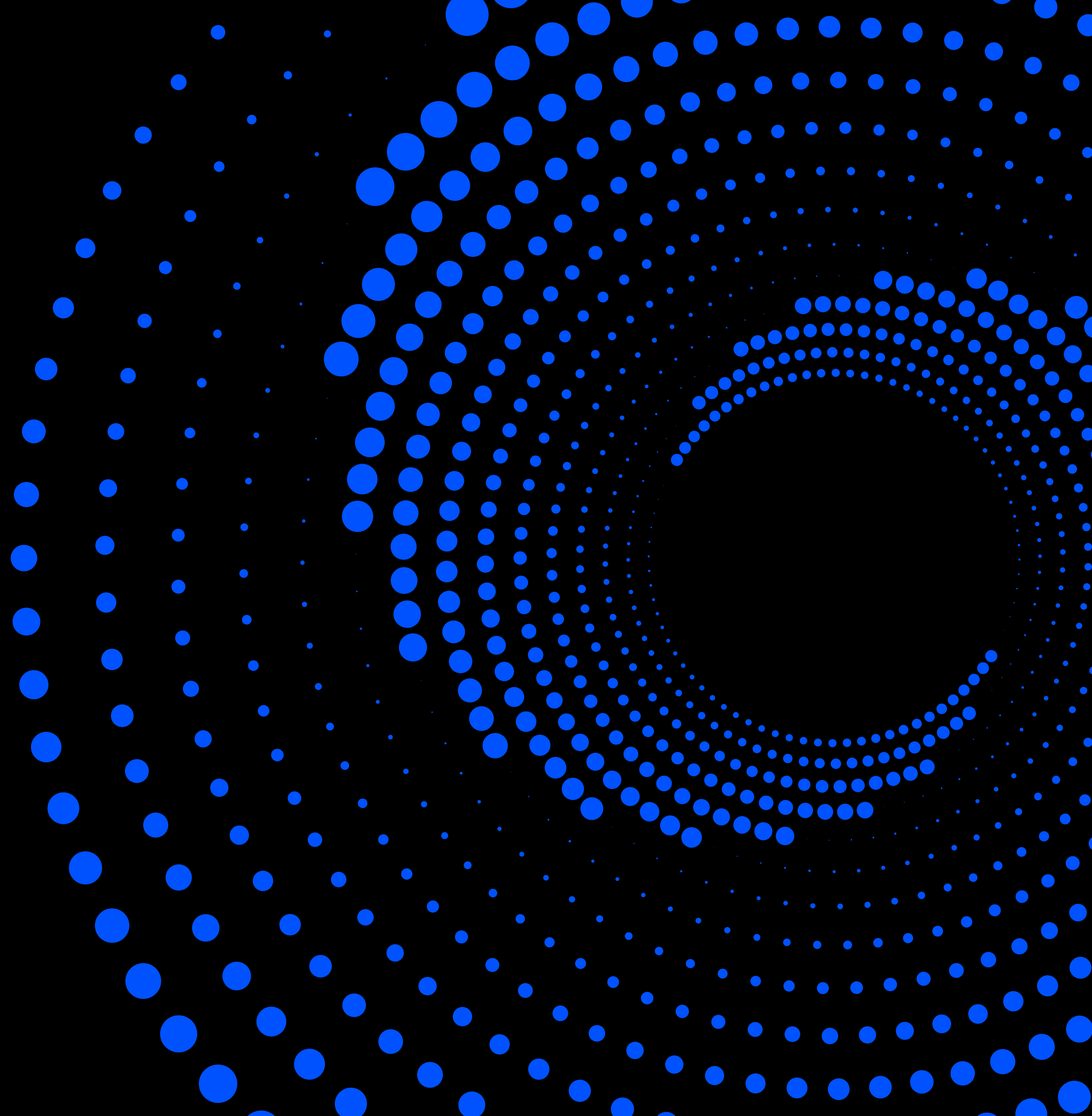


Q1 2024

Guide to Crypto Markets



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About this Report

The Guide to Crypto Markets is a joint publication of Coinbase Institutional and Glassnode. It equips investors with a deeper understanding of crypto markets by providing a comprehensive view of the metrics and trends that matter the most to institutional investors. For more information on any of the charts in the Guide, or on the crypto markets in general, please reach out to us [here](#). To see more of Coinbase Institutional's research and insights, visit our [Research & Insights Hub](#).

All of the data and charts included in this report reflect information through December 31, 2023, unless otherwise noted.

About Coinbase Institutional

Coinbase Institutional is the trusted bridge to crypto markets for institutions. Built by experienced leaders from traditional financial services, Coinbase Institutional understands how to deliver scalable solutions to all types of institutions with industry-leading security and compliance. We work with a diverse set of institutional clients, including investors, liquidity providers, corporates, financial institutions, and private clients to develop solutions that meet their unique requirements.

About Glassnode

Glassnode is the leading market intelligence provider in the digital asset space, primarily focused on institutions. Glassnode's platform delivers unparalleled on-chain analytics and deep insights into the Bitcoin and decentralized finance (DeFi) markets. Founded in 2017, Glassnode equips institutional investors, hedge funds, banks, and asset managers with near real-time, data-driven intelligence, enabling informed decision-making in a highly dynamic trading environment.

01. Market Overview

Total Crypto Market Cap

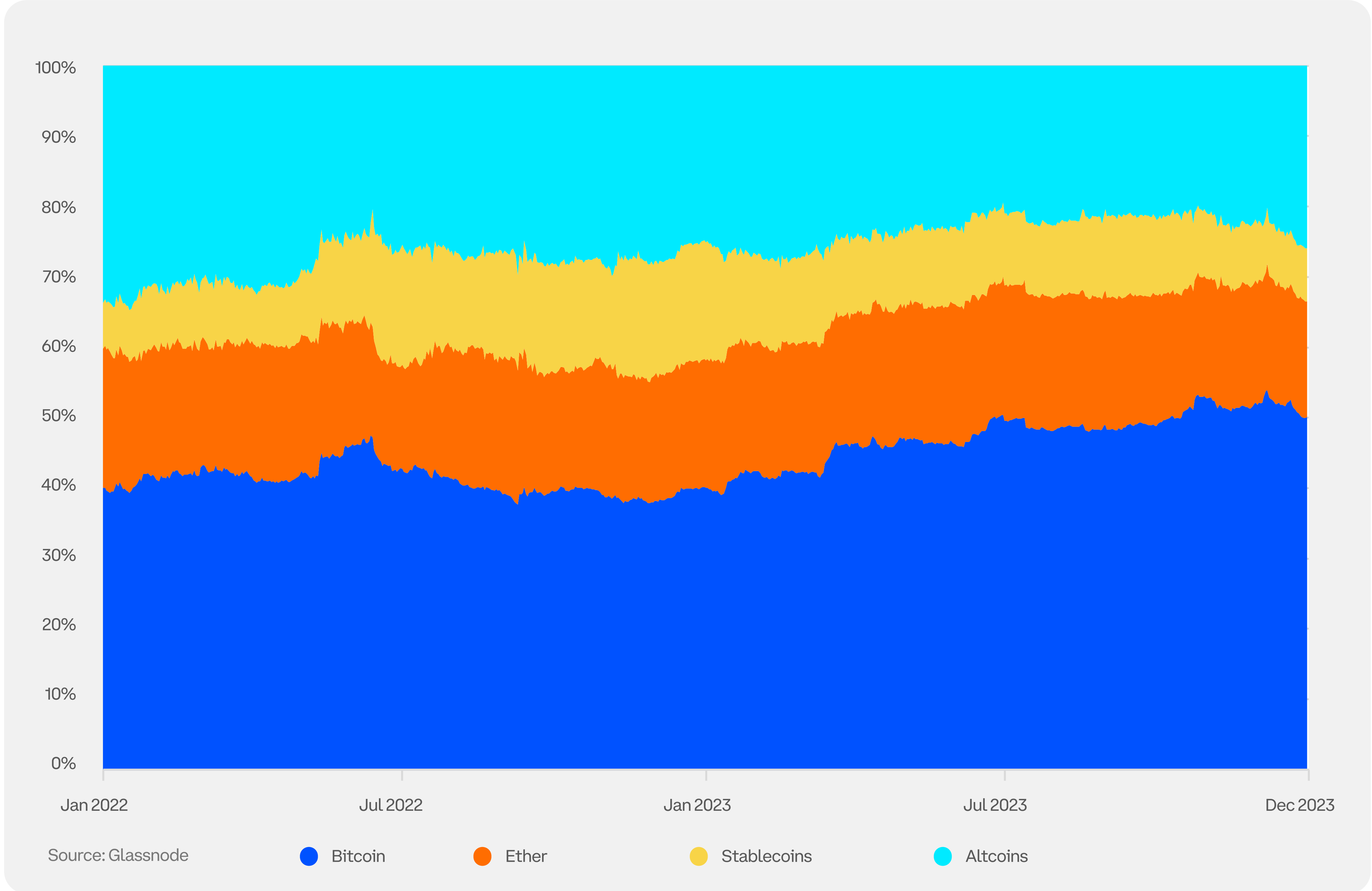
Total crypto market cap measures the global market cap of digital assets including BTC, ETH, altcoins, and stablecoins. The total market cap of the crypto universe rose more than 108% in 2023, led by strong gains in bitcoin and ether.



Source: Glassnode

Crypto Dominance

Crypto dominance measures a cryptocurrency's market capitalization as a percentage of the total market cap of all cryptocurrencies. Bitcoin dominance rose in 2023 with a flight to quality and as the market grew increasingly bullish about the approval prospects for spot bitcoin ETFs. Some market participants also view the April 2024 BTC halving as a potentially positive price catalyst.



Source: Glassnode

● Bitcoin ● Ether ● Stablecoins ● Altcoins

Correlations

Crypto has historically shown low correlations with traditional asset classes. 2022 was an exception, when nearly all assets traded down in tandem, but 2023 saw a reversion to historical norms, indicating that crypto can be a source of idiosyncratic risk.

	BTC/USD	Copper	CRY	DXY	ETH/USD	Gold	MOVE	S&P 500	US 10Y	US 2Y	US Bond	VIX
BTC/USD	1.00	0.06	0.11	-0.12	0.83	-0.05	-0.02	0.18	0.08	0.09	0.10	-0.18
Copper	0.06	1.00	0.29	-0.40	0.14	0.39	-0.18	0.26	-0.01	-0.01	0.03	-0.20
CRY	0.11	0.29	1.00	-0.52	0.14	0.12	0.01	0.00	0.48	0.50	0.47	0.14
DXY	-0.12	-0.40	-0.52	1.00	-0.15	-0.17	0.16	-0.27	-0.44	-0.41	-0.48	0.18
ETH/USD	0.83	0.14	0.14	-0.15	1.00	0.02	-0.07	0.19	0.04	0.03	0.06	-0.19
Gold	-0.05	0.39	0.12	-0.17	0.02	1.00	-0.05	0.14	-0.08	-0.10	-0.07	-0.09
MOVE	-0.02	-0.18	0.01	0.16	-0.07	-0.05	1.00	-0.25	-0.20	0.08	-0.26	0.40
S&P 500	0.18	0.26	0.00	-0.27	0.19	0.14	-0.25	1.00	0.04	-0.13	0.15	-0.73
US 10Y	0.08	-0.01	0.48	-0.44	0.04	-0.08	-0.20	0.04	1.00	0.78	0.98	0.04
US 2Y	0.09	-0.01	0.50	-0.41	0.03	-0.10	0.08	-0.13	0.78	1.00	0.74	0.29
US Bond	0.10	0.03	0.47	-0.48	0.06	-0.07	-0.26	0.15	0.98	0.74	1.00	-0.05
VIX	-0.18	-0.20	0.14	0.18	-0.19	-0.09	0.40	-0.73	0.04	0.29	-0.05	1.00

Portfolio Diversification

Allocations to cryptocurrency can provide a diversifying source of risk and return to traditional portfolios. In this table, we measure the effects of adding small allocations to the Coinbase Core Index (COINCORE) to a portfolio comprised of 60% MSCI ACWI and 40% US Agg, adjusting the equity and bond positions proportionally.

COINCORE is a market cap-weighted crypto index that is rebalanced quarterly with an almost 94% combined allocation to bitcoin (65.3%) and ether (28.7%) among eight total constituents.

The analysis looks at the period from March 2018 – October 2023, which encompassed two major cycles of crypto price depreciation and appreciation. As seen in the table, adding COINCORE to the 60/40 portfolio increased both absolute and risk-adjusted returns. For more information on the impacts of adding crypto to a portfolio, see [“Crypto’s Role in Portfolio Diversification.”](#)

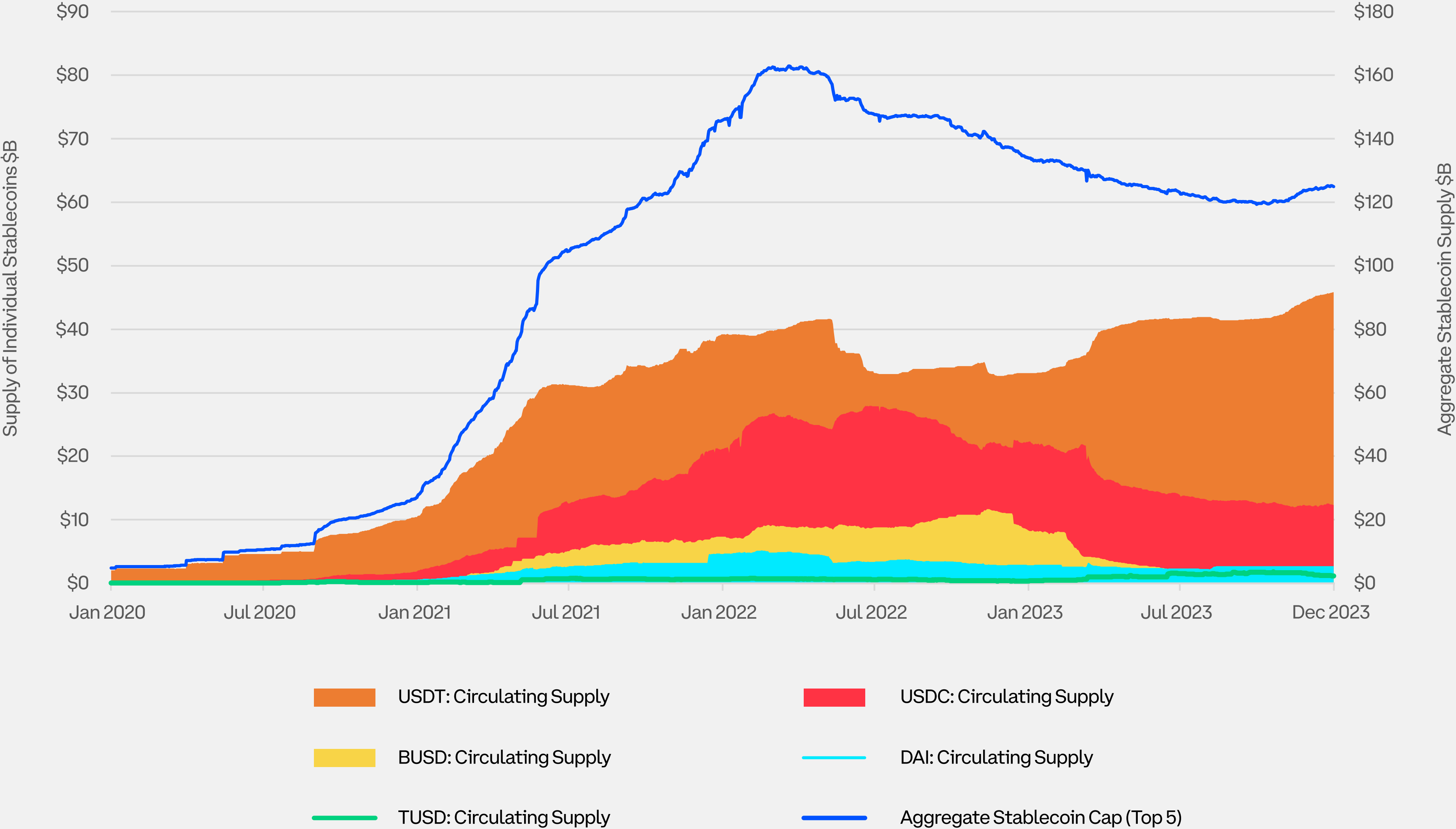
Effects of adding crypto to a 60/40 portfolio Mar 2018 - Oct 2023

