

Monthly Market Recap

November 2023

Market Performance

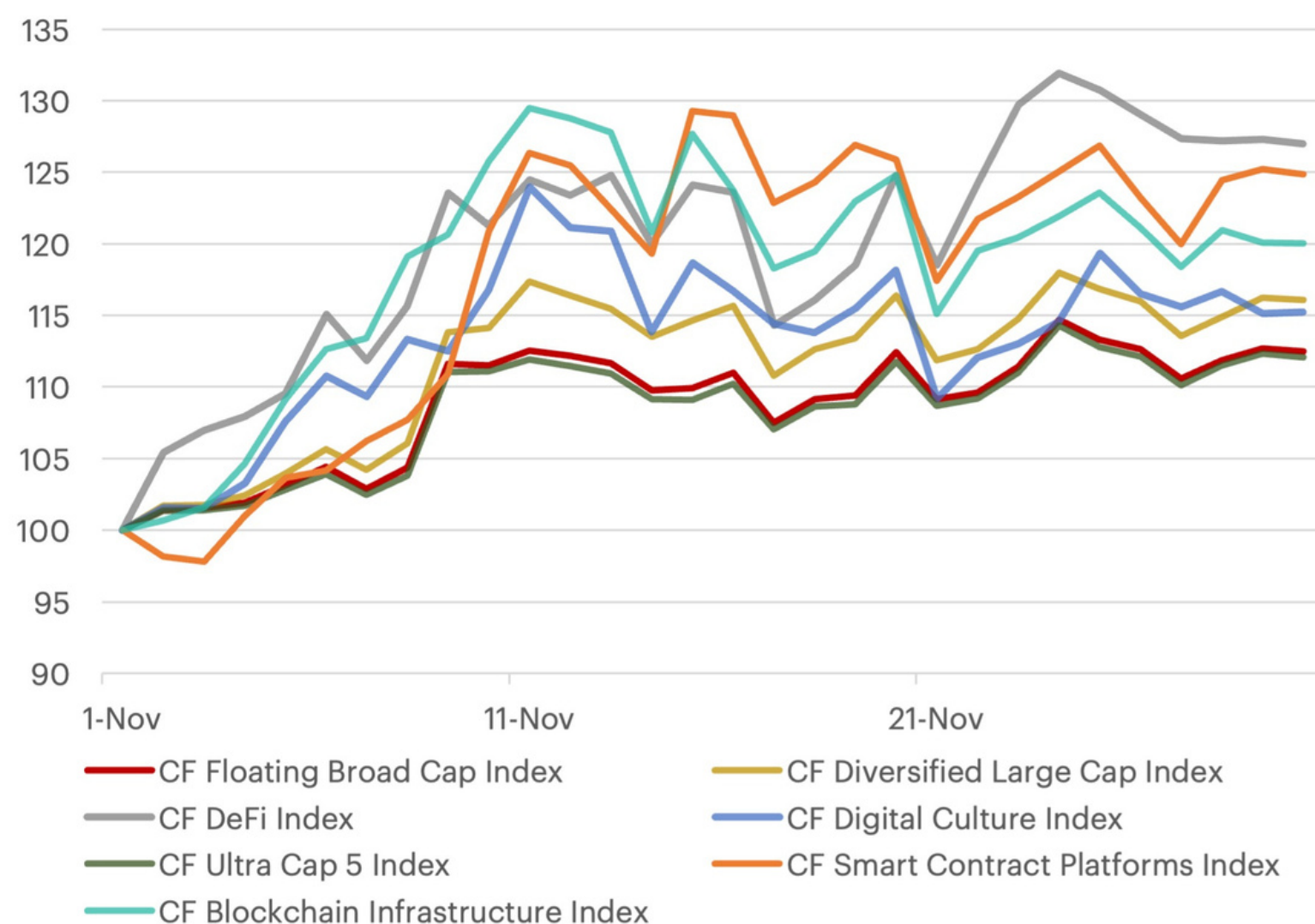


Monthly Index Performance



DeFi outperforms as user activity ramps up

Multi-token indexes



- Positive price momentum was widely exhibited across our flagship portfolio indices. Rising institutional interest and bullish technical factors helped post double-digit growth across all indices. Major tokens like Bitcoin and Ether saw increases of over 8% and 12%, respectively, with our Bitcoin Real-Time Index (BRTI) breaking the \$38,000 mark for the first time since May 2022. Ether prices also set a relatively high watermark price, breaching the \$2,100 level for the first time since April.
- Our barometer for DeFi-related tokens led the rest of its peers, rising over 26%. The recovery in price performance continued to coincide with a rise in Total Value Locked (TVL), a widely followed gauge used to measure the overall size of the DeFi market. Meanwhile, our CF Smart Contract Platforms Index rose over 24% on the back of a sharp rally in prices for key index constituents.
- This month's laggards included our CF Ultra Cap 5 Index and CF Floating Broad Cap Index, which still managed to post double-digit performance for November.

