being staked, also impacts rewards: as more tokens are staked, the rewards per validator may decrease, potentially lowering individual returns but contributing to network security and decentralization.

Source: CF Benchmarks, Dune Analytics, stakingrewards.com as of October 31, 2024

# Appendix

# CF Digital Asset Classification Structure



## CF Digital Asset Classification Structure

The CF Digital Asset Classification Structure (CF DACS) classifies coins and tokens based on the services that the associated software protocol delivers to end users, grouping assets by the role they play in delivering services to end users. The CF DACS powers CF Benchmarks' sector composite and category portfolio indices and allows users to perform attribution analysis to better understand the fundamental drivers of returns within their digital asset portfolios.

# CF Digital Asset Classification Structure

## Additional Resources

For more information about our CF Benchmark indices and our methodologies, please visit the respective web links below:

- CF Diversified Large Cap Index
- CF DeFi Composite Index
- CF Web 3.0 Smart Contract Platforms Index
- CF Digital Culture Composite Index
- CF Blockchain Infrastructure Index
- CF Cryptocurrency Ultra Cap 5 Index
- CF Broad Cap Index Market Cap Weight
- CF Broad Cap Index Diversified Weight

## Contact us

Have a question or would like to chat? If so, please drop us a line to:

info@cfbenchmarks.com

# Appendix

## Disclaimer and Disclosures

# Appendix

## Disclaimer and Disclosures (cont.)

# Appendix

## Disclaimer and Disclosures (cont.)

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