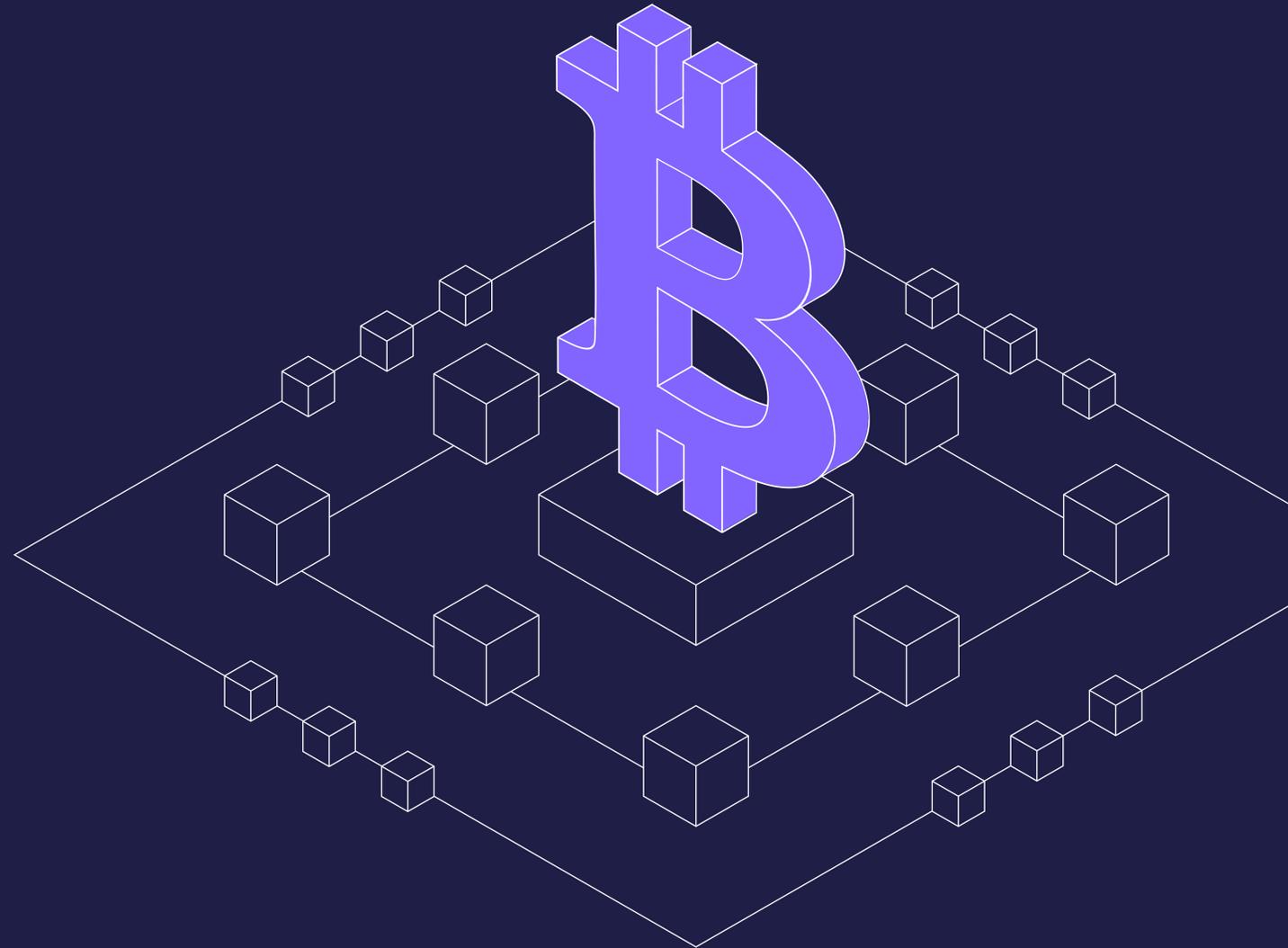


April 2025

THE BITCOIN MONTHLY

IS BITCOIN BACK?





Important Information Regarding Bitcoin

Bitcoin is a relatively new asset class, and the market for bitcoin is subject to rapid changes and uncertainty. Bitcoin is largely unregulated and bitcoin investments may be more susceptible to fraud and manipulation than more regulated investments. Bitcoin is subject to unique and substantial risks, including significant price volatility and lack of liquidity, and theft.

Bitcoin is subject to rapid price swings, including as a result of actions and statements by influencers and the media, changes in the supply of and demand for bitcoin, and other factors. There is no assurance that bitcoin will maintain its value over the long term.

ARK strongly encourages any investor considering an investment in bitcoin or any other digital asset to consult with a financial professional before investing. All statements made regarding bitcoin are strictly beliefs and points of view held by ARK and are not recommendations by ARK to buy, sell or hold bitcoin. Historical results are not indications of future results.



SECTIONS

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Market Summary

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Bitcoin Strength

03

Crosscurrents Of Inflation, Sentiment, And Taxes

04

Appendix: Glossary Of Terms



Section 01

Market Summary





Bitcoin Recovered After Tariffs Scare

Bitcoin Strength

- During April, bitcoin's price increased ~14%, surpassing its 200-day moving average at \$89,690 and its short-term holder cost basis at \$93,212.
- Spot bitcoin ETFs in the US saw 29,800 BTC in net inflows during the week of April 21, the highest since the 34,800 BTC during the week of November 18, 2024.
- Bitcoin balances at exchanges have hit their lowest levels since 2018.
- In the month of April, bitcoin outperformed the S&P 500 Index by ~13%.

Crosscurrents of Inflation, Sentiment, and Taxes

- Inflation, sentiment, and tax data sent mixed signals about the economic outlook.
- Policy shifts and business sentiment added uncertainty to near-term market conditions.

ARK'S KEY TAKEAWAYS

- During April, bitcoin's price rose ~14%.
- Its outperformance relative to equities, as represented by the S&P 500 Index, bolstered the case that bitcoin should be considered a safe-haven asset.
- Rising demand from institutional investors supported the inflows to US spot ETFs.



News Of The Month

[USDC Issuer Circle Files IPO Prospectus With SEC](#)

[Arizona House Passes Bitcoin Reserve Bill](#)

[Kraken Partners with Mastercard To Bring Bitcoin Payments](#)

[Senate Confirms Pro Bitcoin Paul Atkins As SEC Chair](#)

[Tether, SoftBank Group, And Jack Mallers Launch Twenty One, A Bitcoin-Native Company](#)

[Semler Scientific Files \\$500 Million Offering To Buy More Bitcoin](#)

[Panama City Approves Bitcoin And Crypto Payments For Taxes, Fees, And Permits](#)

[Charles Schwab CEO Says Spot Crypto Trading Will 'Likely' Launch Within 12 Months](#)

[Circle, BitGo To Apply For Bank Charters; Coinbase, Paxos May Follow Suit](#)

[Coinbase Launches the Coinbase Bitcoin Yield Fund](#)

[Morgan Stanley Reportedly Plans To Introduce Crypto Trading](#)



Despite Increased Turnover Of Once-Dormant Coins, Network Activity Seems To Favor Buyers

	Bitcoin Metrics ¹	Unit	April 2025	1M Change	1Y Change	ARK's View	Upgrade/Downgrade ³
Network Security	<u>Mining Difficulty</u>	Exahash/SEC ¹ (Thousands)	529.2	+8.3%	+39.8%	Bullish	No Change
	<u>Miner Revenue</u> (Rolling 7-Day Average)	USD (Millions)	41.4	+4.5%	+21.7%	Bullish	↑↑
Network Usage	<u>Active Owners</u> ² (Active Entities, Rolling 7-Day Average)	Thousands	203.8	+0.7%	-10.6%	Bearish	No Change
	<u>Transaction Volume</u> ² (Rolling 7-Day Moving Average)	BTC (Thousands)	101.6	+25%	+15.6%	Bullish	↑↑
Holder Behavior	<u>Long-Term-Holder Supply</u> ² (Coins Held For 155 Days+)	BTC (Millions)	14	+0.7%	+4.5%	Bullish	No Change
	<u>Locked Supply</u> ² (Illiquid Supply)	BTC (Millions)	14.3	+0.7%	+3.5%	Bullish	No Change
	<u>Time-Weighted Turnover</u> ² (Coindays Destroyed, Rolling 7-Day Median)	Coindays (Millions)	15.1	+42%	+66.5%	Bearish	↓↓