All index performance is rebased to 100. Source: CF Benchmarks, Bloomberg, as of November 30, 2023

Major Crypto-Pairs (USD)

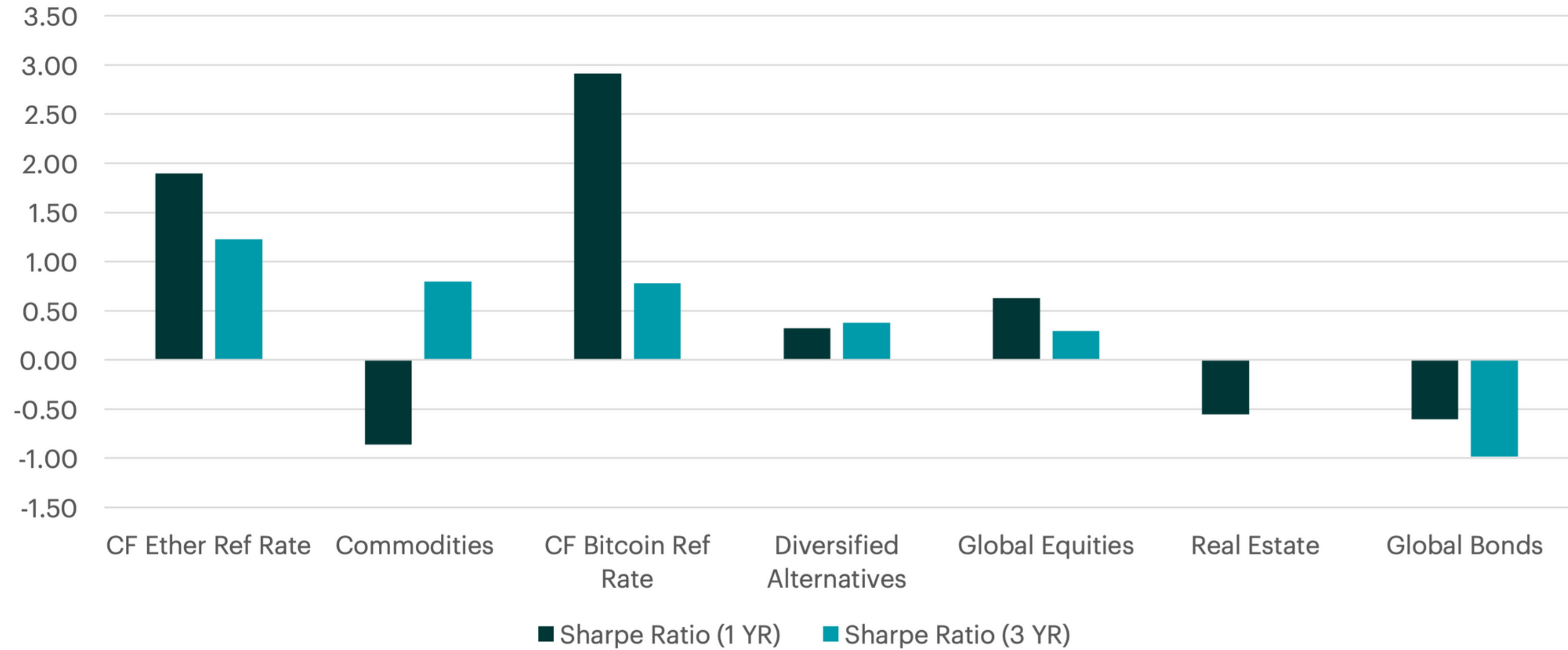


Name	DACS Level 1	DACS Level 2	DACS Level 3	1 Day	1 Week	1 Month	3 Month	YTD	30 D Volatility
Avalanche	Settlement	Programmable	General Purpose Smart Contract Platforms	1.3%	3.7%	88.7%	114.3%	96.0%	115.82
Solana	Settlement	Programmable	General Purpose Smart Contract Platforms	-0.1%	4.9%	54.2%	202.5%	491.9%	115.35
Uniswap	Sectors	Finance	Trading	-1.8%	-8.0%	42.9%	36.0%	14.7%	80.53
Cardano	Settlement	Programmable	General Purpose Smart Contract Platforms	-1.5%	-1.7%	27.6%	48.0%	51.7%	49.38
Chainlink	Services	Utility	Oracles	-1.0%	-1.7%	26.3%	146.2%	158.4%	80.59
Fantom	Settlement	Programmable	General Purpose Smart Contract Platforms	0.6%	1.9%	25.9%	48.8%	51.9%	98.17
Polkadot	Settlement	Programmable	General Purpose Smart Contract Platforms	6.5%	7.4%	23.4%	29.0%	27.1%	60.09
Algorand	Settlement	Programmable	General Purpose Smart Contract Platforms	-0.2%	3.2%	22.5%	44.5%	-21.9%	76.22
Dogecoin	Settlement	Non-Programmable	Store Of Value And Payment	3.2%	9.2%	21.5%	31.0%	18.2%	50.30
Aave	Sectors	Finance	Borrowing & Lending	1.8%	2.5%	20.6%	77.8%	87.6%	69.48
Polygon	Services	Infrastructure	Scaling	0.9%	-1.7%	20.0%	39.2%	-27.2%	66.22
Apecoin	Sectors	Culture	Social	1.4%	11.7%	19.8%	9.8%	-56.6%	88.42
Decentraland	Sectors	Culture	Vr And Ar	-1.9%	6.9%	18.7%	47.2%	45.4%	66.88
Cosmos	Settlement	Programmable	General Purpose Smart Contract Platforms	2.5%	6.7%	17.7%	29.9%	-1.1%	63.34
Synthetix	Sectors	Finance	Derivatives	0.0%	-3.5%	17.0%	17.0%	7.8%	64.62
Curve DAO Token	Sectors	Finance	Trading	1.8%	-3.4%	15.9%	25.1%	6.1%	75.65
Internet Computer	Settlement	Programmable	General Purpose Smart Contract Platforms	1.8%	-0.8%	15.7%	36.5%	14.5%	78.82
Hedera	Settlement	Programmable	General Purpose Smart Contract Platforms	0.2%	-1.5%	14.9%	16.6%	66.6%	62.38