Portfolio	60% ACWI / 40% US Agg	60/40 + 1% Coinbase Core	60/40 + 2% Coinbase Core	60/40 + 3% Coinbase Core	60/40 + 4% Coinbase Core	60/40 + 5% Coinbase Core
Return	3.78%	4.35%	4.91%	5.45%	6.00%	6.53%
Volatility	10.69%	10.76%	10.89%	11.06%	11.29%	11.56%
Sharpe	0.23	0.28	0.32	0.37	0.41	0.44
Sortino	0.22	0.26	0.30	0.34	0.38	0.41
Calmar	0.08	0.12	0.15	0.17	0.20	0.22
Average up month	2.37%	2.57%	2.67%	2.92%	3.05%	3.29%
Average down month	-3.15%	-2.91%	-2.93%	-2.76%	-2.83%	-2.82%
Max drawdown	-22.22%	-22.84%	-23.46%	-24.08%	-24.69%	-25.32%

Source: Venn by Two Sigma (Venn), <https://www.venn.twosigma.com> Data covers the period from March 2018 - October 2023. Presented for informational purposes only. Information sourced from Venn is not (i) an offer or solicitation of an offer to invest in, buy or sell any investment or to participate in any trading strategy and (ii) is not intended to provide any accounting, legal, or tax advice or investment recommendations. Venn is for institutional investors only. 2023 © Two Sigma Investments, L.P. All rights reserved.

Stablecoin Circulating Supply

Stablecoins are digital currencies that are designed to maintain a constant or "stable" value. To achieve a stable value, many hold reserve assets denominated in US dollars or other fiat currency at a fixed rate (typically 1:1). Such fiat-backed stablecoins make up the vast majority of the overall stablecoin market. An important metric to consider when assessing stablecoins is the amount and nature of reserve assets they hold.



Source: Glassnode

02. Bitcoin

Background: Bitcoin (BTC) is the world's first widely adopted cryptocurrency. Note that bitcoin (BTC) itself is distinct from the Bitcoin network on which the token is transacted. The network is what allows secure and seamless peer-to-peer transactions on the internet through a blockchain. A blockchain is a public ledger that contains the history of every transaction ever made using bitcoin. BTC is decentralized: any two people, anywhere in the world, can send bitcoin to each other without the involvement of a bank, government, or other institution.

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DEVELOPER(S)

Bitcoin was created by Satoshi Nakamoto, a pseudonymous person or team who outlined the technology in a 2008 white paper.

REFERENCE PRICE

Bitcoin Reference Rate (BRR) - CME CF Benchmark reference rate

% SUPPLY IN CIRCULATION

93%

BLOOMBERG TICKER

XBT Curncy

CIRCULATING SUPPLY

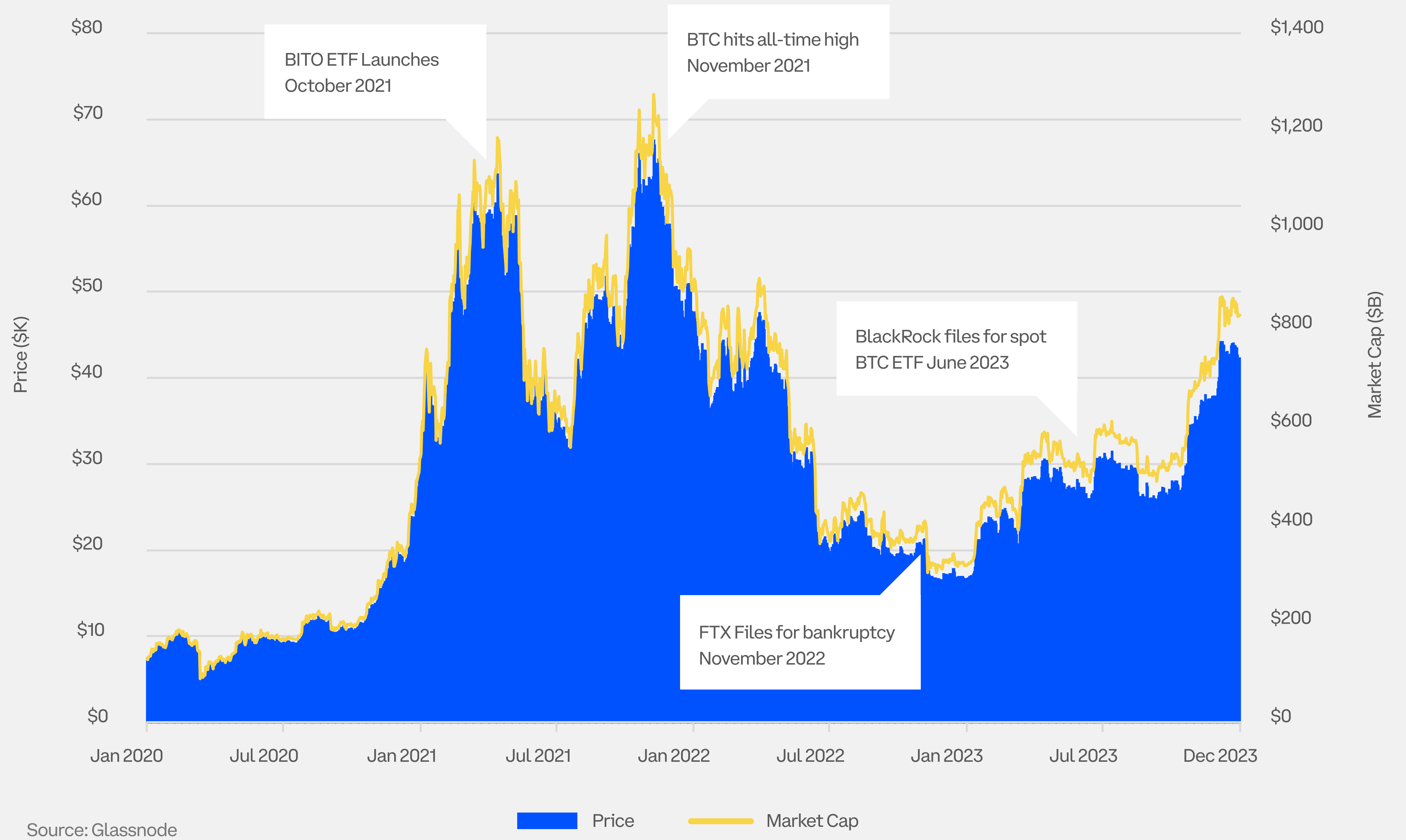
Fixed at 21 million BTC. Currently ~19.58 million.

INFLATION RATE

1.83%

BTC Price & Market Cap

The price of BTC increased more than 155% in 2023 as market participants were encouraged by a number of factors from the slowing pace of inflation to the increasing likelihood of approval for spot crypto ETFs.

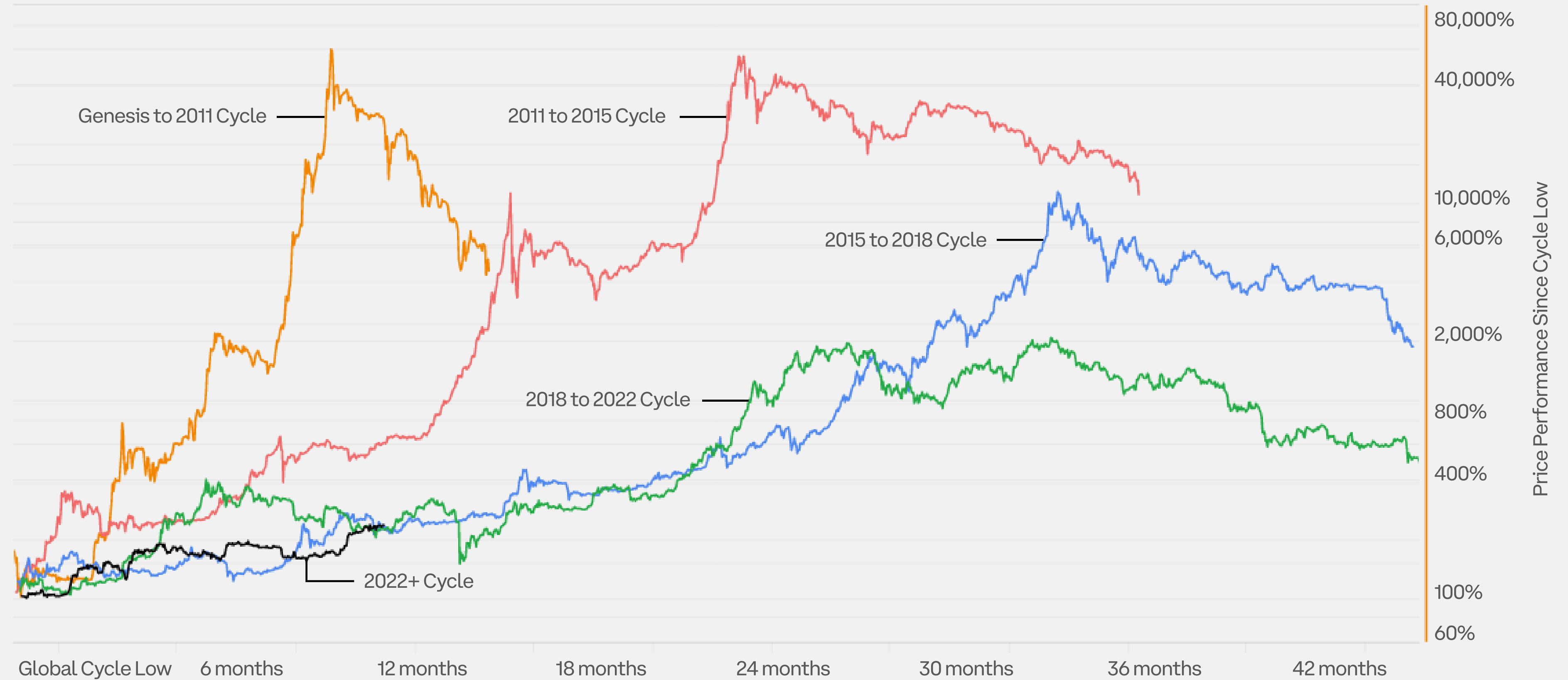


Source: Glassnode

Price Market Cap

BTC Price Performance Since Cycle Low

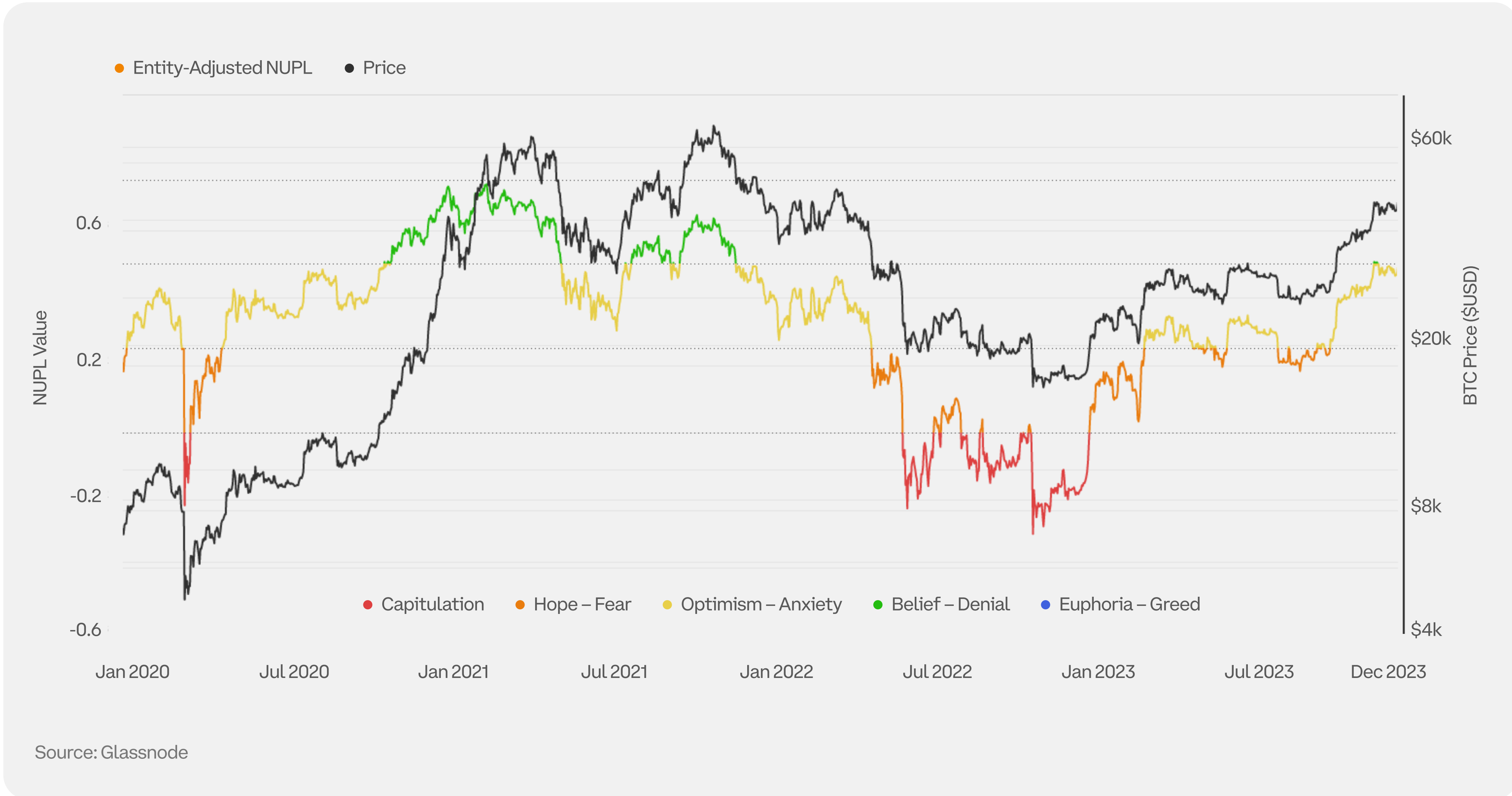
Bitcoin has completed four cycles that each included both bull and bear markets. In this chart, we see how the current market cycle, which began in 2022, compares to the previous cycles.