[1] For more information on these metrics and their units of account, please read the Appendix: Glossary of Terms in the Appendix of this report. [2] Data may be subject to change over time since they are entity-adjusted in real time via a machine-learning algorithm. [3] Arrows displayed in the "Upgrade/Downgrade" column convey the change in our view of that metric compared to last month. For instance, if our view changes from bearish to neutral, the arrow will be green, and so forth. One arrow denotes a 1-tier change, and two arrows denote a 2-tier change. Source: ARK Investment Management LLC, 2025. Data sourced from Glassnode. Some data may be subject to change over time since they are entity-adjusted in real time. Information as of April 30, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency.

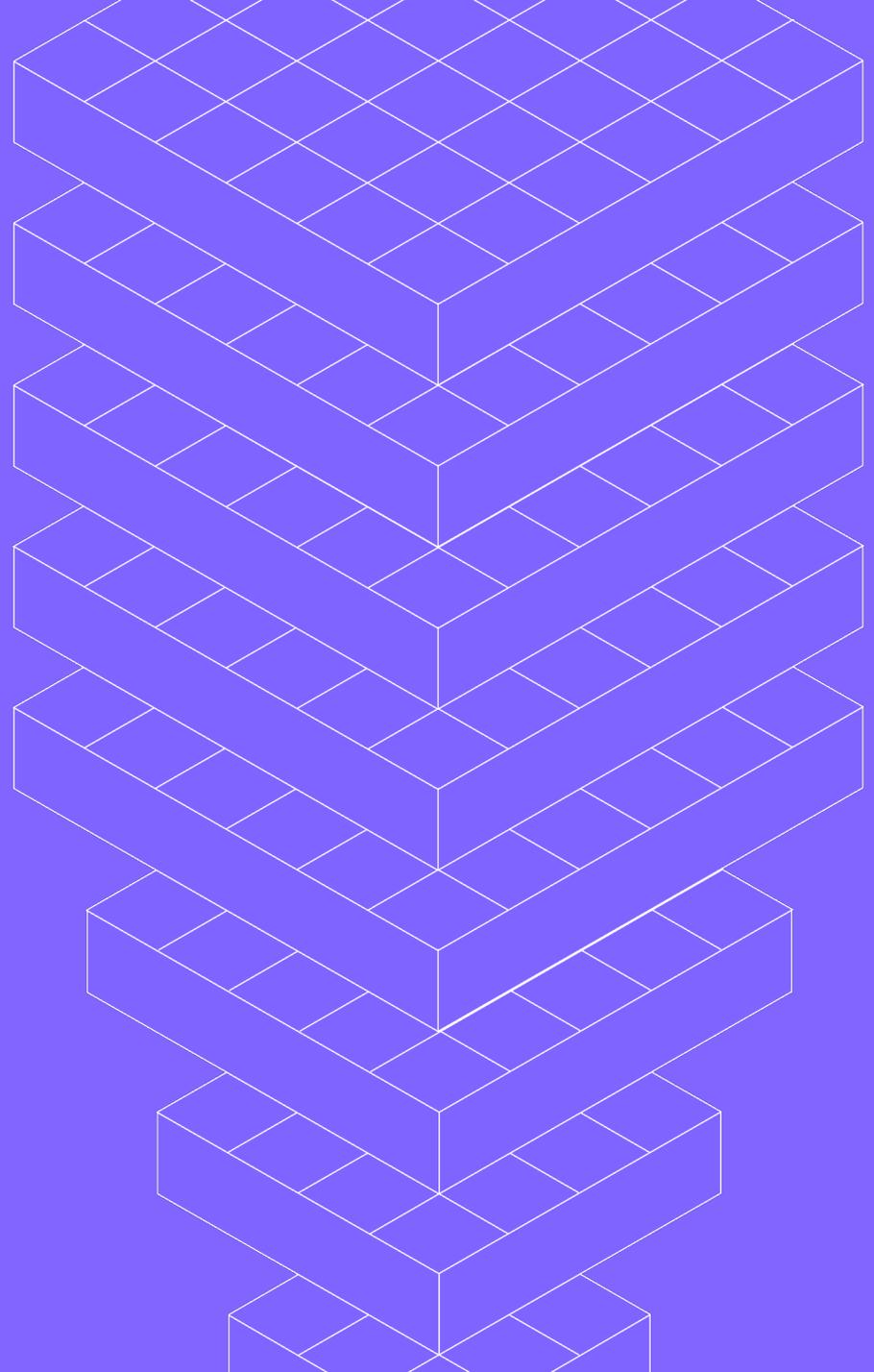


Despite Increased Upward Momentum, The Market Is Not Overheated

	Bitcoin Metrics ¹	Unit	April 2025	1M Change	1Y Change	ARK's View	Upgrade/Downgrade ³
Long-Term Valuation	<u>Market Cost Basis</u> (Realized Price)	USD	\$44,515	+1.7%	+54.3%	Bullish	No Change
	<u>Percent Supply In Profit</u>	pp	85.8	+9.5	+32.2	Neutral	No Change
Short-Term Valuation	<u>Short-Term-Holder Cost Basis²</u> (STH Realized Price)	USD	\$93,212	-1.2%	+56.2%	Bullish	No Change
	<u>Realized Market Returns²</u> (SOPR-1, Rolling 7-Day Average)	pp	10.3	+6.7	+1.9	Neutral	↓
Market Sentiment	<u>Perpetual Futures Basis</u> (Binance, Estimated)	pp	-0.05	-0.01	-0.05	Bullish	No Change
	<u>Expirational Futures Basis</u> (Quarterly, Binance, Annualized)	pp	7	+2.1	-0.6	Bullish	No Change

[1] For more information on these metrics and their units of account, please read the Appendix: Glossary of Terms in the Appendix of this report. [2] Data may be subject to change over time since they are entity-adjusted in real time via a machine-learning algorithm. [3] Arrows displayed in the "Upgrade/Downgrade" column convey the change in our view of that metric compared to last month. For instance, if our view changes from bearish to neutral, the arrow will be green, and so forth. One arrow denotes a 1-tier change, and two arrows denote a 2-tier change. Source: ARK Investment Management LLC, 2025. Data sourced from Glassnode. Some data may be subject to change over time since they are entity-adjusted in real time. The perpetual futures basis was estimated internally on the basis of data from TradingView, and it is subject to change. Information as of April 30, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency.