Filecoin	Services	Utility	Information & Data Management	-1.2%	-2.4%	14.5%	37.3%	44.7%	73.88
Ether	Settlement	Programmable	General Purpose Smart Contract Platforms	0.8%	-1.1%	12.7%	24.1%	70.6%	41.33
Chiliz	Sectors	Culture	Social	0.0%	-1.4%	12.3%	15.9%	-25.5%	76.66
Tezos	Settlement	Programmable	General Purpose Smart Contract Platforms	0.0%	2.5%	12.2%	20.3%	15.3%	57.44
Maker	Sectors	Finance	Stablecoin Issuance & Management	0.3%	3.0%	11.8%	33.8%	199.4%	44.62
Stacks	Services	Infrastructure	Computing	-4.1%	9.8%	11.1%	41.2%	229.8%	72.51
Bitcoin	Settlement	Non-Programmable	Store Of Value And Payment	0.0%	1.3%	8.9%	45.1%	128.2%	31.41
Ethereum Classic	Settlement	Programmable	General Purpose Smart Contract Platforms	-0.5%	-1.6%	7.6%	20.4%	15.9%	44.92
EOS	Settlement	Programmable	General Purpose Smart Contract Platforms	-0.1%	1.2%	7.2%	15.6%	-21.4%	44.28
Ripple	Settlement	Non-Programmable	Store of Value and Payment	-0.1%	-1.8%	1.0%	19.3%	77.5%	52.39
Litecoin	Settlement	Non-Programmable	Store Of Value And Payment	-0.7%	-0.1%	0.8%	8.7%	-1.1%	37.37
Stellar	Settlement	Non-Programmable	Store Of Value And Payment	-0.2%	0.9%	-2.4%	3.2%	65.9%	38.46
Bitcoin Cash	Settlement	Non-Programmable	Store Of Value And Payment	-0.9%	-1.9%	-9.2%	7.4%	127.6%	23.25

- General purpose smart contract platforms, Avalanche (AVAX) and Solana (SOL), led the rest of the major crypto-pairs, rising over 88% and 54%, respectively. Uniswap (UNI) also posted strong gains after the protocol's total value locked (TVL) continued to increase.
- Conversely, Stellar (XLM) and Bitcoin Cash (BCH) were the only two tokens to finish the month in negative territory.

Source: CF Benchmarks, Bloomberg, as of November 30, 2023

Trailing Risk-Adjusted Returns



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

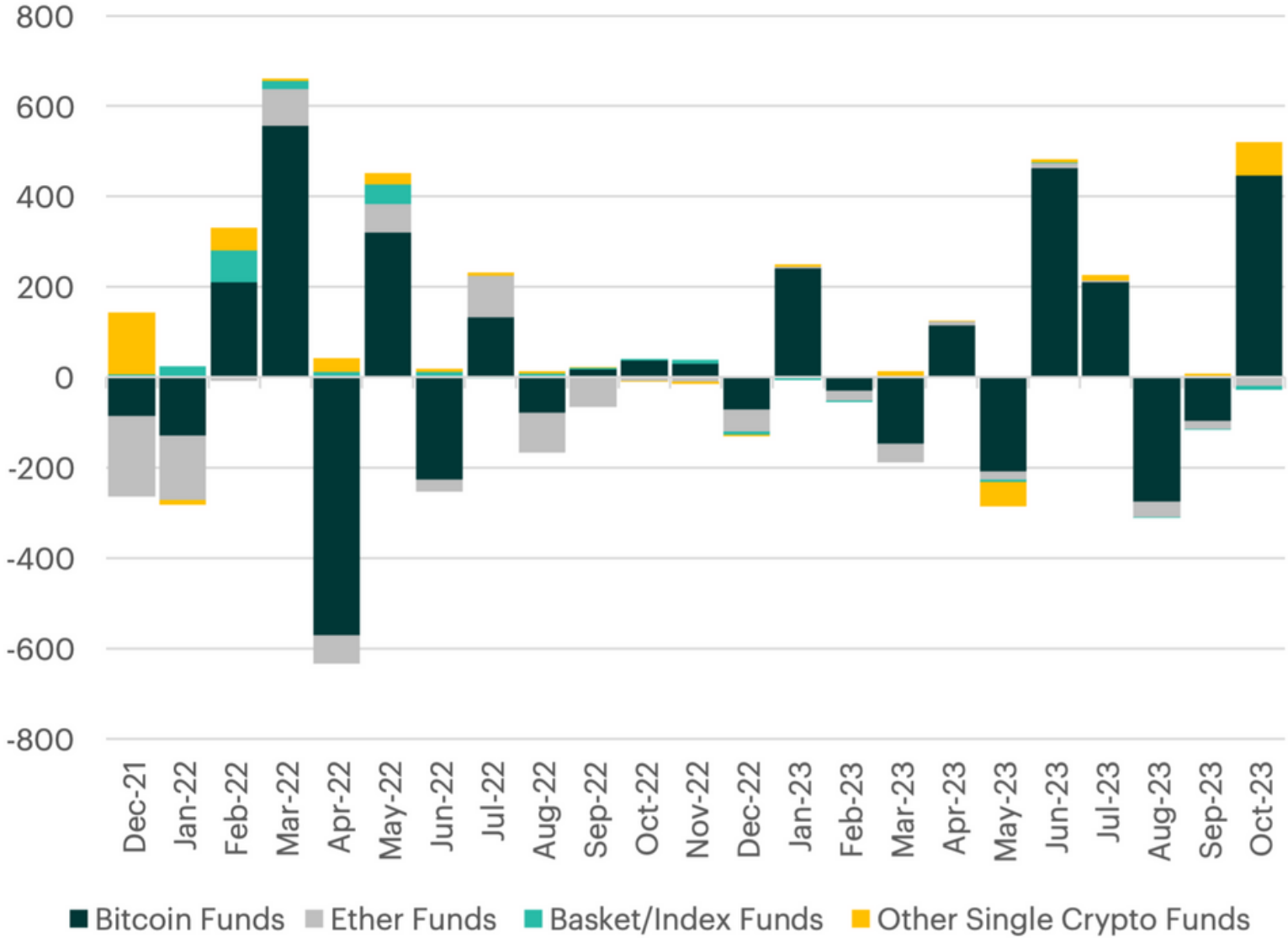
Source: CF Benchmarks, Bloomberg, total return indices are referenced in USD, as of November 30, 2023