Source: Glassnode

BTC Entity-Adjusted NUPL

Net Unrealized Profit/Loss (NUPL) is the difference between relative unrealized profit and relative unrealized loss. Entity-adjusted NUPL discards transactions between addresses of the same entity ("in-house" transactions) to measure only real economic activity and provide an improved market signal compared to unadjusted NUPL. For more information, see [this article](#).



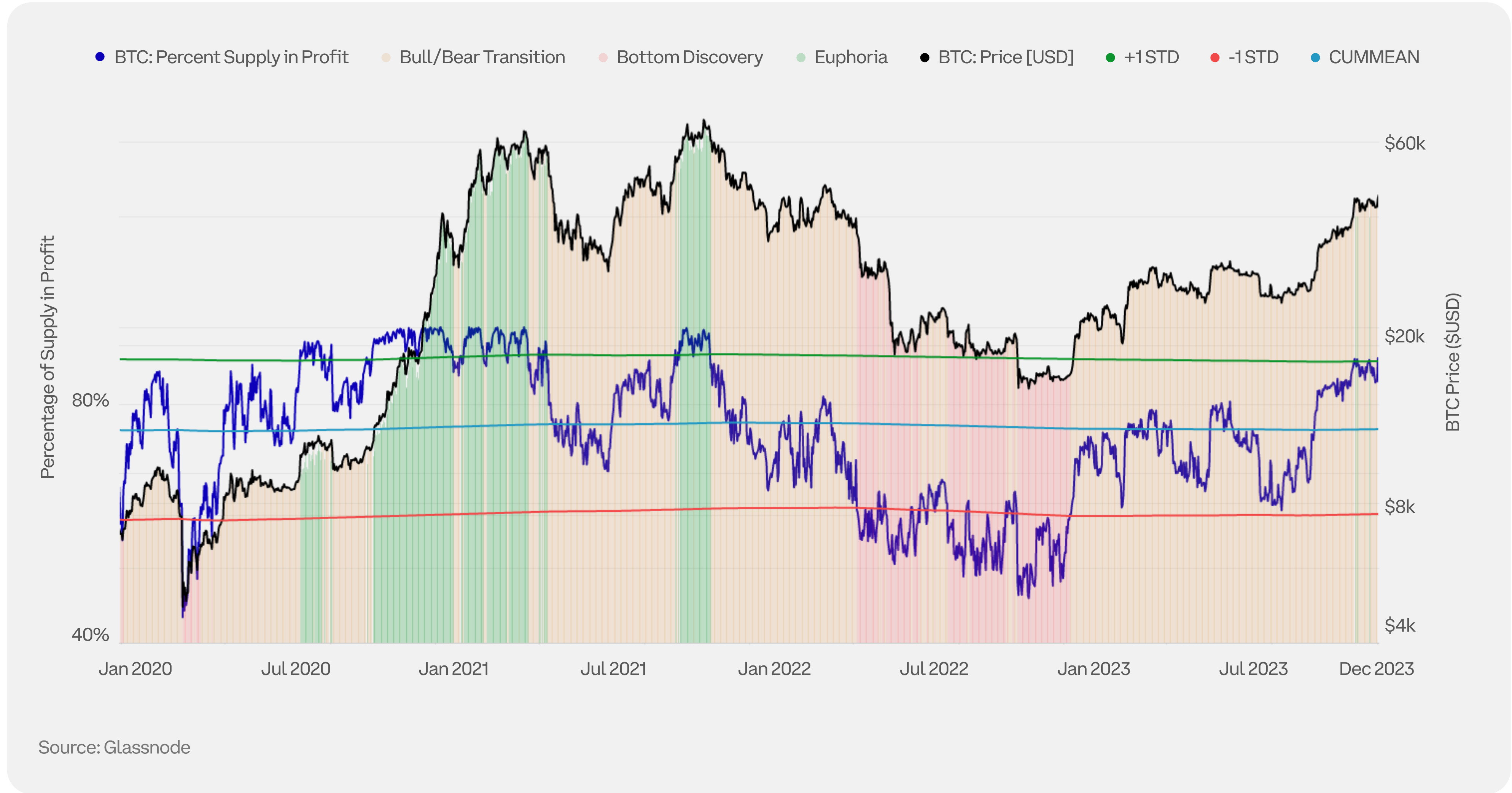
BTC Supply Profitability State

The circulating supply of a cryptocurrency is comprised of supply in loss (all coins with a cost basis higher than the current spot price) and supply in profit (all coins with a cost basis lower than the current spot price). Looking at supply profitability can help shed light on where crypto prices are in the current market cycle, as previous crypto market cycles have been characterized by three phases:

Bottom Discovery: In the last stage of a bear market, when an extended period of price depreciation causes the share of supply in loss to rise (Percent of Supply in Profit < 55%)

Euphoria: When a parabolic price uptrend is in play during a bull market, the share of supply in profit dominates (Percent of Supply in Profit > 95%)

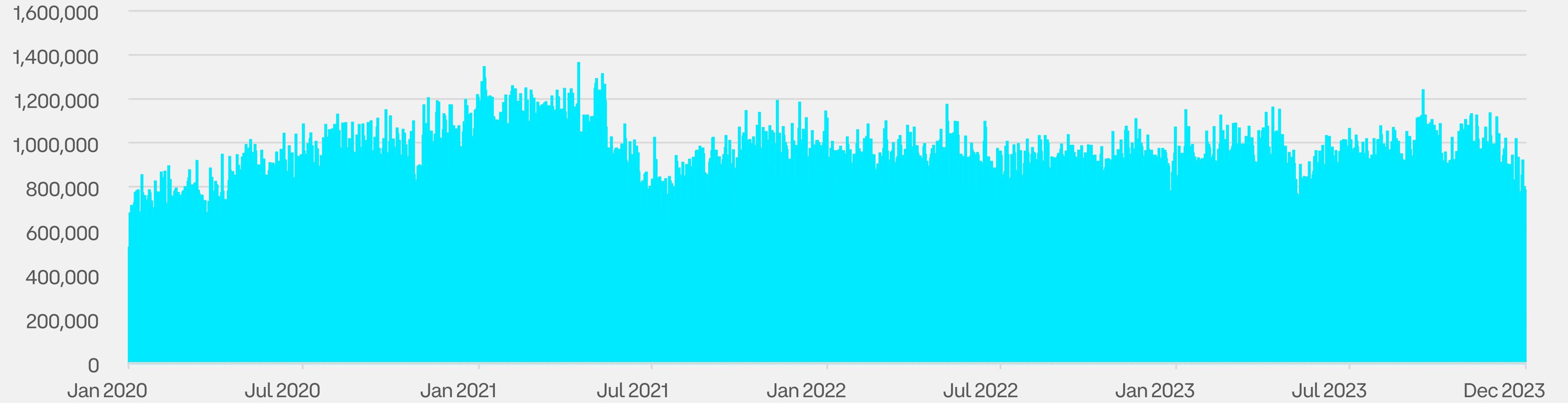
Bull/Bear Transition: The transition periods between Bottom Discovery and Euphoria, when supply profitability is closer to equilibrium (Percent of Supply in Profit between 55% and 95%)



Source: Glassnode

BTC Daily Active Addresses

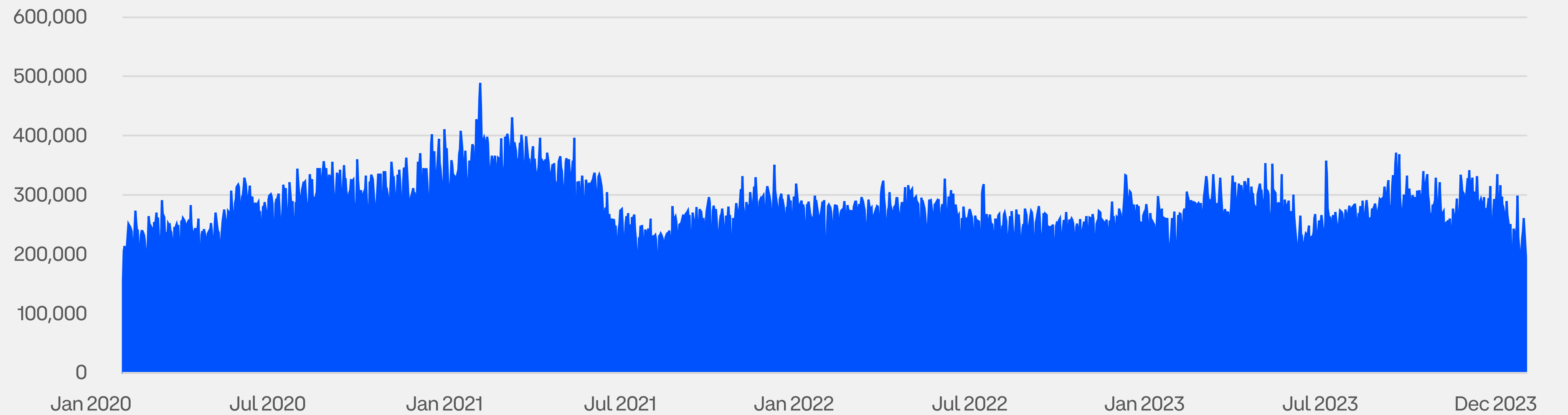
Active addresses are the number of unique addresses that were active in a network as either a sender or a receiver. They are an important metric that can be used to gauge user adoption, network health, economic activity, and more.



Source: Glassnode

BTC Daily Active Entities

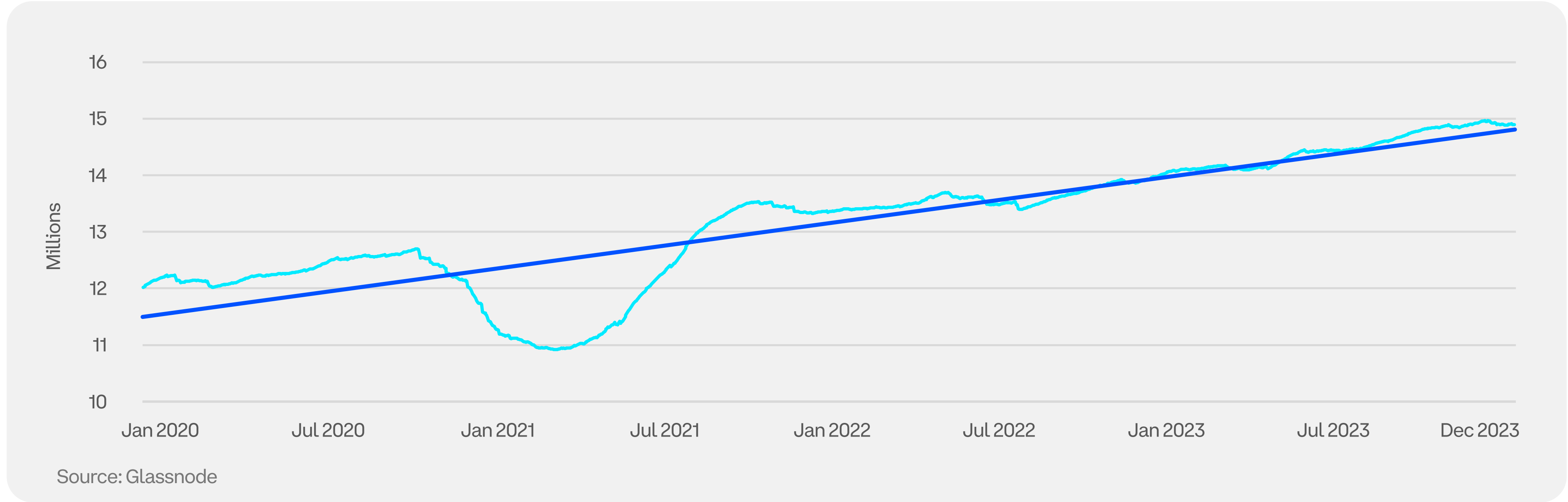
While active addresses are an important metric, a single entity can have multiple addresses, so we also look at the number of active entities. Entities are defined as a cluster of addresses that are controlled by the same network entity and are estimated through advanced heuristics and Glassnode's proprietary clustering algorithms.



Source: Glassnode

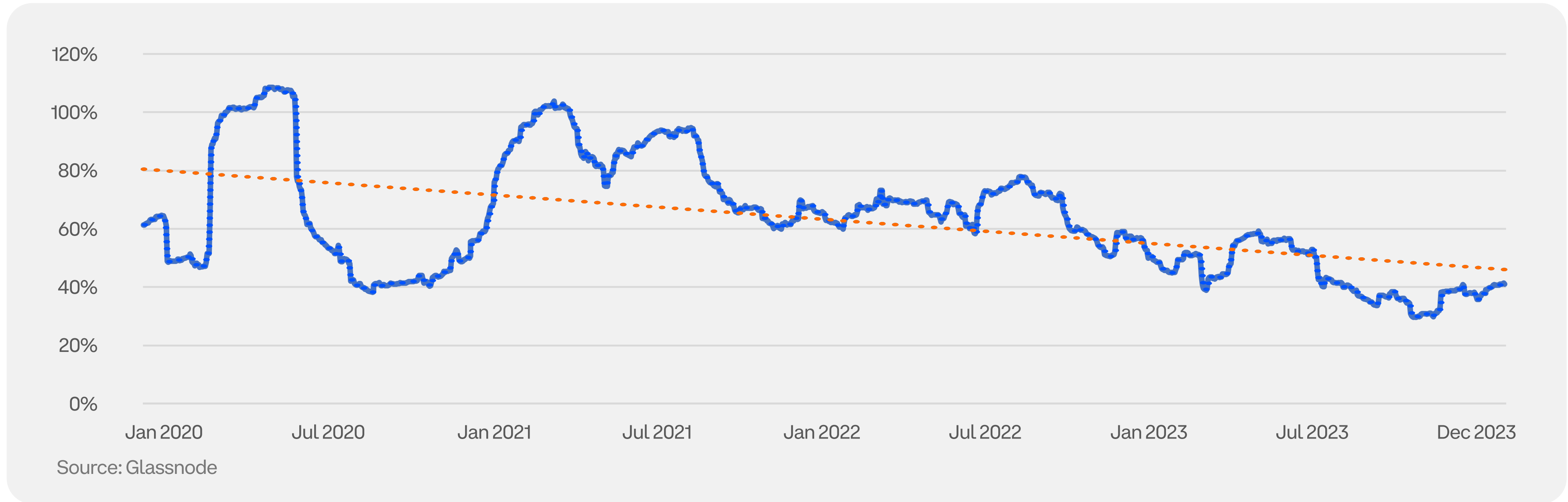
BTC Total Supply Held by Long-Term Holders

Long-term holders (LTHs), as defined by Glassnode, refers to investors who retain their cryptocurrency holdings for a minimum of 155 days. Historically, this duration marks the point beyond which the probability of these assets being sold decreases notably. The activity patterns of LTHs can be used as a barometer for identifying cyclical trends within the cryptocurrency markets, including potential peaks and troughs.