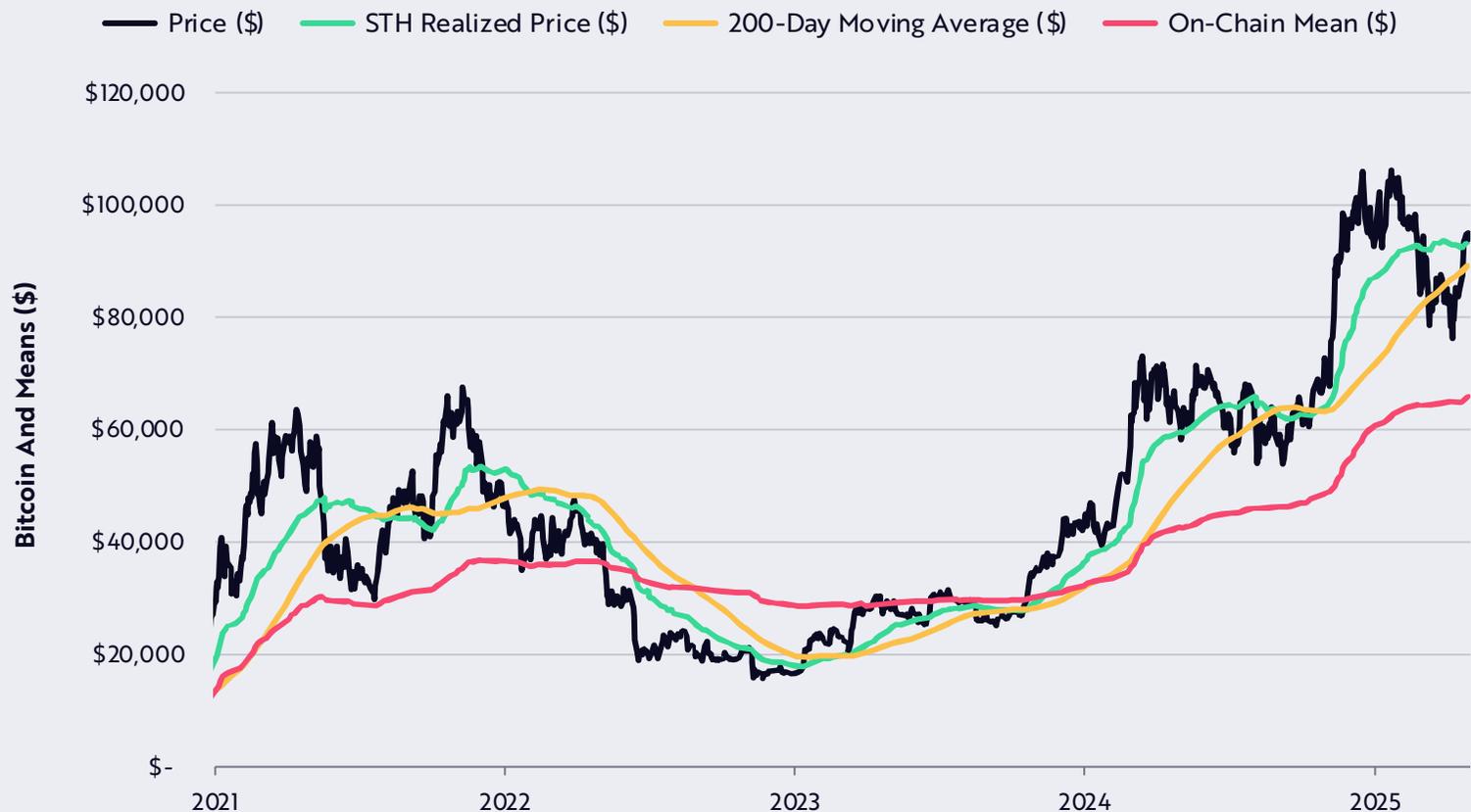
Bitcoin Strength





Bitcoin Surpassed Its 200-Day Moving Average And Short-Term-Holder Cost Basis

Bitcoin Means



ARK'S VIEW: BULLISH

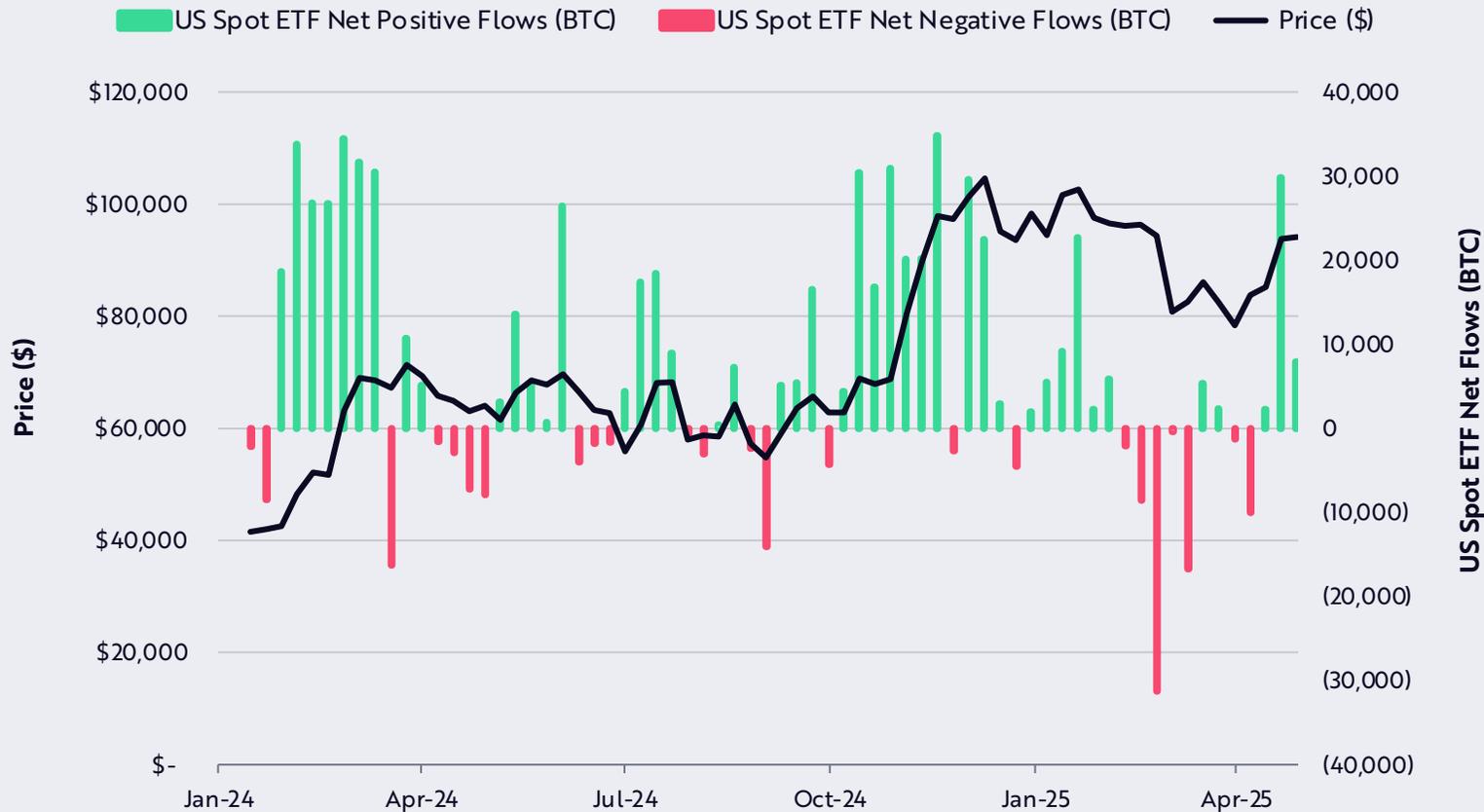
- During April, bitcoin's price increased ~14%, the highest monthly percent change since November 2024.
- Bitcoin also surpassed its 200-day moving average and its short-term-holder cost basis—which stand at \$89,690 and \$93,212, respectively.
- At month's end, bitcoin's on-chain mean was \$65,921.

Source: ARK Investment Management LLC, 2025. Chart data from Glassnode. Information as of April 30, 2025. STH realized price data may be subject to change over time since they are entity-adjusted in real time via a machine-learning algorithm. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.