Investor Activity & Sentiment Positioning

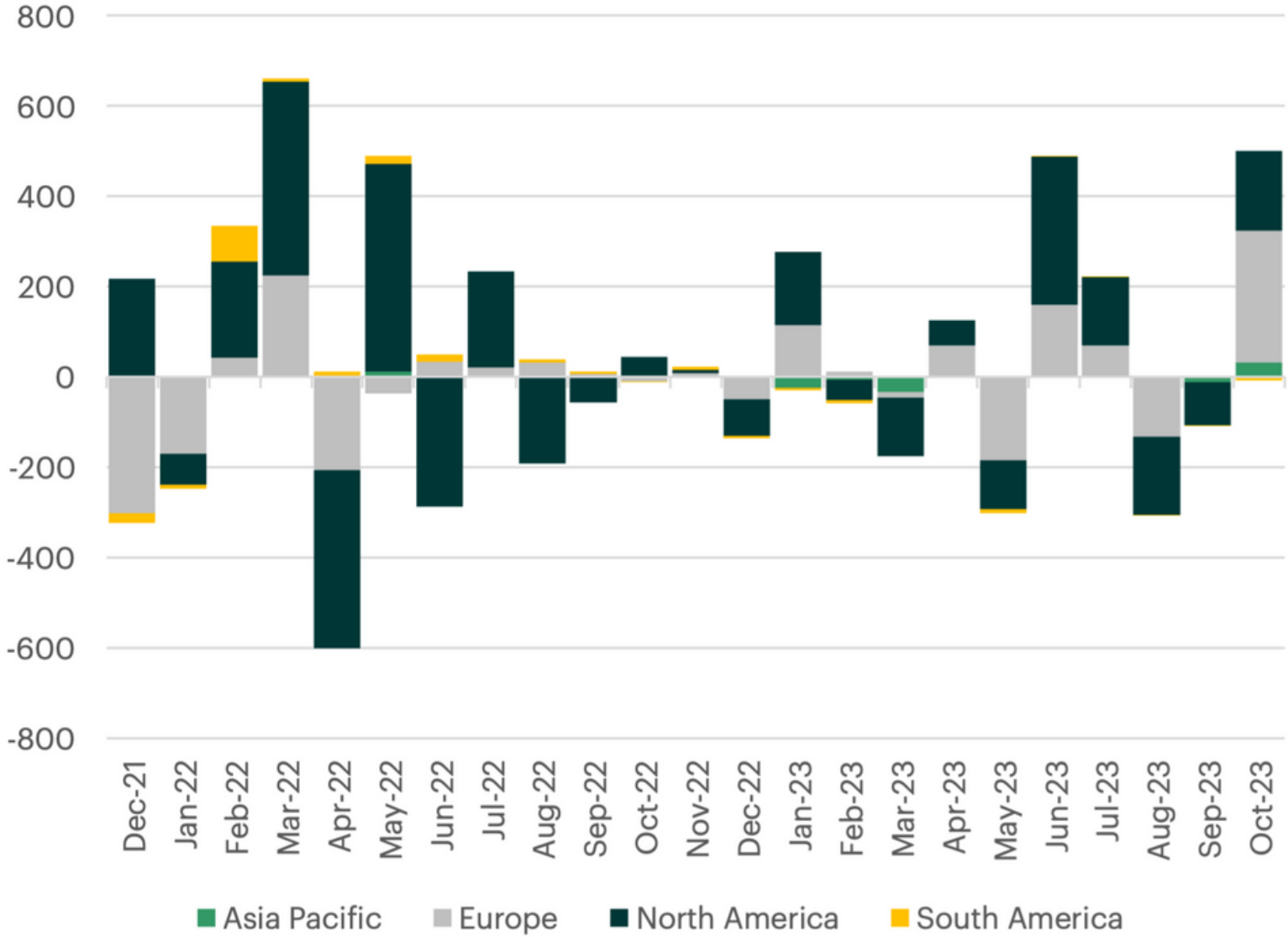
Currency of Flows



Fund Flows by Asset (\$m)