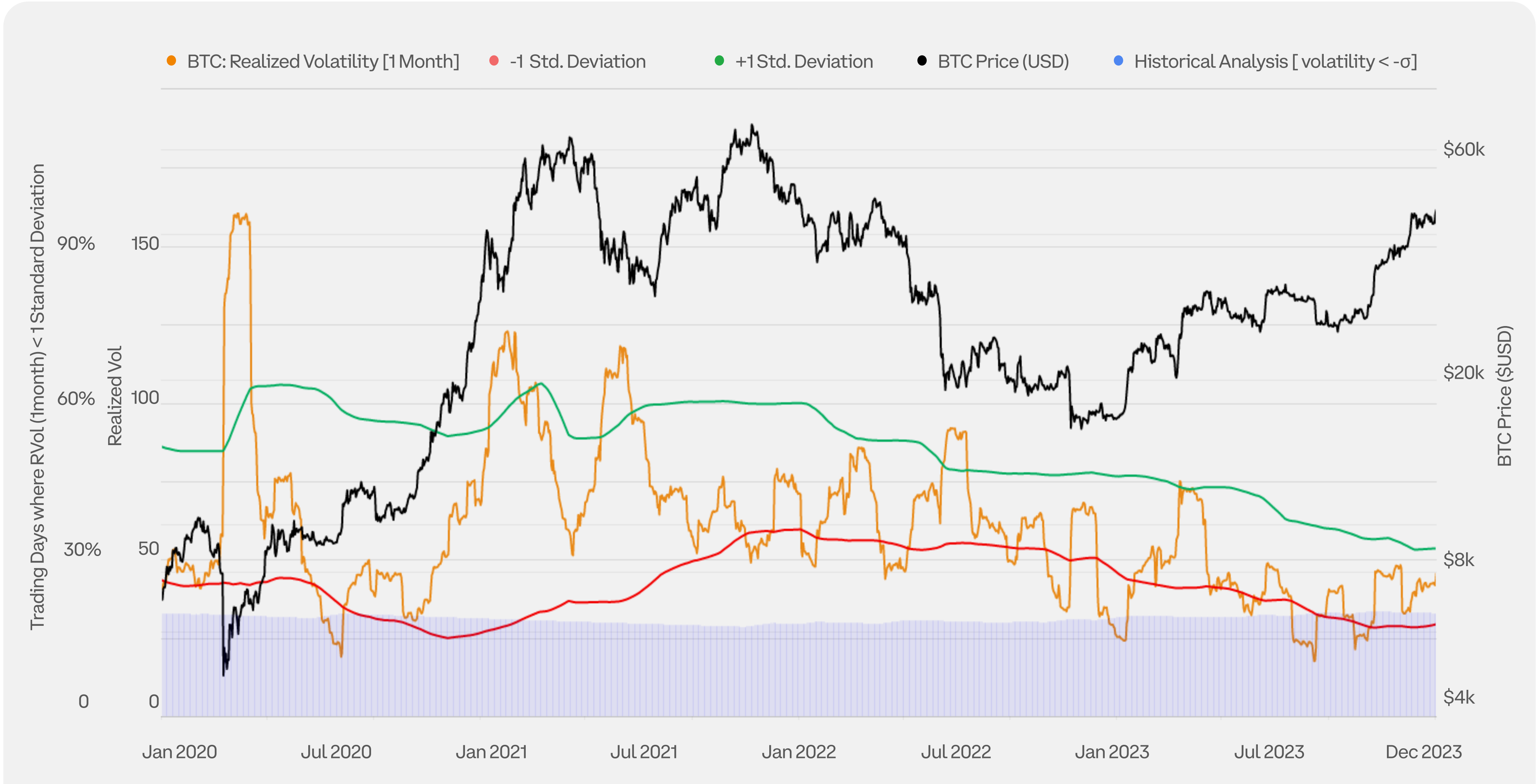
BTC Annualized 3-Month Volatility

As crypto has matured as an asset class and institutional participation has increased, volatility has trended steadily lower.



BTC Monthly Realized Volatility Bands

This chart applies Bollinger Bands to one-month realized volatility to identify potential turning points in the prevailing volatility backdrop. When volatility is one standard deviation above or below the one-month average, it may signal that a reversal is more likely.



Source: Glassnode

BTC Realized Price and MVRV

Realized Price is the average price of a cryptocurrency's supply, valued on the day each coin last transacted on-chain; it is often considered the on-chain cost basis of the market. MVRV is short for Market Value to Realized Value; it is the ratio between the market value (spot price) and the realized value (realized price).

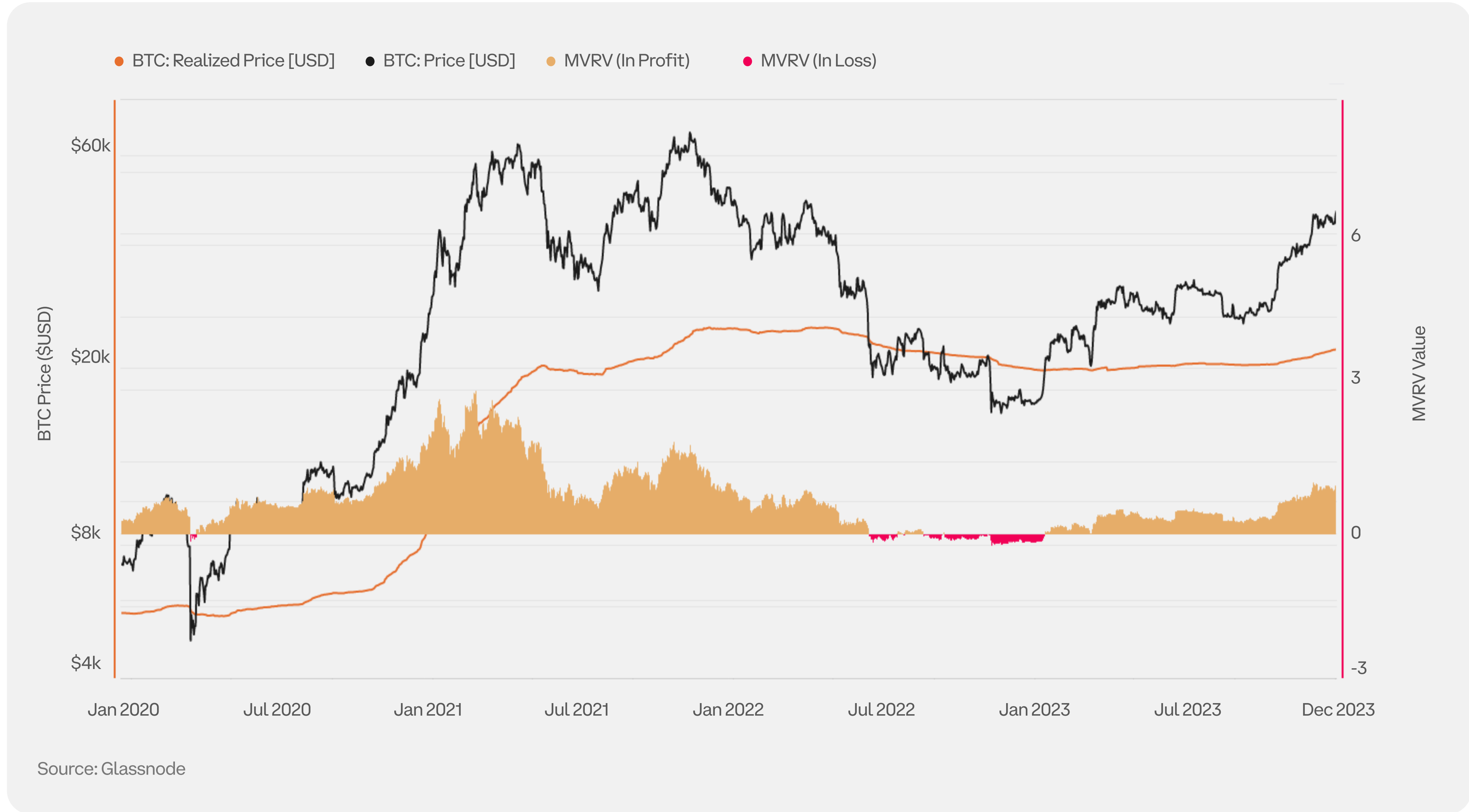
An MVRV of 2.0 means the current price is 2x the market's average cost basis (average holder is up 2x).

An MVRV of 1.0 means the current price is equal to the market's average cost basis (average holder is at break-even).

An MVRV of 0.50 means the current price is -50% below the market's average cost basis (average holder is underwater by -50%).

Extreme MVRV values can help identify periods where the market is overheated, or undervalued, and where investor profitability has reached a large deviation from the mean (realized price).

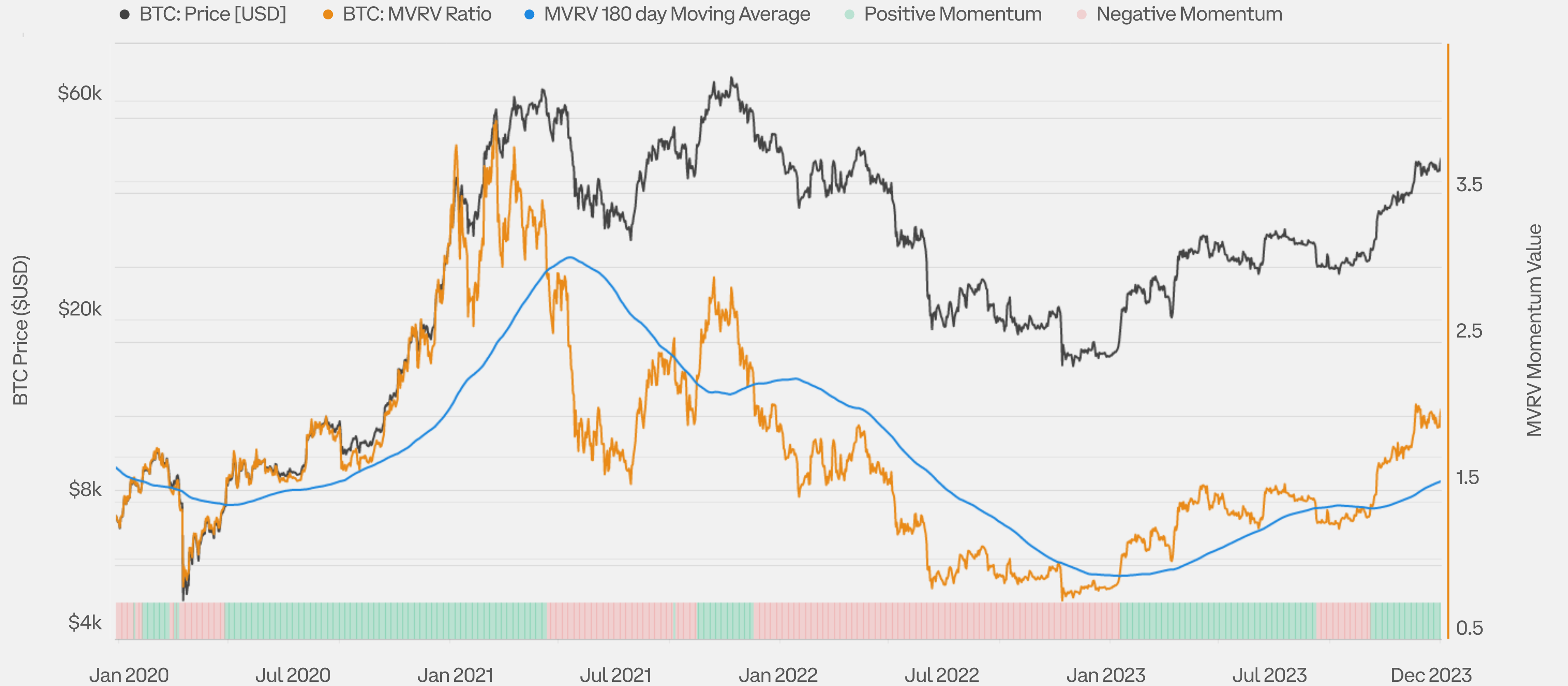
For more on the MVRV ratio, see this [article](#).



BTC MVRV Momentum

This chart shows the MVRV ratio alongside the six-month simple moving average (SMA), which is used as a gauge for momentum. Periods where MVRV is above the six-month SMA typically describe macro market uptrends, and periods where it is below typically describe downtrends.

Cycle transition points are often characterized by MVRV breaking strongly across the six-month SMA. Strong breaks above the SMA indicate large volumes of BTC were acquired below the current price, and strong breaks below indicate large volumes of BTC were acquired above the current price.



Source: Glassnode

BTC Derivatives

Market participants use bitcoin derivatives for a variety of reasons, including gaining capital-efficient access to BTC, hedging spot exposure, mitigating mining risks, and hedging other tokens that don't have liquid and regulated derivatives. For more on hedging, see [Hedging cryptocurrencies with futures: A look at common use cases](#).