US Spot ETFs Enjoyed The Largest Weekly Net Inflows Since November

Bitcoin US Spot ETF Net Flows¹ (Weekly)



ARK'S VIEW: BULLISH

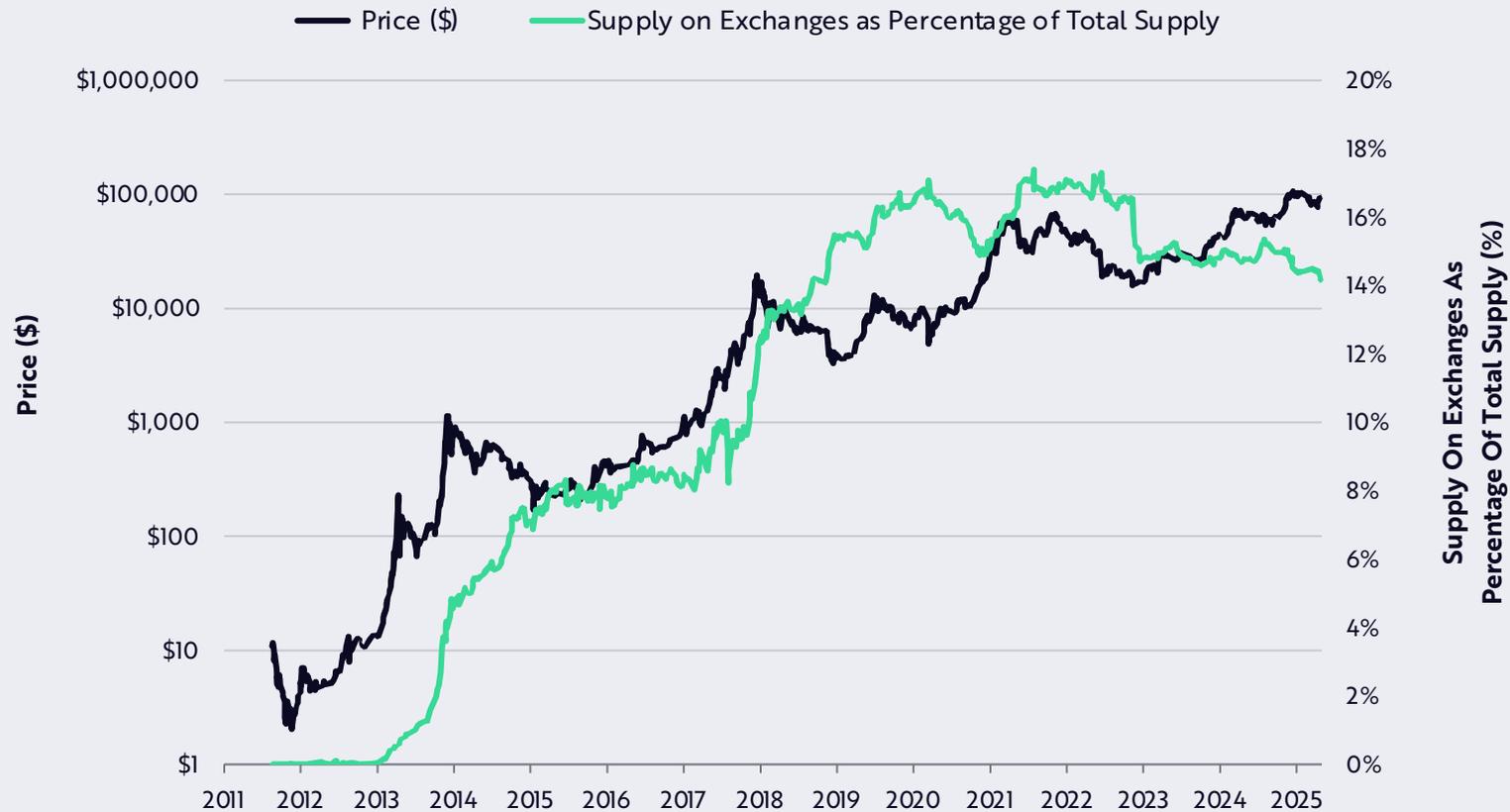
- Spot bitcoin ETFs in the US saw 29,800 BTC in net inflows the week of April 21, the highest since the 34,800 BTC inflows during the week of November 18, 2024.
- This inflow almost mirrored the 31,232 BTC net weekly outflow in February 2025.

[1] DEFI is not included. Source: ARK Investment Management LLC, 2025. Chart data from Glassnode. Information as of April 30, 2025. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.



Relative Supply On Exchanges Hit A 7-Year Low

Bitcoin Supply On Exchanges As Percentage of Total Supply



ARK'S VIEW: BULLISH

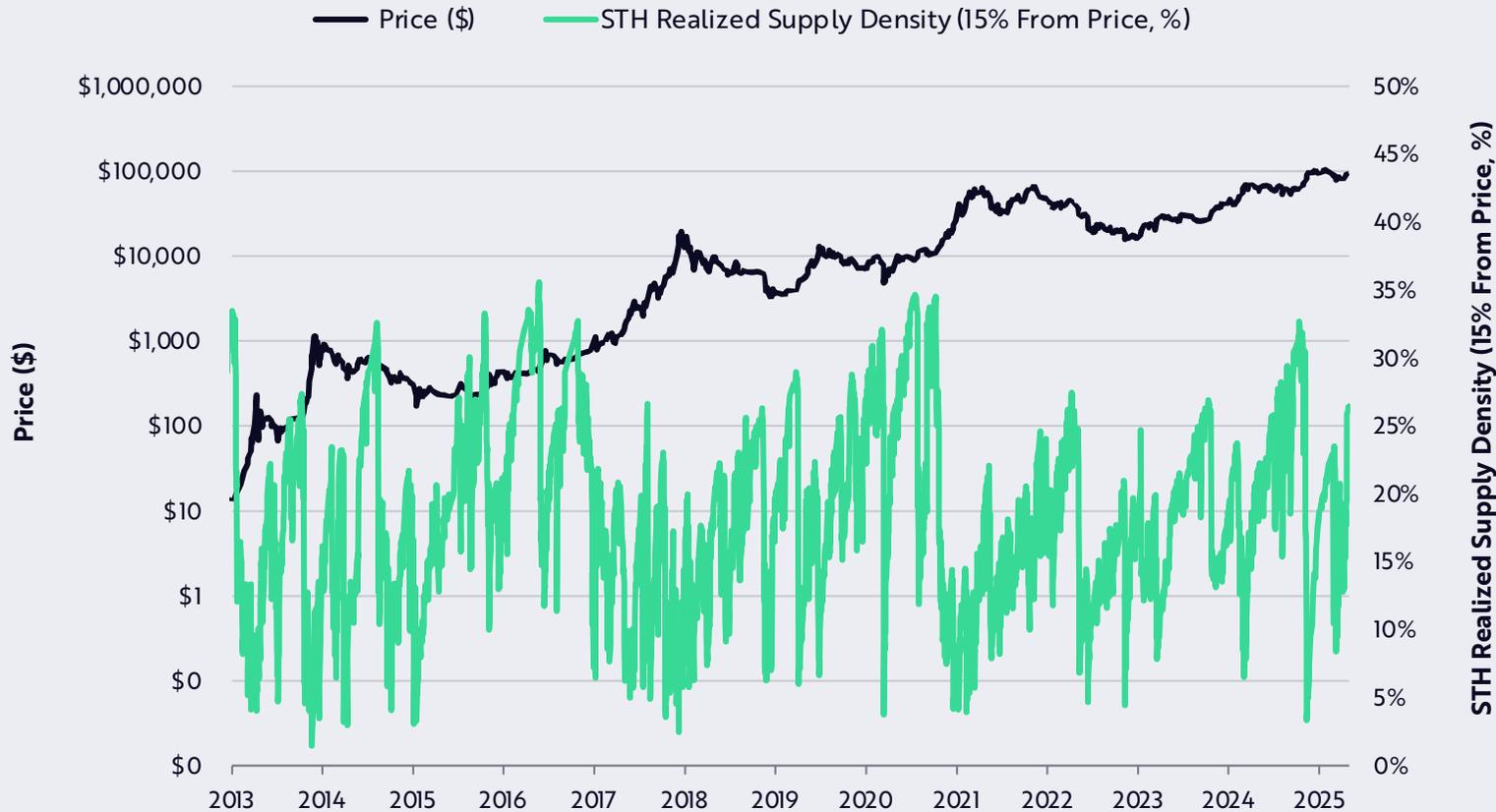
- As a percent of total supply, bitcoin balances on exchanges closed the month at 14%, the lowest since late 2018.
- The shrinking supply on exchanges suggests fewer bitcoin available for immediate sale.