Regional Fund Flows (\$m)

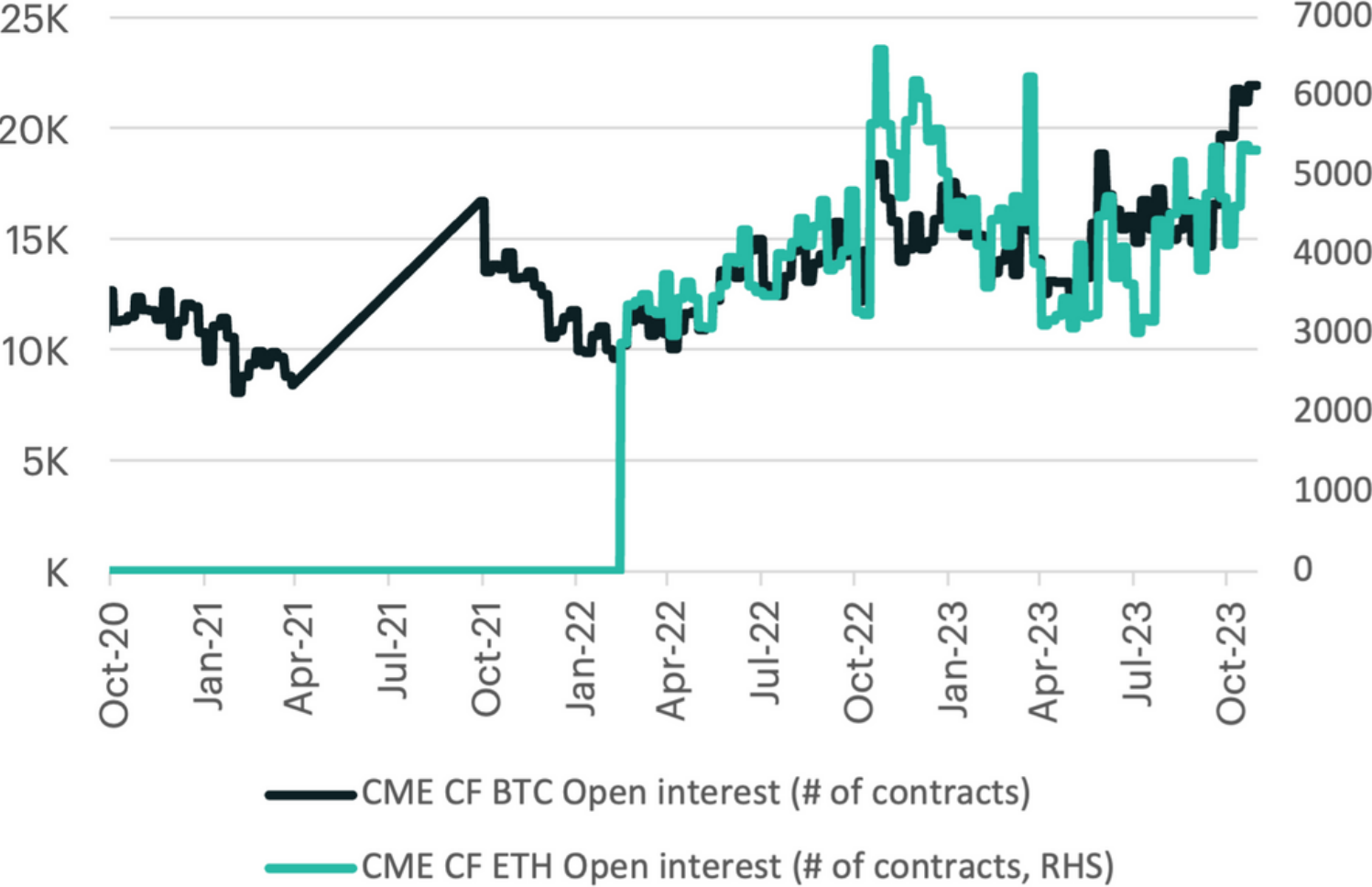
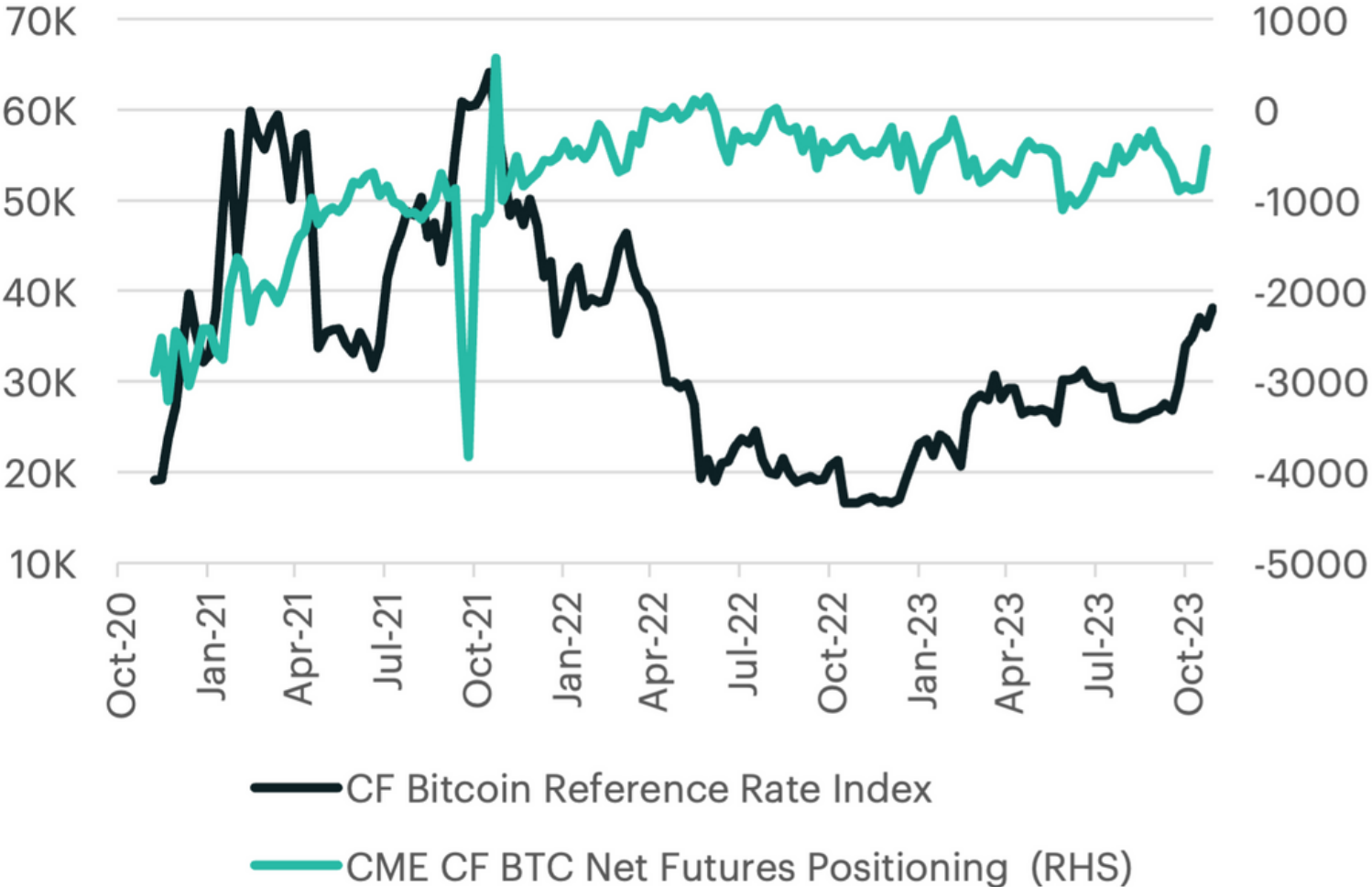