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Q4 2023 Daily Averages

Futures volume: \$25.4B

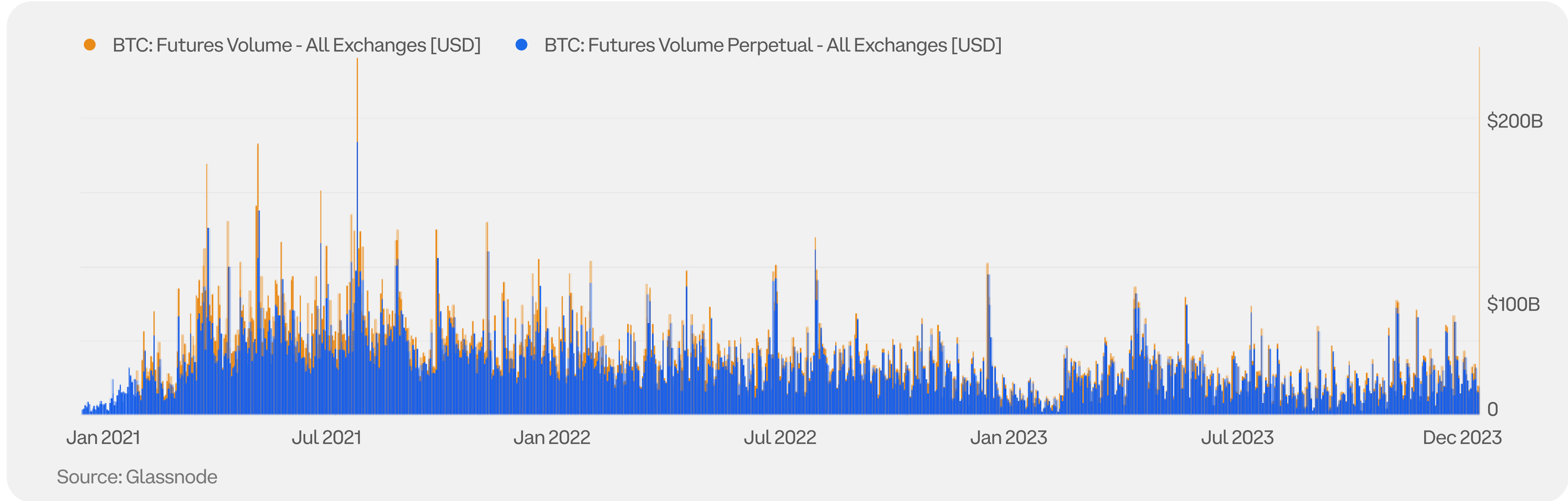
Futures open interest: \$12.9B

Perp funding rate: 0.0085%

Options open interest (weekly): \$14.4B

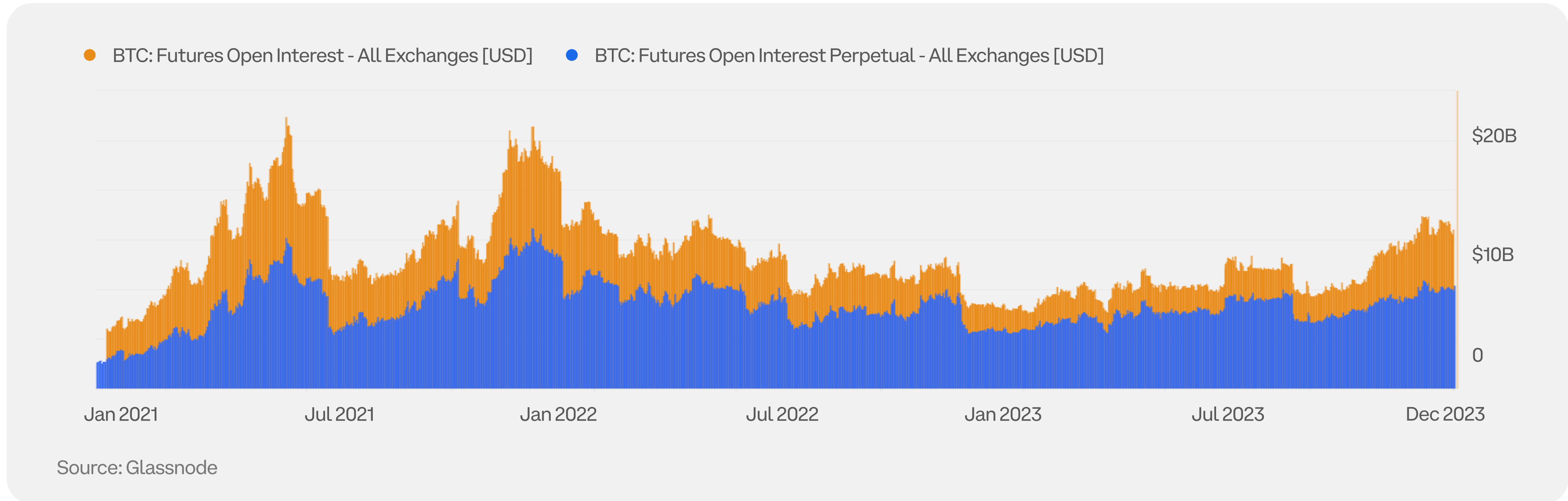
BTC Futures Volume

Volume in crypto futures is split between traditional futures, also known as term or calendar futures, and perpetual futures (perps), which are unique to crypto. Perps do not have an expiration date, so holders do not need to roll their contracts.



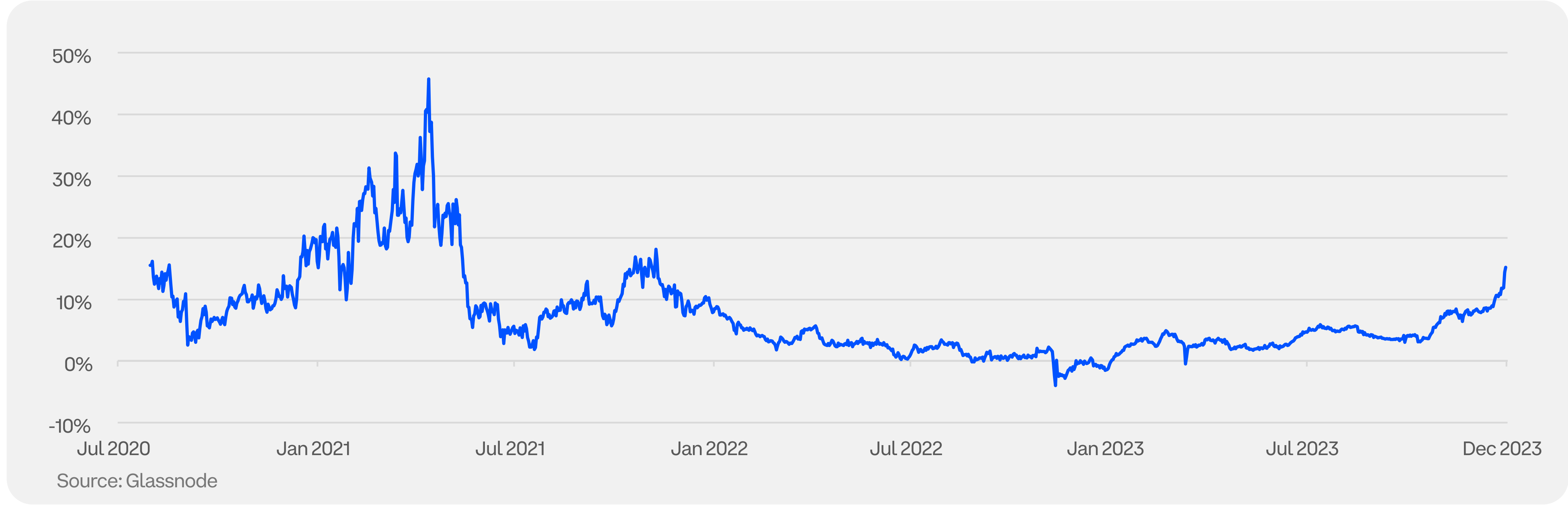
BTC Futures Open Interest

While trading volume in BTC futures is dominated by perps, many market participants use traditional futures for hedging and to put on cash-and-carry trades, so traditional futures make up a significant portion of total BTC futures open interest.



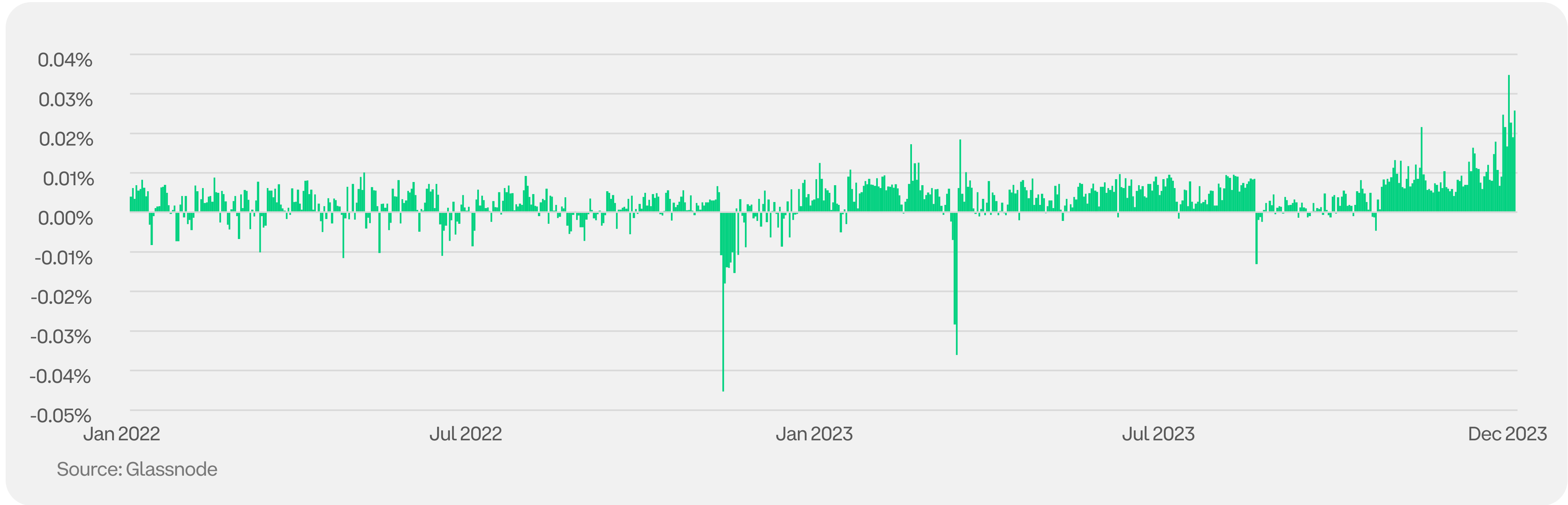
BTC Futures Annualized Rolling Basis (3M)

The basis in crypto markets has historically been positive (outside of market dislocations). Extreme moves in the basis, both positive and negative, tend to be associated with large swings in sentiment.



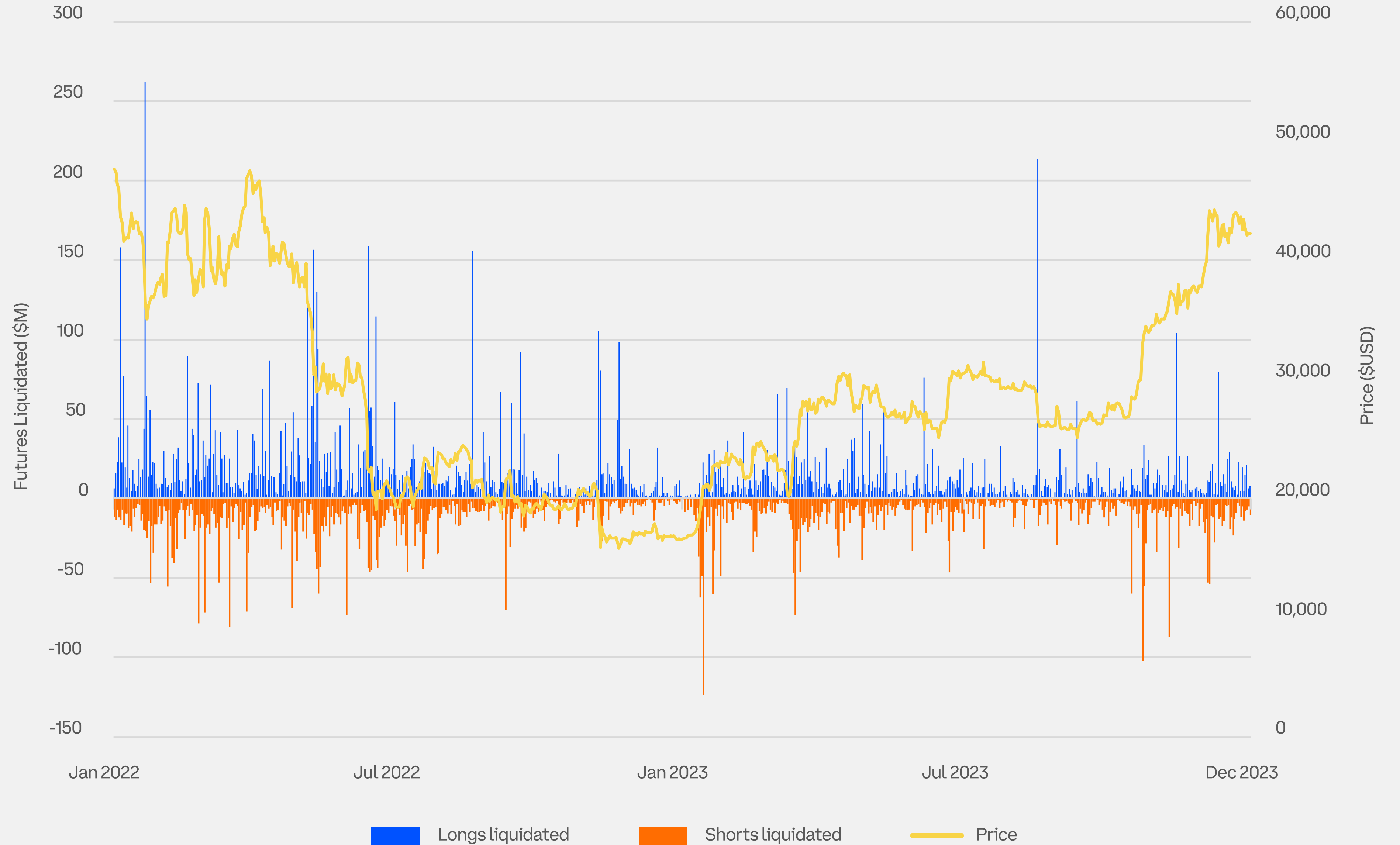
BTC Perpetual Futures Funding Rates

Perpetual futures (perps) do not have an expiration date, so holders do not need to roll their contracts. To prevent the price from deviating too far from spot prices, perps have a funding mechanism (the funding rate) that is periodically paid between long holders and short holders. When the funding rate is positive, longs pay shorts, and when the funding rate is negative, shorts pay longs.



BTC Perpetual Futures Liquidated

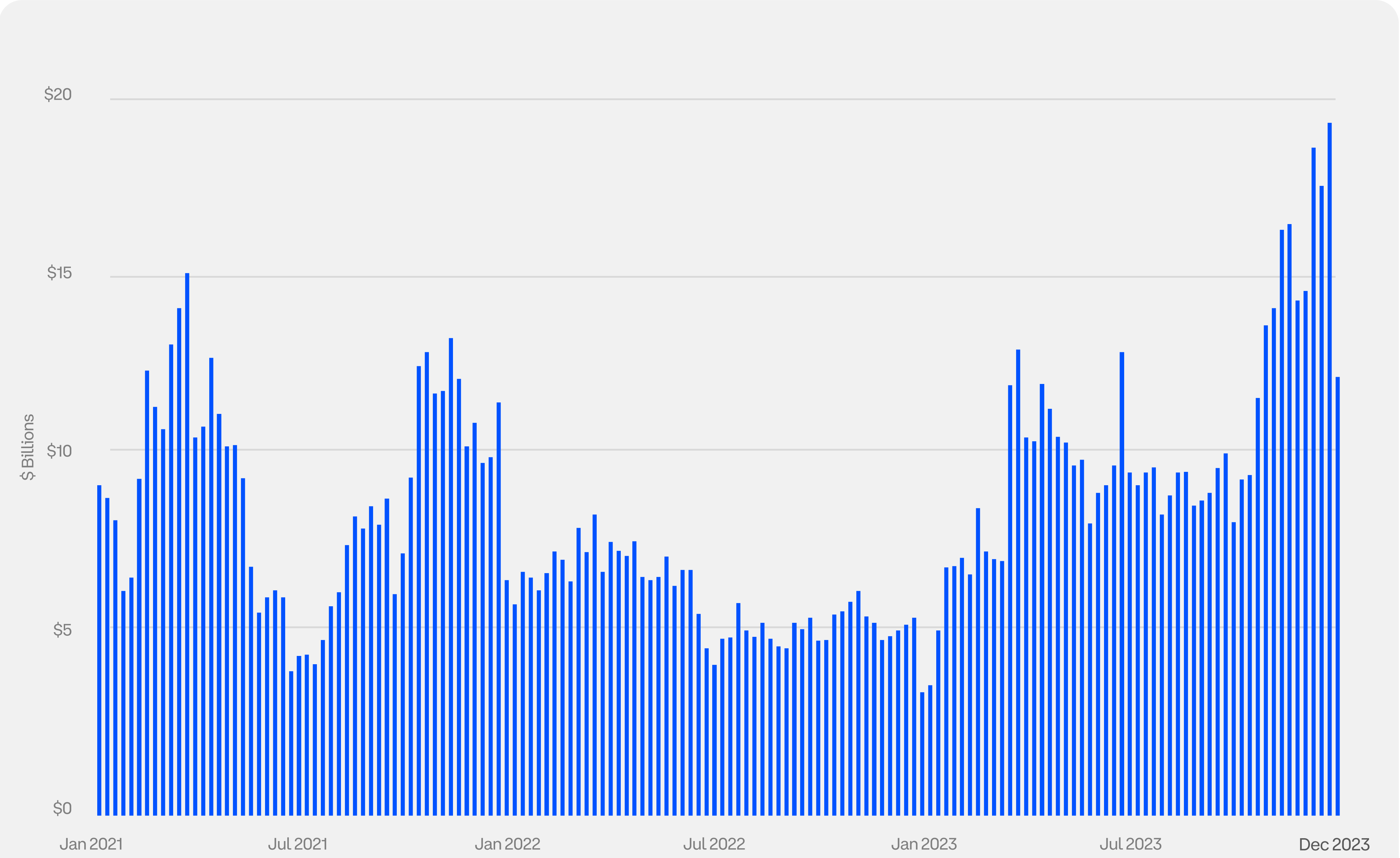
Liquidation occurs when an exchange forcefully closes a futures position due to a partial or total loss of the initial margin. Large liquidations can signal the top or bottom of a steep price move.