Source: ARK Investment Management LLC, 2025. Chart data from Glassnode. Information as of April 30, 2025. Exchange supply data may be subject to change over time since they are entity-adjusted in real time via a machine-learning algorithm. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.



The Focus On Bitcoin's Price Movements Has Increased

Bitcoin Short-Term-Holder Realized Supply Density



ARK'S VIEW: NEUTRAL

- Realized supply density measures the concentration of short-term-holder supply—or UTXOs¹ younger than 155 days—which last moved within a 15% range from spot price.
- This metric suggests heightened interest in bitcoin price movements. Why? If volatility were to expand, more investors could be at a profit or a loss.
- Whenever this metric has increased to 25% or higher, such as at the end of April 2025, the expectation is for higher price volatility in the future.

[1] UTXO: Cryptographic ledger that tracks unspent funds from all past transactions. It is the underlying accounting system of the Bitcoin network. Source: ARK Investment Management LLC, 2025. Chart data from Glassnode. Information as of April 30, 2025. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.



Bitcoin Has Outperformed The S&P 500 By ~13% Since “Liberation Day”

BTC/SPX Price Ratio



ARK'S VIEW: BULLISH

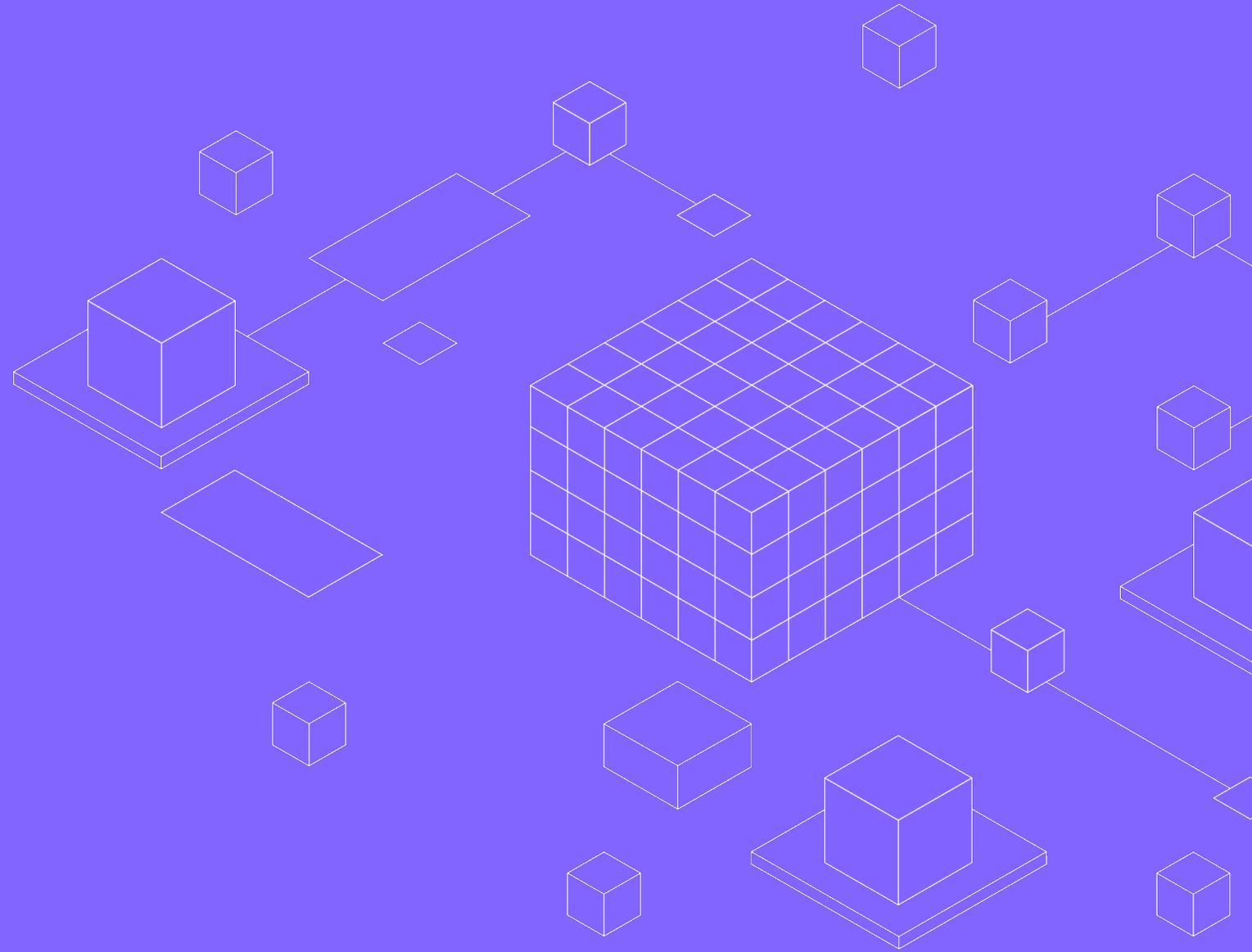
- From “Liberation Day” on April 2 to the end of April, bitcoin outperformed the S&P 500 Index by ~13%. The BTC/S&P500 price ratio is nearing its all-time high.
- This price action strengthens the view that bitcoin should be considered a safe-haven asset in the midst of global economic uncertainty.
- If the bitcoin price is a leading indicator of crypto sentiment, which we believe, this chart suggests a rebound in crypto assets during the Trump era.

Source: ARK Investment Management LLC, 2025. Chart data from TradingView. Information as of April 30, 2025. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.