- Total monthly fund flows climbed to their highest level since March of 2022, with Bitcoin funds seeing the majority (or approximately \$450m) of inflows.

Source: CF Benchmarks, Bloomberg, as of October 31, 2023

- From a regional perspective, the majority of fund inflows were concentrated in Europe (+\$291m) North America (+\$177m).

Futures Positioning and Open Interest

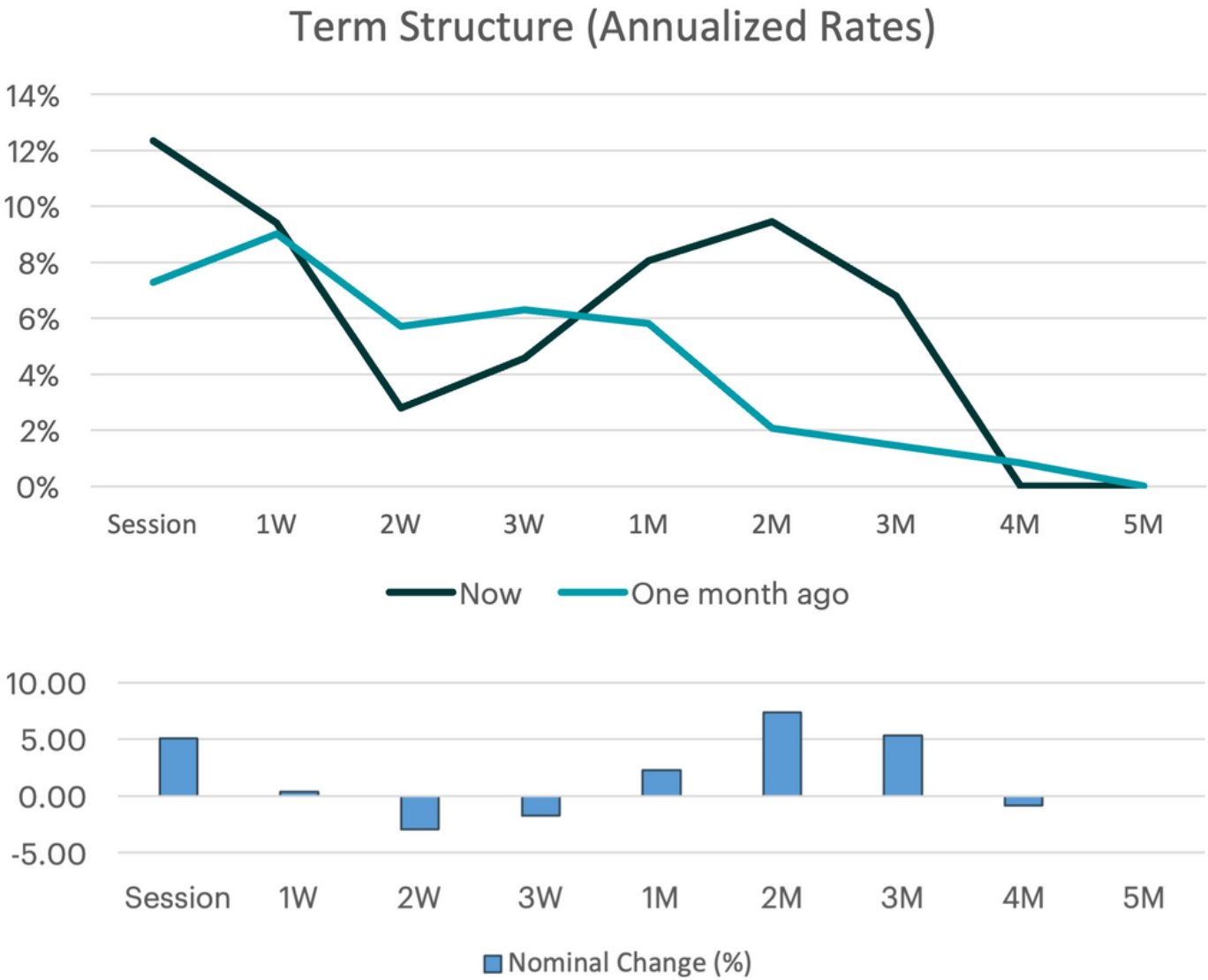


- Net sentiment positioning in Bitcoin futures continued to rise towards neutral territory, increasing from -511 to -431.

- Open interest for Bitcoin futures climbed over 11% to a new record high of almost 22,000 contracts in November. Ether futures also saw a 13% increase as the world’s largest asset manager, BlackRock, filed for a spot Ether ETF.