Source: Glassnode

BTC Options Open Interest

Options open interest increased in 2023 as institutional investors increasingly moved into the space. In October 2023, open interest in BTC options overtook open interest in BTC futures for the first time.



Source: Glassnode

BTC Traditional Futures Specs

Bitcoin futures are offered by a variety of exchanges in different sizes and denominations.

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Exchange	Size of Large BTC Contract	Size of Small BTC Contract	Trading Hours
Coinbase Derivatives Exchange	1 BTC	0.01 BTC	Sunday – Friday 6 pm – 5 pm ET
CME	5 BTC	0.1 BTC	Sunday – Friday 6 pm – 5 pm ET
Deribit	N/A	\$10 USD	24/7

BTC Upcoming Market Events

Bitcoin halving

We think it's possible that the next bitcoin halving in 2Q24 could have a positive impact on the token's performance. However, the limited supporting evidence makes this relationship still somewhat speculative, in our view. With only three halving events historically, we have yet to see a clear pattern fully emerge, particularly as previous events were contaminated by factors like global liquidity measures. For more on what to expect from BTC halving, see our [detailed report](#).

.....

03. Ethereum

Background: Ethereum is an open-source blockchain platform that allows developers to run decentralized applications (dApps) and to create and deploy smart contracts. Ether (ETH) is the native cryptocurrency of the Ethereum network, and it has the second-largest market capitalization of any cryptocurrency, trailing only bitcoin.

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DEVELOPER(S)

Ethereum was developed by Vitalik Buterin, who published a [white paper](#) in 2014 before launching the project in 2015.

REFERENCE PRICE

Ether Reference Rate (ETHUSD_RR.) - CME CF Benchmark reference rate

TOTAL VALUE LOCKED

\$28.7 BILLION

BLOOMBERG TICKER

XET Currency

CIRCULATING SUPPLY

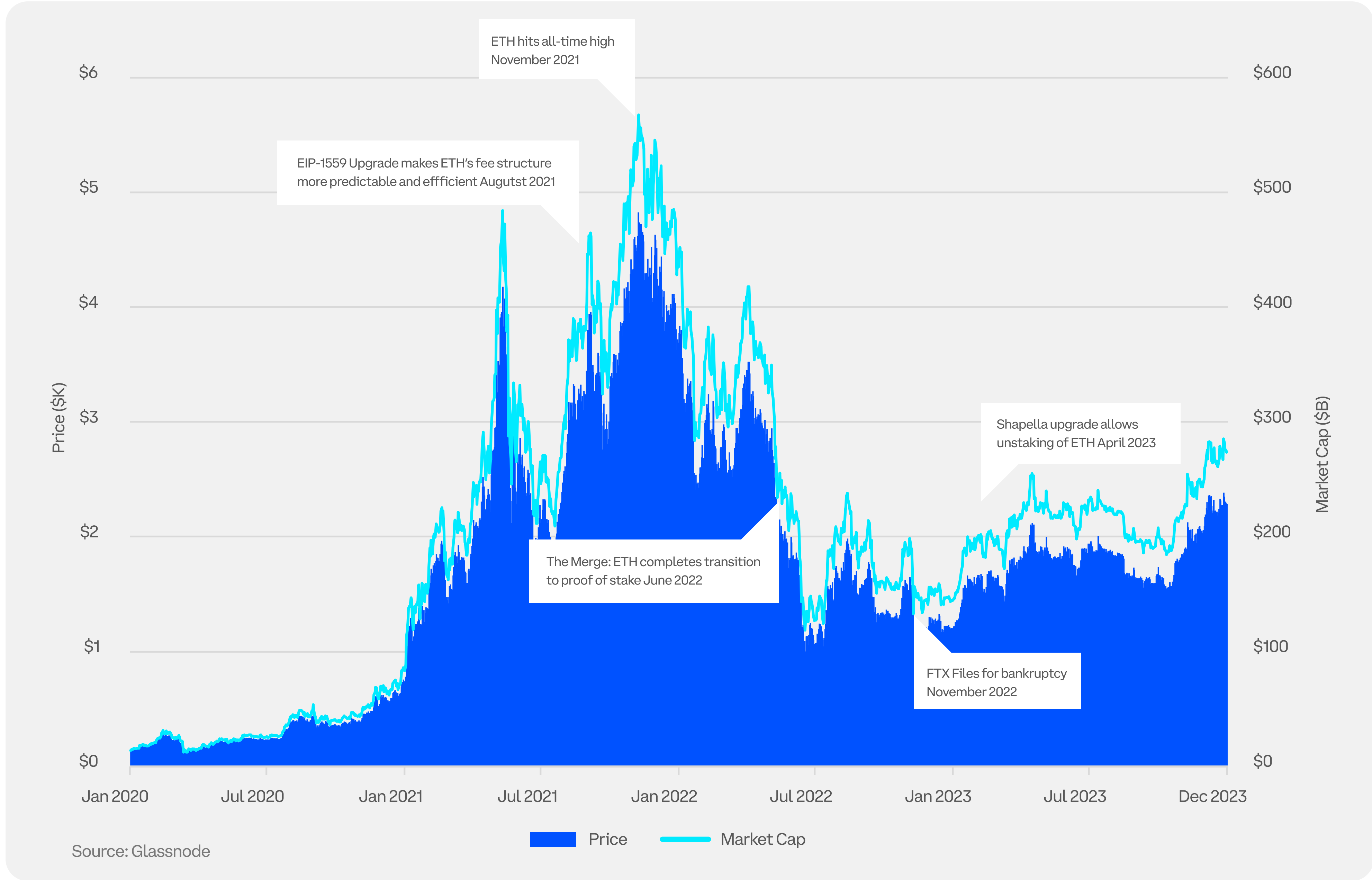
119.8 million

INFLATION RATE

0.29%

ETH Price & Market Cap

The price of ETH increased more than 90% in 2023 as market participants were encouraged by a number of factors from the success of the Shapella upgrade to the increasing likelihood of approval for spot crypto ETFs.



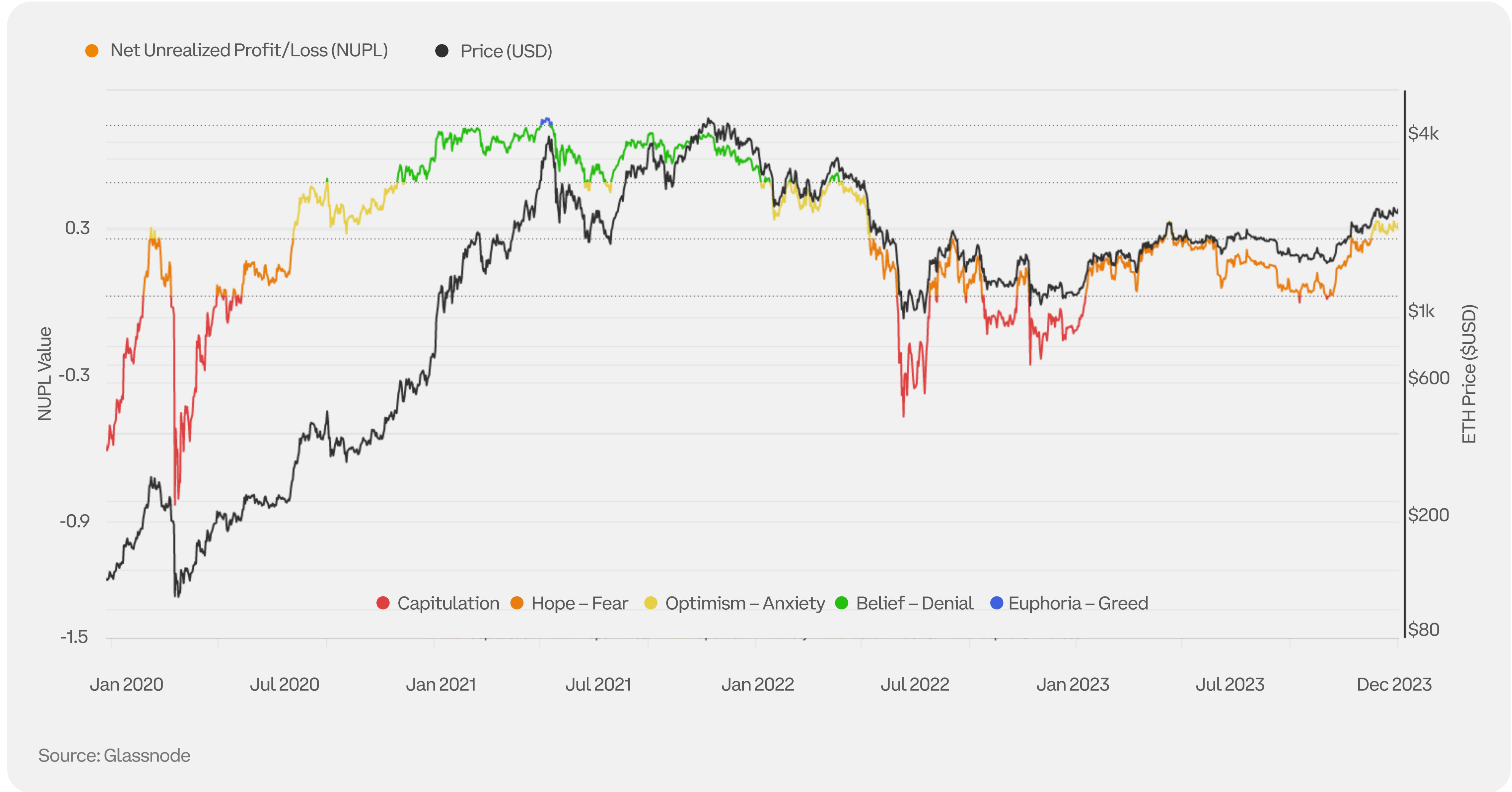
ETH Price Performance Since Cycle Low

Ether has completed two cycles that each included both bull and bear markets. In this chart, we see how the current market cycle, which began in 2022, compares to the previous cycles.



ETH Net Unrealized Profit/Loss (NUPL)

Net Unrealized Profit/Loss is the difference between Relative Unrealized Profit and Relative Unrealized Loss. For more information see [this article](#).



Source: Glassnode

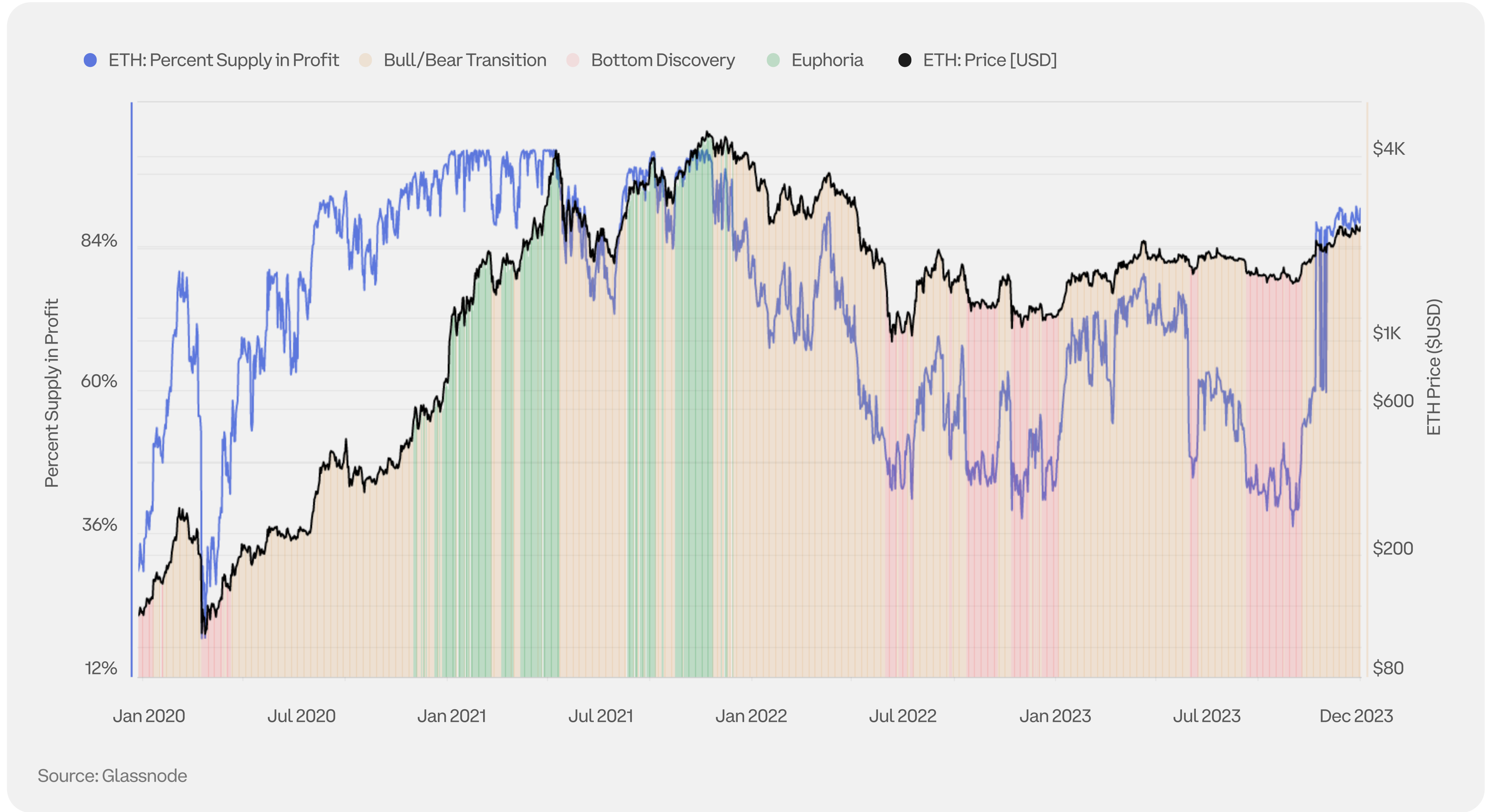
ETH Supply Profitability State

The circulating supply of a cryptocurrency is comprised of supply in loss (all coins with a cost basis higher than the current spot price) and supply in profit (all coins with a cost basis lower than the current spot price). Looking at supply profitability can help shed light on where crypto prices are in the current market cycle, as previous crypto market cycles have been characterized by three phases:

Bottom Discovery: In the last stage of a bear market, when an extended period of price depreciation causes the share of supply in loss to rise (Percent of Supply in Profit < 55%)

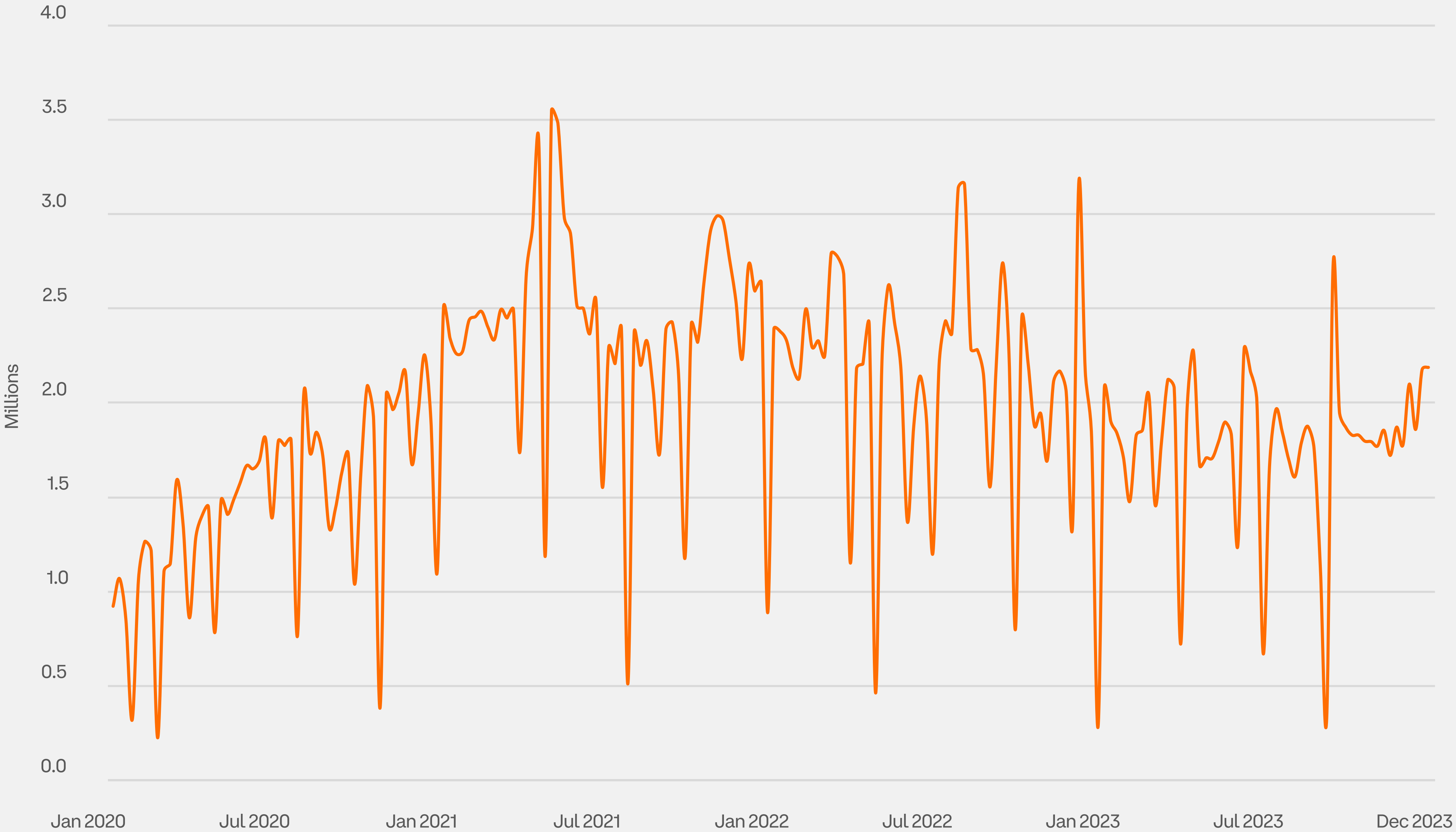
Euphoria: When a parabolic price uptrend is in play during a bull market, the share of supply in profit dominates (Percent of Supply in Profit > 95%)

Bull/Bear Transition: The transition periods between Bottom Discovery and Euphoria, when supply profitability is closer to equilibrium (Percent of Supply in Profit between 55% and 95%)



ETH Weekly Active Addresses

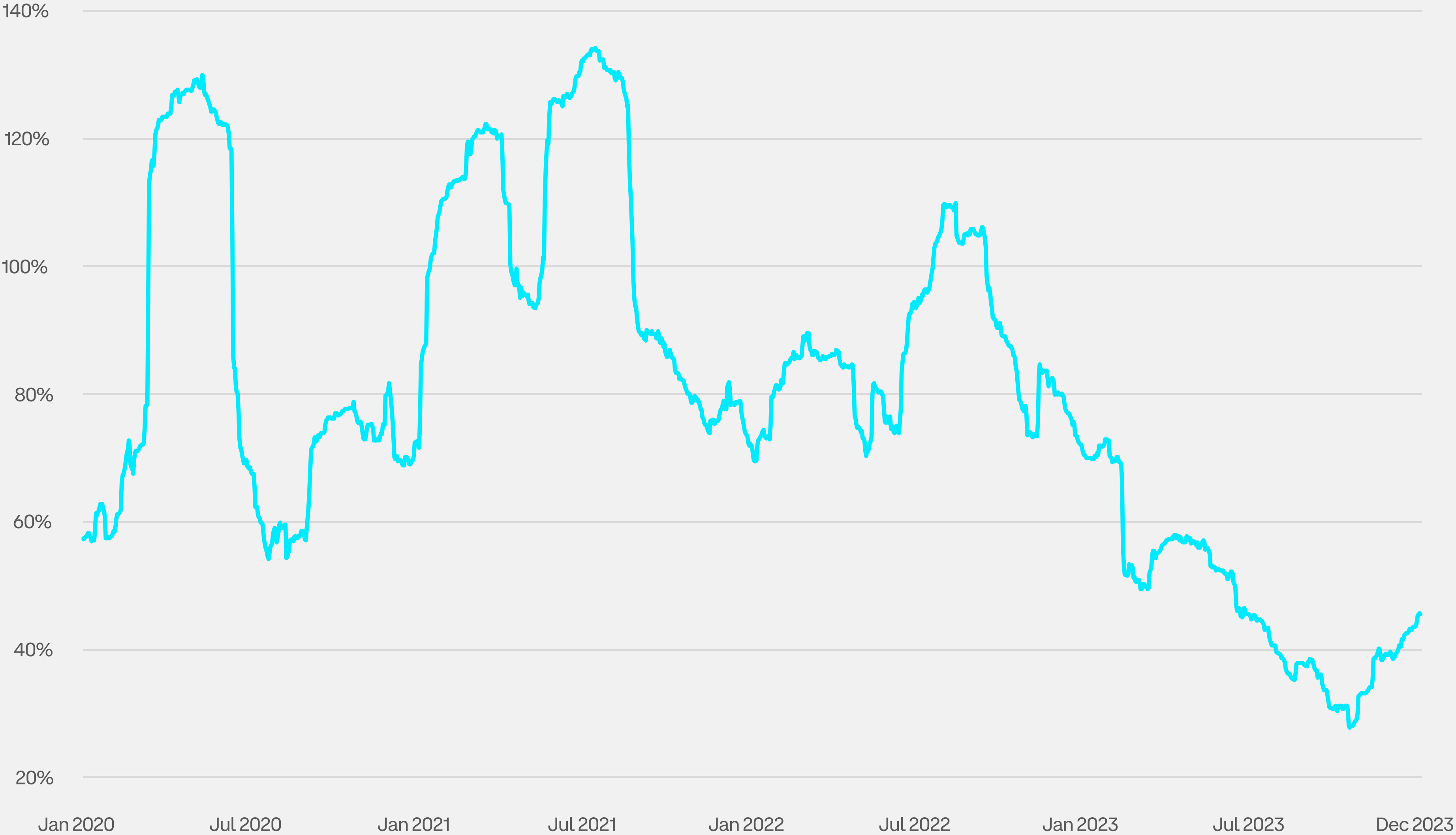
Active addresses are the number of unique addresses that were active in a network as either a sender or a receiver. They are an important metric that can be used to gauge user adoption, network health, economic activity, and more.



Source: Glassnode

ETH Annualized 3-Month Volatility

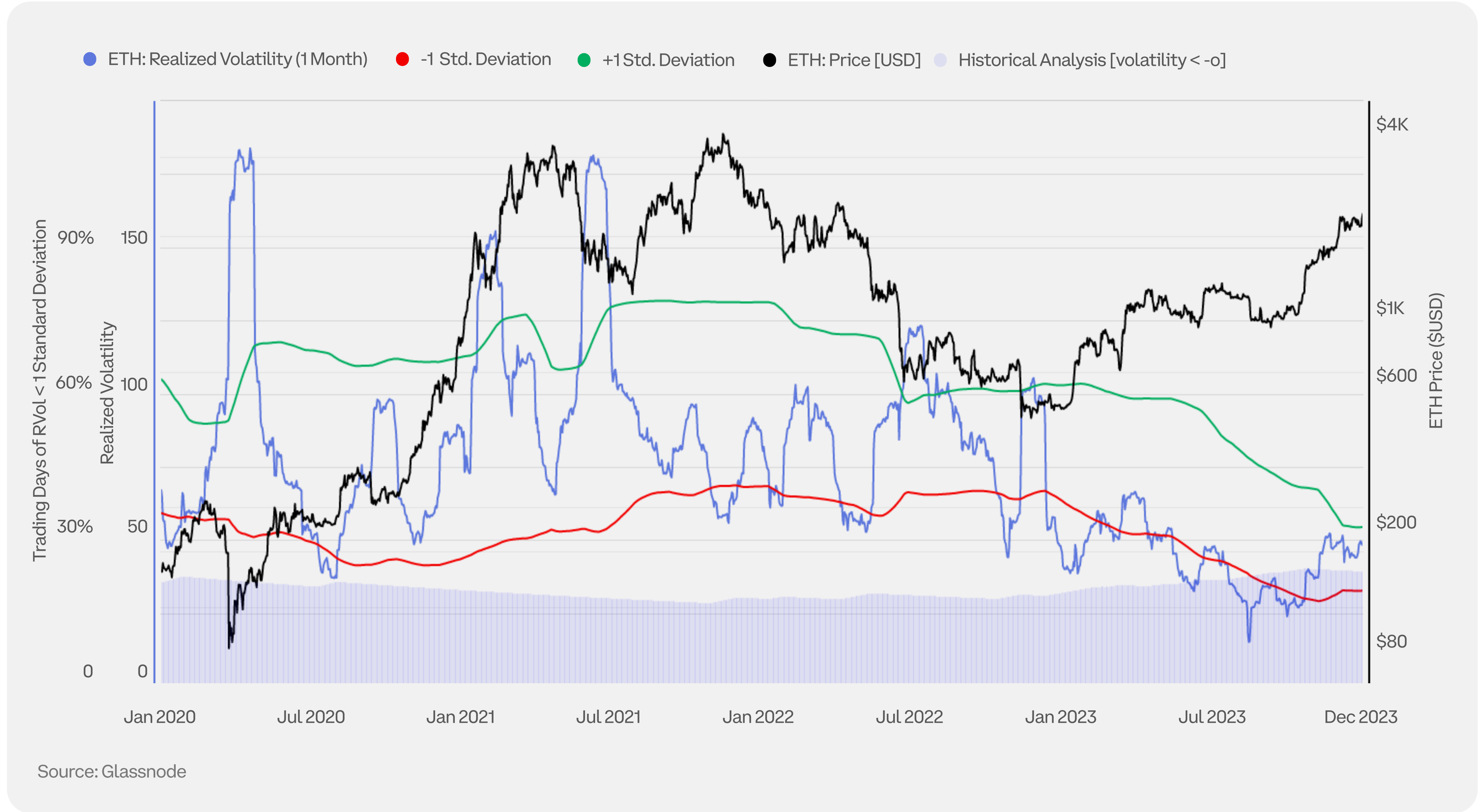
As crypto has matured as an asset class and institutional participation has increased, volatility has trended steadily lower.



Source: Glassnode

ETH Monthly Realized Volatility Bands

This chart applies Bollinger Bands to one-month realized volatility to identify potential turning points in the prevailing volatility backdrop. When volatility is one standard deviation above or below the one-month average, it may signal that a reversal is more likely.



ETH Realized Price and MVRV

Realized Price is the average price of a cryptocurrency's supply, valued on the day each coin last transacted on-chain; it is often considered the on-chain cost basis of the market. MVRV is short for Market Value to Realized Value; it is the ratio between the market value (spot price) and the realized value (realized price).