Section 03

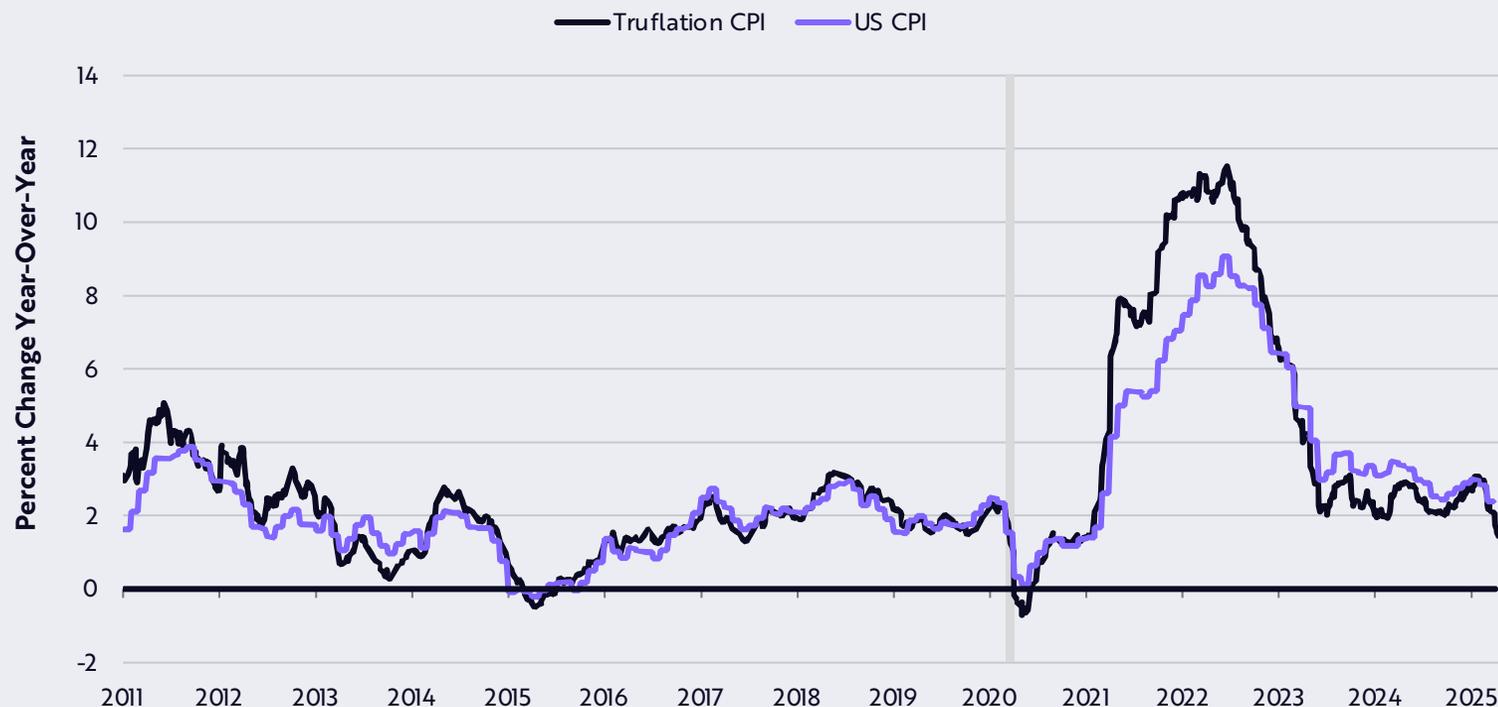
Crosscurrents Of Inflation, Sentiment, And Taxes





Truflation's Measure Of The CPI Suggests That The Labor Department's Measure Will Drop Below 2%

Truflation CPI And US CPI



Note: The Consumer Price Index (CPI) is the primary US economic metric used to track inflation, reflecting the average change in prices of a basket of consumer goods and services. It's calculated and published by the U.S. Bureau of Labor Statistics (BLS). Truflation provides an alternative inflation index to the widely used Consumer Price Index (CPI), aiming to offer more real-time and accurate data. While the CPI is updated monthly, Truflation uses daily data from a vast number of sources, including decentralized oracles and foreign sources, to provide a more frequent and potentially more accurate reflection of inflation. Source: ARK Investment Management LLC, 2025. Chart data from Truflation and Macrobond. Information as of April 30, 2025. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.

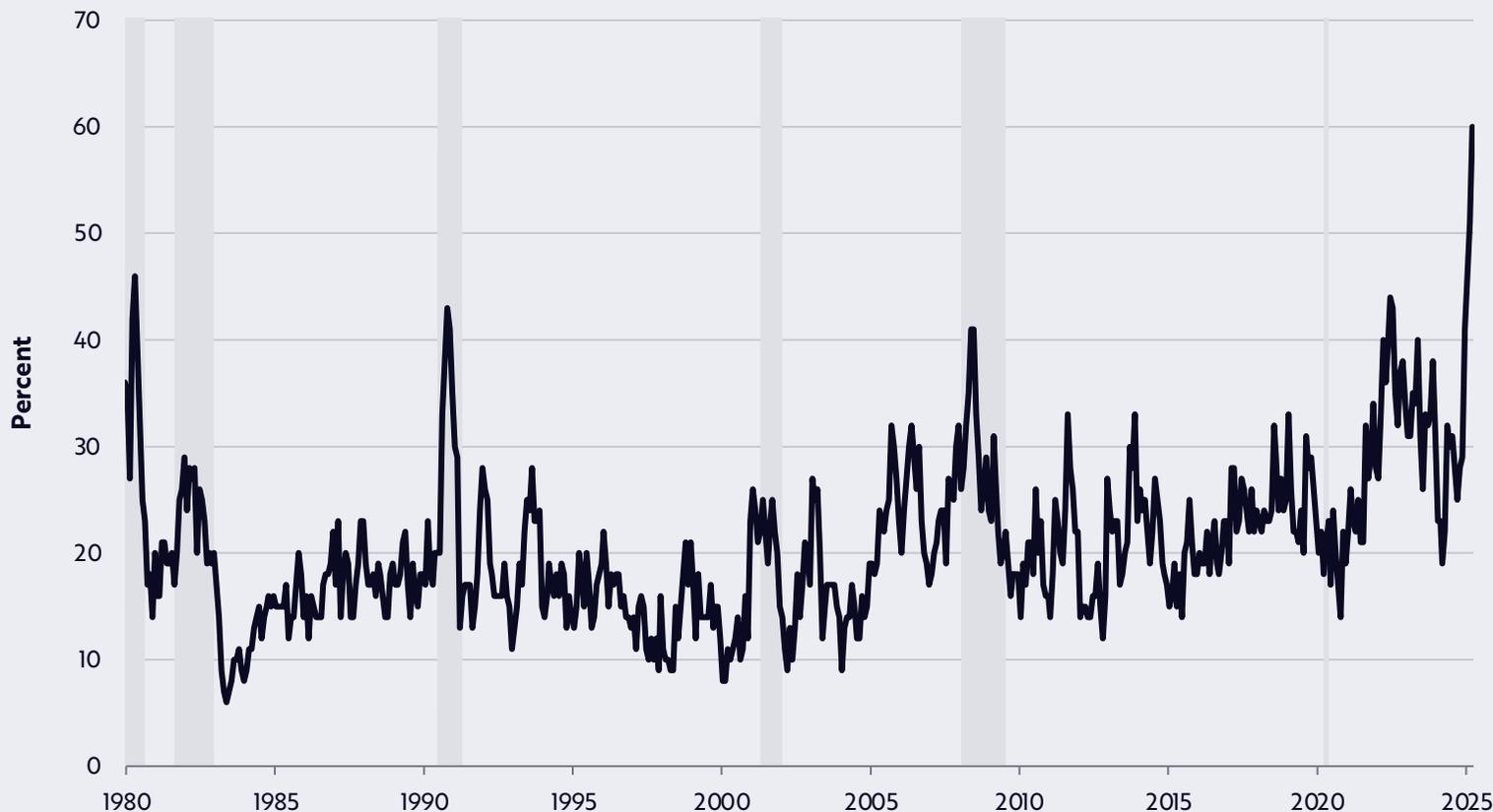
ARK'S VIEW: BULLISH

- Truflation provides an alternative inflation index to the widely used Consumer Price Index (CPI), with more real-time and accurate data.
- Innovation platforms are likely to increase productivity and lower inflation. Why? Technologies follow learning curves, which are expressed in cost declines.
- AI training costs have been dropping 75% per year, and AI inference costs 85-90% per year. Because AI is permeating every industry and company, the deflationary undercurrents are likely to gain momentum during the next few years.



Business Pessimism Spiked Amid Trade Policy Uncertainty

Expected Business Conditions In One Year: Worse (%)



Source: ARK Investment Management LLC, 2025. Chart data from University of Michigan and Macrobond. Information as of April 30, 2025. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.