Source: CF Benchmarks, CFTC, Bloomberg, as of November 30, 2023

CF Bitcoin Interest Rate Curve



Term structure broadly flatten

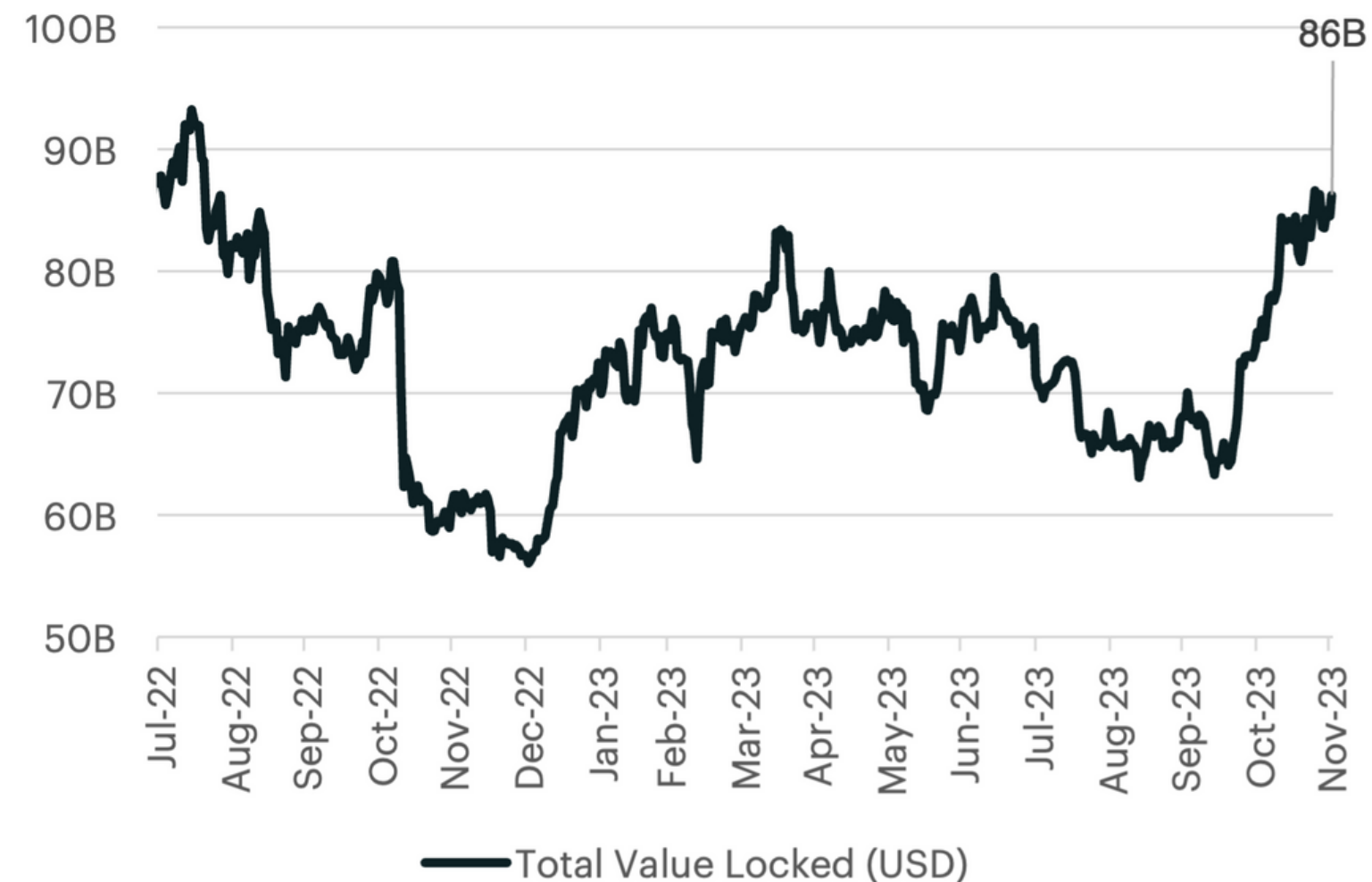
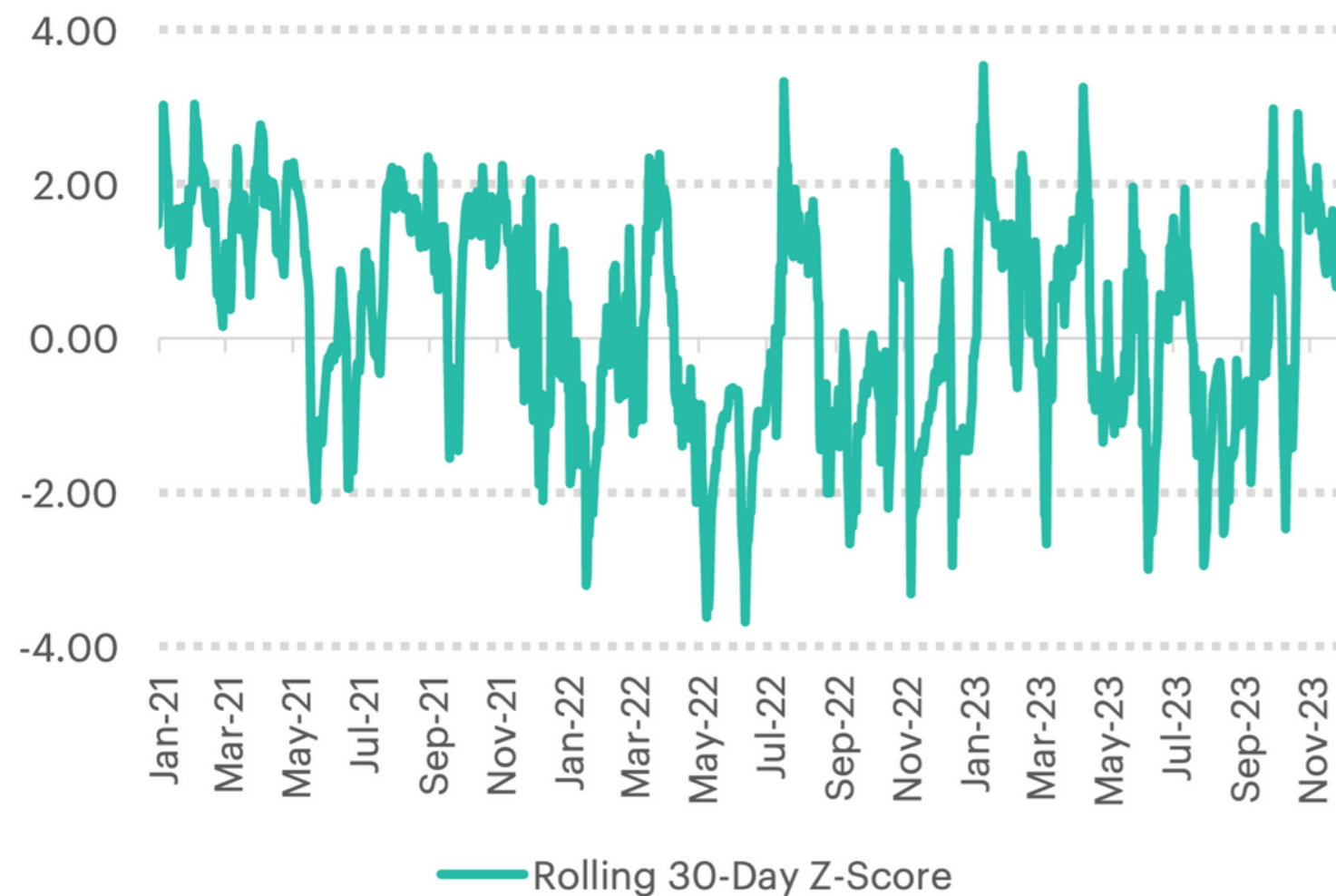
- The Bitcoin Interest Rate Curve (or BIRC) represents the profit of a static cash and carry strategy (sell the futures and buy the spot or vice-versa) from the perspective of an economic agent who owns Bitcoins and is trying to generate yield.
- Changes, or shifts, of the CF BIRC have historically been indicative of bullish or bearish sentiment.
- Bullish price action, stemming from the anticipation of a spot Bitcoin ETF, has had a steepening impact on the BIRC, with most of the increases occurring in the front-end (or session rate) and belly portion (the 1-3 month tenors) of the curve.

Source: CF Benchmarks, as of November 30, 2023

On-chain Updates



Total Value Locked (TVL) in DeFi Protocols



- Total value locked (TVL) in decentralized finance (DeFi) protocols continued to climb, rising from \$74 billion to over \$86 billion, or over a one-sigma move to the upside in November.

Source: CF Benchmarks, DeFiLlama, Kraken Intelligence, as of November 30, 2023

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](#)

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