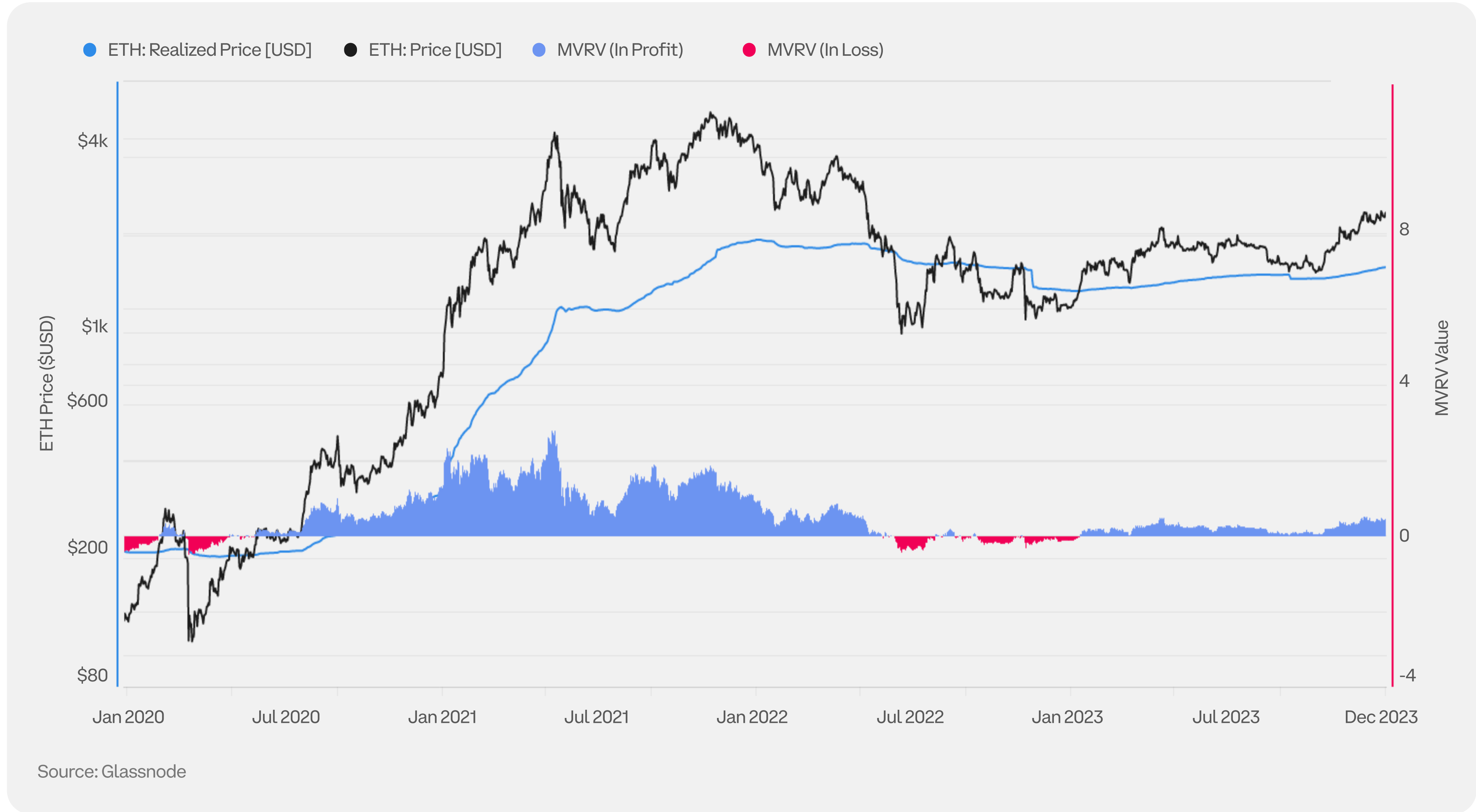
An MVRV of 2.0 means the current price is 2x the market's average cost basis (average holder is up 2x).

An MVRV of 1.0 means the current price is equal to the market's average cost basis (average holder is at break-even).

An MVRV of 0.50 means the current price is -50% below the market's average cost basis (average holder is underwater by -50%).

Extreme MVRV values can help identify periods where the market is overheated or undervalued, and where investor profitability has reached a large deviation from the mean (realized price).

For more on the MVRV ratio, see [this article](#).



ETH MVRV Momentum

This chart shows the MVRV ratio alongside the six-month simple moving average (SMA), which is used as a gauge for momentum. Periods where MVRV is above the six-month SMA typically describe macro market uptrends, and periods where it is below typically describe downtrends.

Cycle transition points are often characterized by MVRV breaking strongly across the six-month SMA. Strong breaks above the SMA indicate large volumes of ETH were acquired below the current price, and strong breaks below indicate large volumes of ETH were acquired above the current price.



ETH Total Value Staked

Staking is an investment feature of Proof of Stake (PoS) blockchains in which token holders pledge their assets to support the network's security, in exchange for rewards in the form of additional tokens. In order to stake ETH, holders must pledge a minimum of 32 ETH and run a validator node. For more on staking see ["Staking 101 for Institutions,"](#) ["Growth of the Liquid Staking Market,"](#) and ["Ethereum Staking in Regulated Vehicles."](#)



Source: Glassnode

— Number of ETH Staked — Value of ETH Staked

ETH Total Value Locked in DeFi

Total Value Locked (TVL) refers to the value of assets, including ETH, stablecoins, and alt coins, that are locked in smart contracts or deposited in decentralized applications on the Ethereum blockchain. TVL is a measure of financial activity and liquidity within the Ethereum ecosystem.



Source: Glassnode

ETH Derivatives

Market participants use ether derivatives for a variety of reasons, including gaining capital-efficient access to ETH, hedging spot exposure, and hedging staked positions in ETH or in other tokens that don't have liquid and regulated derivatives. For more on hedging, see [Hedging cryptocurrencies with futures: A look at common use cases](#).

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Q4 2023 Daily Averages

Futures volume: \$12.9B

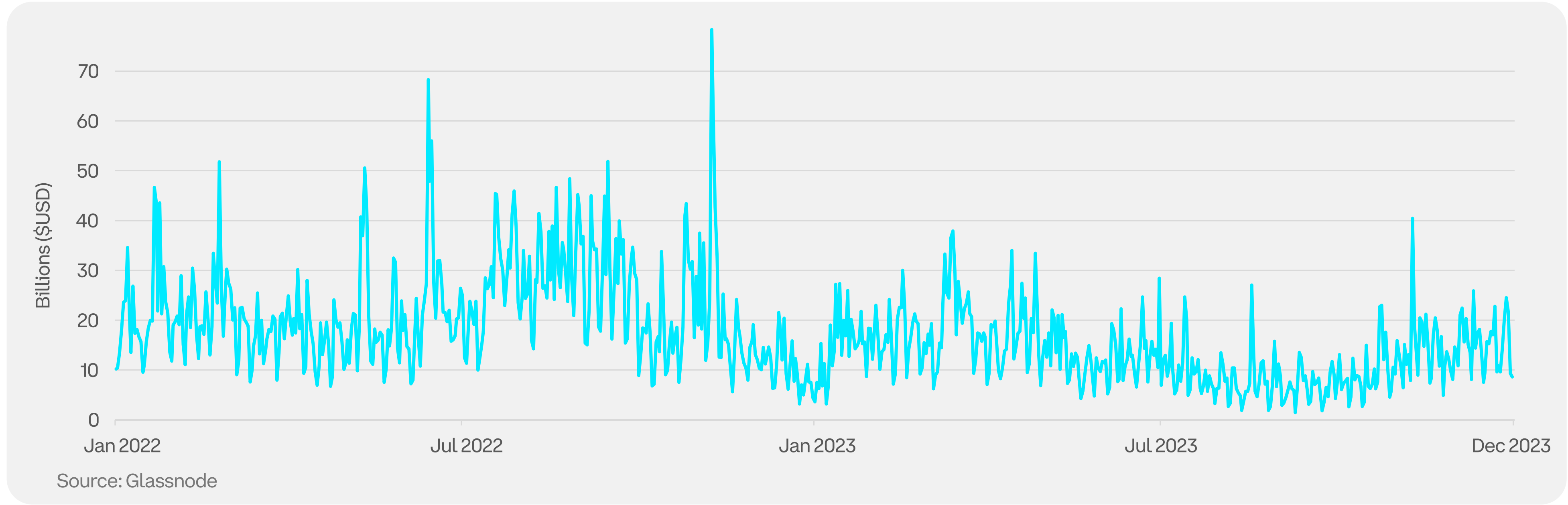
Futures open interest: \$4.9B

Perp funding rate: 0.0012%

Options open interest (weekly): \$6.9B

ETH Perpetual Futures Volume

Volume in crypto futures is split between traditional futures, also known as term or calendar futures, and perpetual futures (perps), which are unique to crypto. Perps do not have an expiration date, so holders do not need to roll their contracts. Volume in ETH futures is dominated by perps.



ETH Perpetual Futures Open Interest

Open interest in ETH futures is also dominated by perps, with very little activity in traditional futures thus far.



ETH Futures Annualized Rolling Basis (3M)

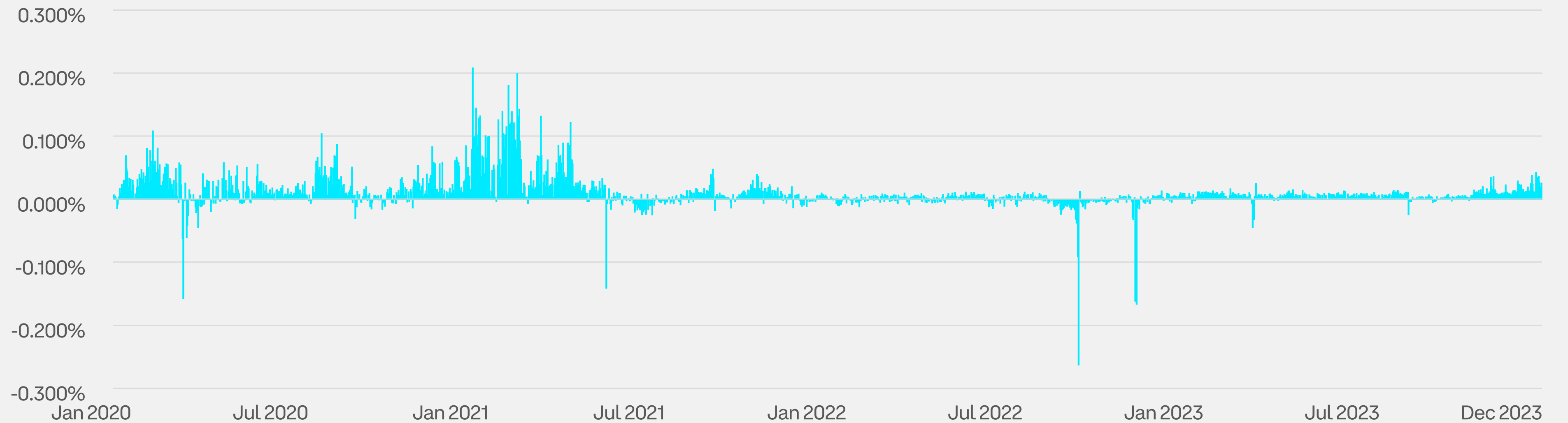
The basis in crypto markets has historically been positive most of the time. Extreme moves in the basis, both positive and negative, tend to be associated with large swings in sentiment.



Source: Glassnode

ETH Perpetual Futures Funding Rates

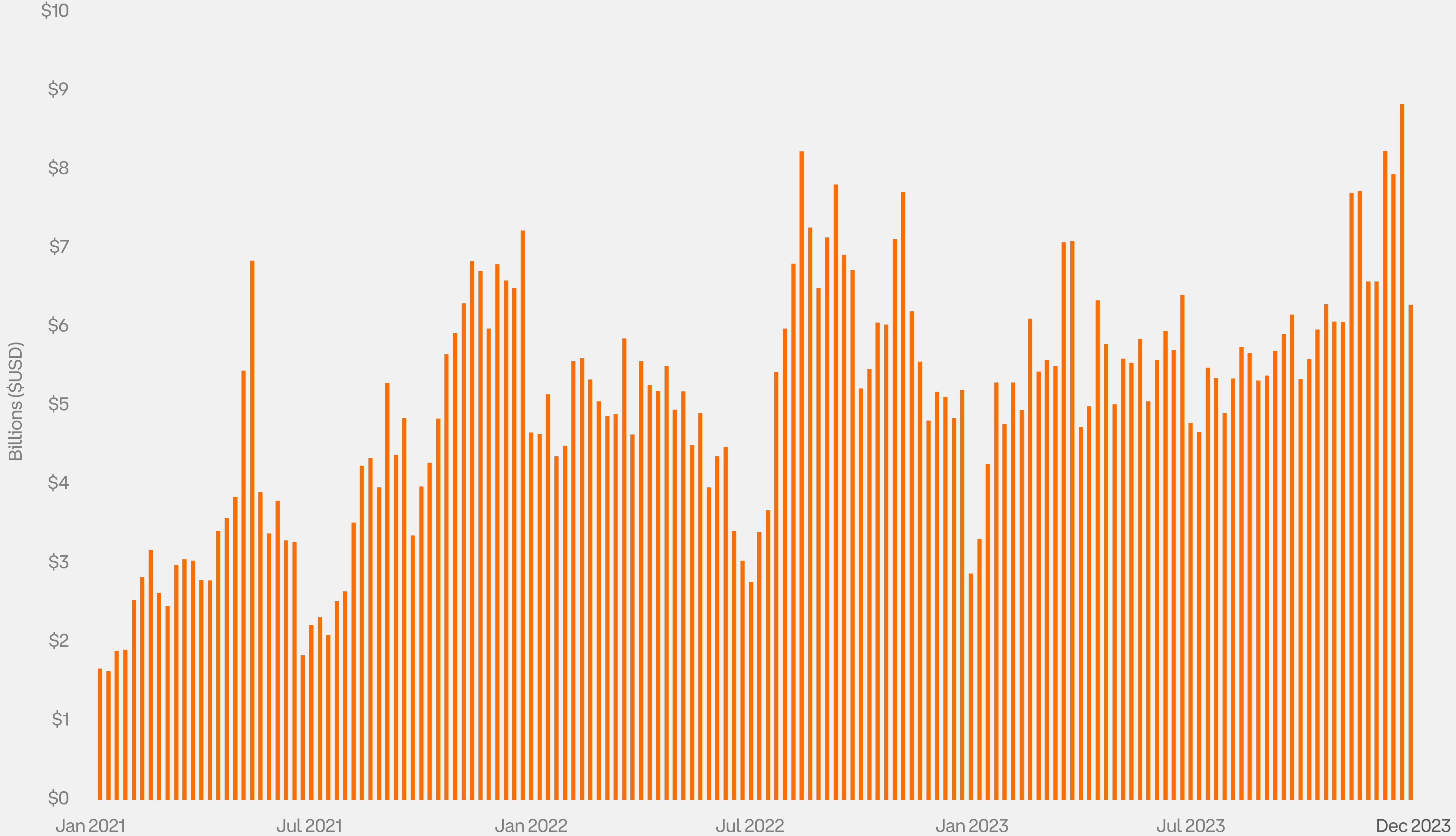
Perpetual futures (perps) do not have an expiration date, so holders do not need to roll their contracts. To prevent the price from deviating too far from spot prices, perps have a funding mechanism (the funding rate) that is periodically paid between long holders and short holders. When the funding rate is positive, longs pay shorts, and when the funding rate is negative, shorts pay longs.



Source: Glassnode

ETH Options Open Interest (Weekly)

Open interest in ETH options hit an all-time high in the fourth quarter of 2023 as market participants turned increasingly bullish on the prospects for a spot ETF and the outlook for ether in 2024.



Source: Glassnode

ETH Traditional Futures Specs

Ether futures are offered by a variety of exchanges in different sizes and denominations.

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Exchange	Size of Large ETH Contract	Size of Small ETH Contract	Trading Hours
Coinbase Derivatives Exchange	10 ETH	0.1 ETH	Sunday – Friday 6 pm – 5 pm ET
CME	50 ETH	0.1 ETH	Sunday – Friday 6 pm – 5 pm ET
Deribit	N/A	\$10 USD	24/7

ETH Upcoming Market Events

After the success of the Shapella upgrade, the ETH community is eagerly awaiting the Cancun ("Decun") upgrade, which is expected to take place in Q1 2024. Cancun will improve the scalability and security of the ethereum network, primarily through the introduction of Proto-Danksharding. Proto-Danksharding aims to make Layer 2 transactions as cheap as possible and can greatly increase the number of transactions that can be processed each second on the Ethereum network.

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