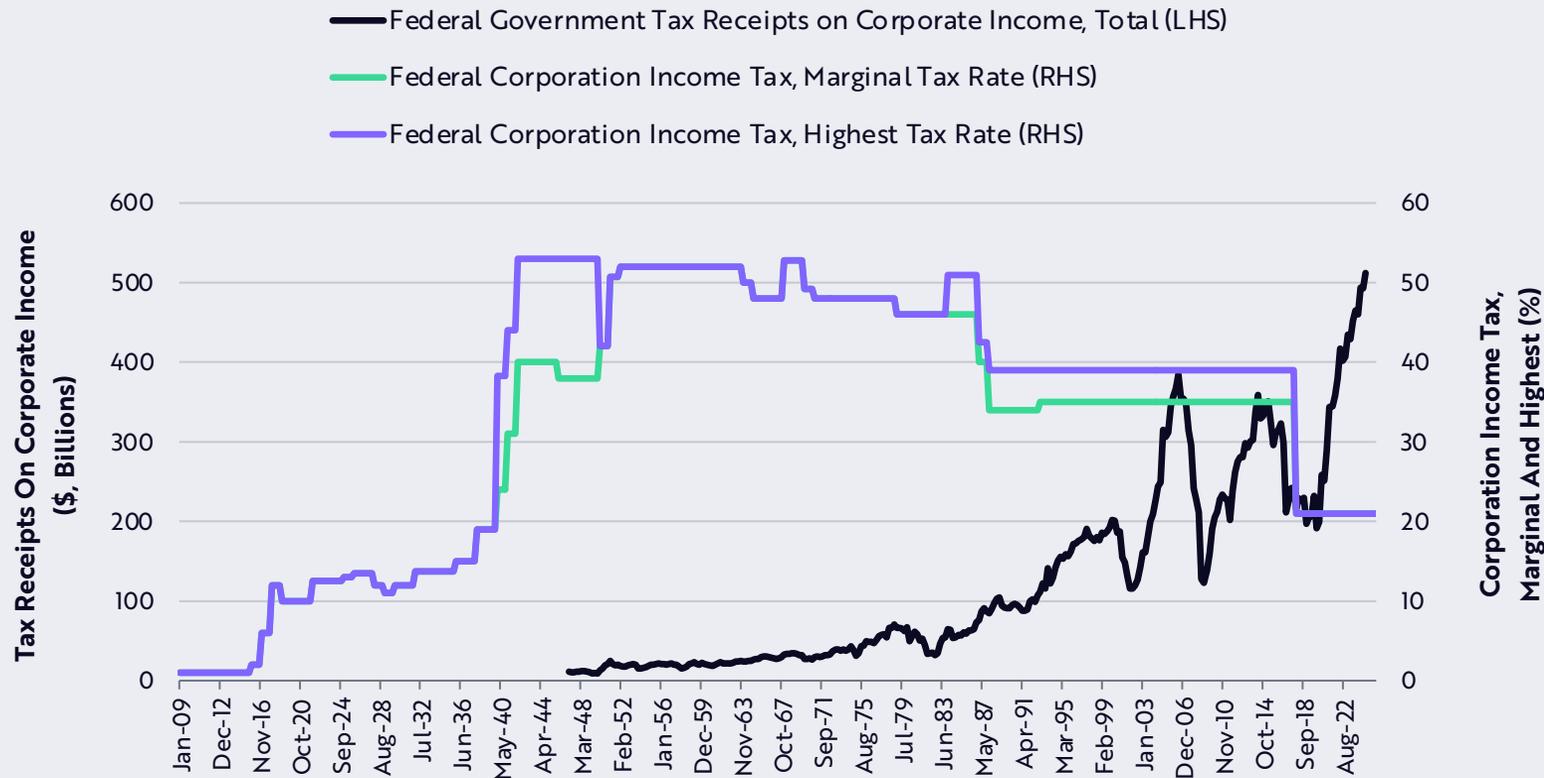
ARK'S VIEW: NEUTRAL

- This metric measures the percentage of consumers who expect business conditions to deteriorate in the next year.
- It is signaling more economic pessimism in response to the tariff turmoil.
- Elevated uncertainty often causes businesses to delay capital allocation decisions, including hiring and investment.



The Laffer Curve in Action: Incentivizing Growth Through Tax Policy

Federal Government Tax Receipts On Corporate Income & Federal Corporate Tax Rate



Source: ARK Investment Management LLC, 2025. Chart data from Macrobond. Information as of April 30, 2025. For more information on certain terms, please read our Glossary Of Terms in the Appendix of this report. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Forecasts are inherently limited and cannot be relied upon. Past performance is not indicative of future results.

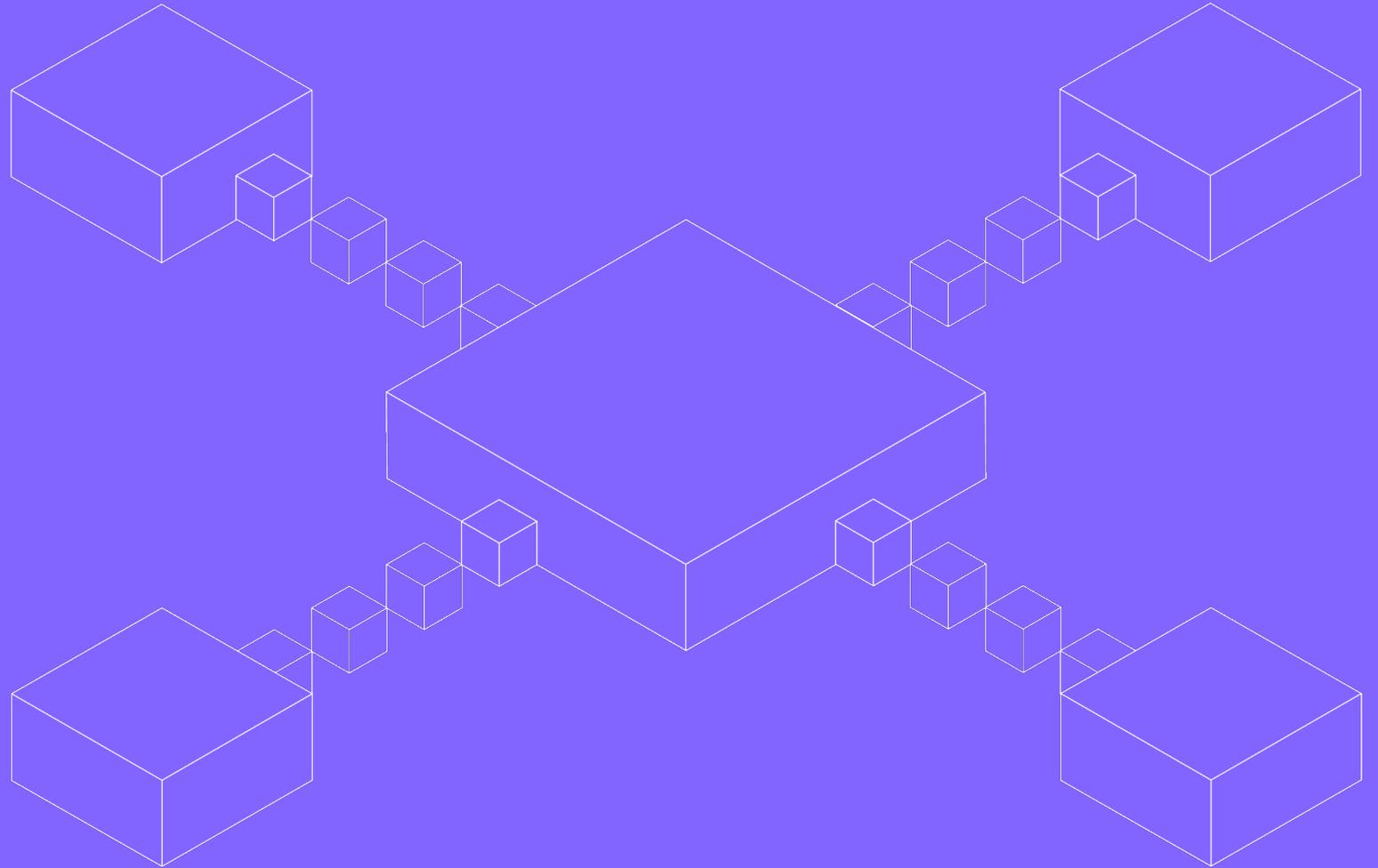
ARK'S VIEW: BEARISH

- Cutting corporate tax rates can increase government revenue, if the starting rate is on the downward-sloping side of the Laffer Curve.
- After the 2017 tax cut reduced the corporate rate to 21%, corporate tax receipts rebounded sharply, exceeding \$500 billion by 2025.
- Lower rates leave businesses with higher after-tax profits, encouraging reinvestment in growth, jobs, and innovation.
- As reinvestment drives economic expansion, the broader corporate income base can offset lower tax rates and support rising tax receipts.



Section 04

Appendix: Glossary Of Terms





Glossary Of Terms

Accumulation Addresses: Defined as those addresses that have received two or more economically meaningful transactions (non-dust transactions) and have never spent funds. Exchange and miner addresses are discarded. "Accumulation balance" refers to coins held in these addresses.

Active Owners: An individual or organization managing the same set of addresses sending and receiving funds. Also known as active entities.

AVIV Ratio: The ratio of active capitalization (market cap adjusted for dormant coins) and investor capitalization (cost basis of the bitcoin secondary market, after a miner has sold their new coins to a counterparty).

Backwardation: Describes when futures trade at a price lower than spot, denoting bullish market sentiment.

BRC-20: A token standard that enables the minting and transaction of fungible tokens via the Ordinals protocol on the Bitcoin network.

Coinblocks Created: The number of coins in the Bitcoin network times the number of blocks at any given day.

Coinblocks Destroyed: The number of coins transacted at any given day times the number of blocks each coin remained dormant.

Contango: Describes when expirational futures contracts are trading at a price higher than spot, suggesting a bearish market environment.

Consumer Price Index (CPI): Measurement that tracks how the average price of a basket of consumer goods and services changes over time. It's often used to calculate inflation.

Delta Cost Basis: An adjusted version of the market cost basis. It is calculated by subtracting the life-to-date moving average of bitcoin's price from its realized price. The measure is used to gauge the downside risk of a bear market. Also known as delta price or delta cap.

Difficulty: Computational power required to validate transactions in the network. "Exa-" and "tera-" hashes per second refer to units of account to a factor of 10^{18} and 10^{12} , respectively. Higher difficulty implies higher network security.

Exchange Supply: The number of bitcoins held in addresses controlled by exchanges.

Expirational Futures Basis: The difference between the price of spot and the price of expirational futures contracts.

Federal Funds Policy Rate: This is the interest rate at which banks lend money to each other overnight. It's set by a country's central bank (like the Federal Reserve in the U.S.) and influences other interest rates throughout the economy.

Fiat Currency: Government-issued money that is not backed by a commodity like gold or silver, but rather by the government that issues it.

Futures Basis: The difference between the price of spot and the price of a perpetual or expirational contract.

Gross Domestic Income (GDI): This is the *nominal* total income earned by a country's residents and businesses, including wages, profits, and taxes minus subsidies. It's a way to measure the economic health of a country, much like GDP. The *real* GDI adjusts for price change by expressing values at base-year prices, not current market prices.

Gross Domestic Product (GDP): This is the *nominal* total value of all goods and services produced in a country over a certain period of time, usually a year. It's another way to measure a country's economic performance. The *real* GDP adjusts for price change by expressing values at base-year prices, not current market prices.

Hash Rate: The estimated computational power mining within and providing security to the Bitcoin network.

Investor Cost Basis: An adjusted version of the market cost basis. It is calculated by subtracting the life-to-date cumulative miner revenue in USD (thermo cap) from realized price. Also known as investor price or investor cap.

Liveliness: The ratio of the sum of coindays created to the sum of coindays destroyed. Liveliness rises when old coins move and decreases when participants hold on to their bitcoin. In essence, it's the ratio of coin movement to coin dormancy in the network.

Locked Supply: The supply held by entities that have <25% probability of spending, as per their historical behavior. Also known as illiquid supply.

Long-term Holding and Holders (LTH): Related to supply last moved 155 days ago or more, the threshold at which the possibility of a bitcoin remaining unmoved increases drastically.

M2: A measure of the US money stock that includes M1 (currency and coins held by the non-bank public, checkable deposits, and travelers' checks) plus savings deposits (including money market deposit accounts), small time deposits under \$100,000, and shares in retail money market mutual funds.

Market Cost Basis: The on-chain volume-weighted average price of the market, calculated by aggregating the value of all bitcoins in circulation at the time when they last moved. Also known as realized price or realized cap.

Miner Revenue: The number of bitcoins (in USD value) block miners obtain for securing the network.



Glossary Of Terms, Continued

MVRV Ratios: Market cap divided by different on-chain cost bases of the market, such as realized cap or short-term-holder realized cap.

MVRV Z-Score: Defined as the ratio of the difference of market cap and realized cap to the cumulative, inception-to-date standard deviation of market cap.

Natural Rate of Interest: Theoretical interest rate that at which the economy is neither expanding nor contracting.

Net Realized Profit/Loss (NRPL): The difference between realized profit and realized loss, normalized by market cap.

Net Unrealized Profit/Loss (NUPL): The difference between unrealized profit and unrealized loss, normalized by market cap. It measures current value relative to the aggregate cost basis (realized cap) of the market to determine how much the network is in profit or loss.

On-Chain: Refers to metrics or economic activity occurring on the blockchain ledger of most cryptocurrencies.

On-Chain Mean: Developed collaboratively by ARK Invest and Glassnode, on-chain mean is calculated by dividing the cost basis capitalization of investors—the secondary market of the Bitcoin network—by the number of active coins in the network based on their aggregate time of dormancy proportional to total supply. Also known as “active-investor price” or “true market mean.”

Ordinals: Refers to the creation of non-fungible tokens (NFTs) in the Bitcoin network by making Inscriptions, where metadata such as images or videos are attached to individual satoshis (the smallest unit of account).

Patoshi: Entity estimated to be Satoshi Nakamoto, the creator and first miner of bitcoin.

Perpetual Futures Basis: The difference between the price of spot and the price of non-expirational futures contracts.

Puell Multiple: Miner revenue (USD) divided by the 365-day moving average of miner revenue (USD). It measures miner earnings relative to their yearly average.

Realized Returns (SOPR): The ratio reached by dividing the average price of bitcoins spent that day by the average price when they last moved. In essence, it is the ratio of price sold to price bought for the coins that moved that day. Also known as spent output ratio, or SOPR.

Regional Cumulative Price Change: The sum of month-over-month (30-day) price action during the business hours of the major financial hubs worldwide: New York for the US, London for Europe, and Hong Kong for Asia.

Seller Exhaustion Constant: A metric created by ARK to measure the convergence of two market factors: high losses denoting capitulation and low volatility denoting market exhaustion.

Short-term Holding and Holders (STH): Related to supply that moved in the last 155 days, the threshold at which the potential for a bitcoin to move again increases drastically.

SOPR: The Spent Output Profit Ratio is calculated by dividing the realized value of a spent output (in USD) divided by the dollar value at the point of its creation. In other words, it divides the aggregate price of coins sold by the aggregate price where those coins were initially bought.

Supply in Profit (Percentage): The percentage of bitcoins currently at a higher price compared to the price at which they last moved.

S&P 500 Index: Short for “The Standard and Poor’s 500,” it is a stock market index tracking the performance of 500 of the largest public companies in the United States.

Time-weighted Turnover: The number of bitcoins traded that day, multiplied by the amount of time each coin had remained dormant. Also known as coindays destroyed.

Transaction Volume: The number of bitcoins that changed hands on any given day.

Velocity-Adjusted Cost Basis: It subtracts the cumulative dollar value of coins spent over time from the general cost basis of the market (realized price). Also known as balanced price is (the smallest unit of account).



For more research on disruptive innovation visit www.ark-invest.com

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