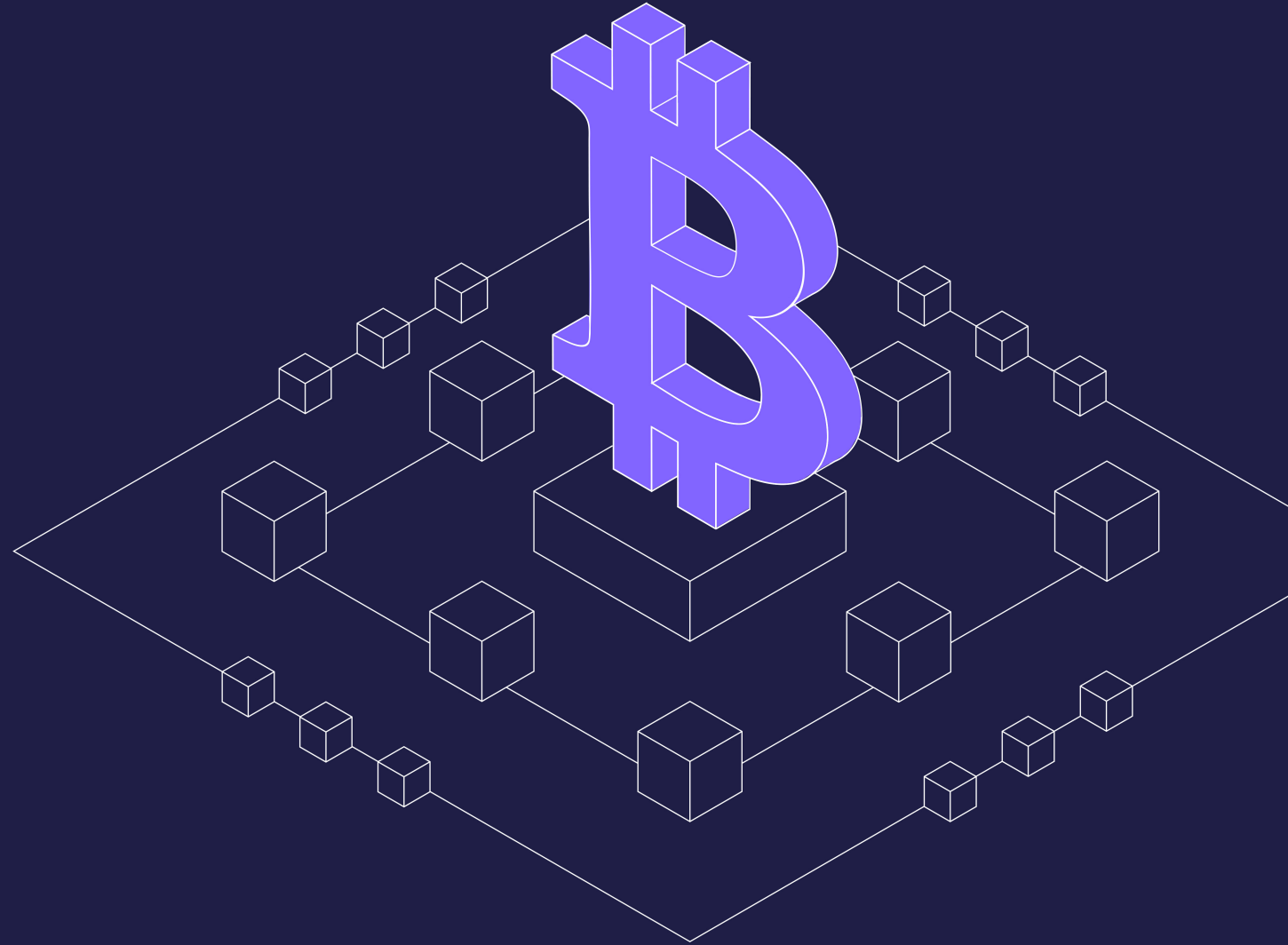




As of June 30, 2024

THE BITCOIN MONTHLY

**BITCOIN OVERSOLD AS GERMAN
GOVERNMENT SELLS**



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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.



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Section 01

Market Summary





Bitcoin Oversold As German Government Sells

Bitcoin Appears Oversold

- In June, bitcoin's price dropped 7.12% to \$62,702, subsequently dropping below \$58,770, its 200-day moving average, on July 7.
- On June 19, the German government began selling the 50,000 bitcoin it had confiscated.¹
- Based on short-term-holder realized profits/losses and miner outflows, bitcoin appears oversold.²

Macro Data Are Surprising To The Downside

- Official economic data dropped below consensus forecasts.
- Companies are losing pricing power, which is depressing margins.

ARK'S KEY TAKEAWAYS

- In June, bitcoin's price dropped 7.12% to \$62,702.
- The German government has been selling confiscated bitcoin aggressively.
- Weaker-than-anticipated economic data are pointing to a drop in interest rates.

[1] For further information on this topic, please see slide 11 of this report. [2] For further information on the metrics here assessed, please see slides 12, 13, and 14. Source: ARK Investment Management LLC, 2024. Data from [Glassnode](#) unless otherwise specified. Data valid as of July 7, 2024, and subject to change. 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.



News Of The Month

[Binance To Restrict "Unauthorized" Stablecoins In EU Starting June 30](#)

[Robinhood To Buy Crypto Exchange Bitstamp In Effort To Expand Outside The US](#)

[Trump Says He Will Advocate For Bitcoin Miners In White House](#)

[SEC's Head Of Crypto Asset And Cyber Unit Departs After Nearly Nine Years](#)

[US SEC Closes Investigation In Ethereum 2.0](#)

[Mt. Gox Trustee To Start Bitcoin, Bitcoin Cash Repayments In July](#)

[Coinbase Sues SEC, FDIC Over FOIA Requests](#)

[SEC Sues Consensus Over MetaMask Staking, Broker Allegations](#)

[German Government Moves \\$94 Million Worth Of Bitcoin To Exchanges](#)



On-Chain Health Remained Net Neutral Throughout June's Correction

	Bitcoin Metrics ¹	Unit	June 2024	1M Change	1Y Change	ARK's View	Upgrade/Downgrade ³
Network Security	<u>Mining Difficulty</u>	Exahash/sec ¹ (Thousands)	359.3	-0.8%	+65.2%	Bullish	No Change
	<u>Miner Revenue</u> (7-Day Moving Average)	USD (Millions)	26,8	-17.6%	-3.2%	Bearish	↓↓
Network Usage	<u>Active Owners</u> ² (Active Entities, 7-Day Moving Average)	Thousands	192.4	5.2%	-24.9%	Neutral	↑
	<u>Transaction Volume</u> ² (7-Day Moving Average)	BTC (Thousands)	113.3	31.8%	-18.6%	Neutral	↑
Holder Behavior	<u>Long-Term-Holder Supply</u> ² (Coins Held for 155 Days+)	BTC (Millions)	13.5	+0.1%	-2.4%	Neutral	No Change
	<u>Locked Supply</u> ² (Illiquid Supply)	BTC (Millions)	14.4	+0.1%	+2.1%	Bullish	No Change
	<u>Time-Weighted Turnover</u> ² (Coindays Destroyed, 7-Day Median)	Coindays (Millions)	15.6	97.7%	43.1%	Neutral	↓

[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, 2024. Data sourced from [Glassnode](#). Some data may be subject to change over time since they are entity-adjusted in real time. Information as of June 30, 2024. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency.

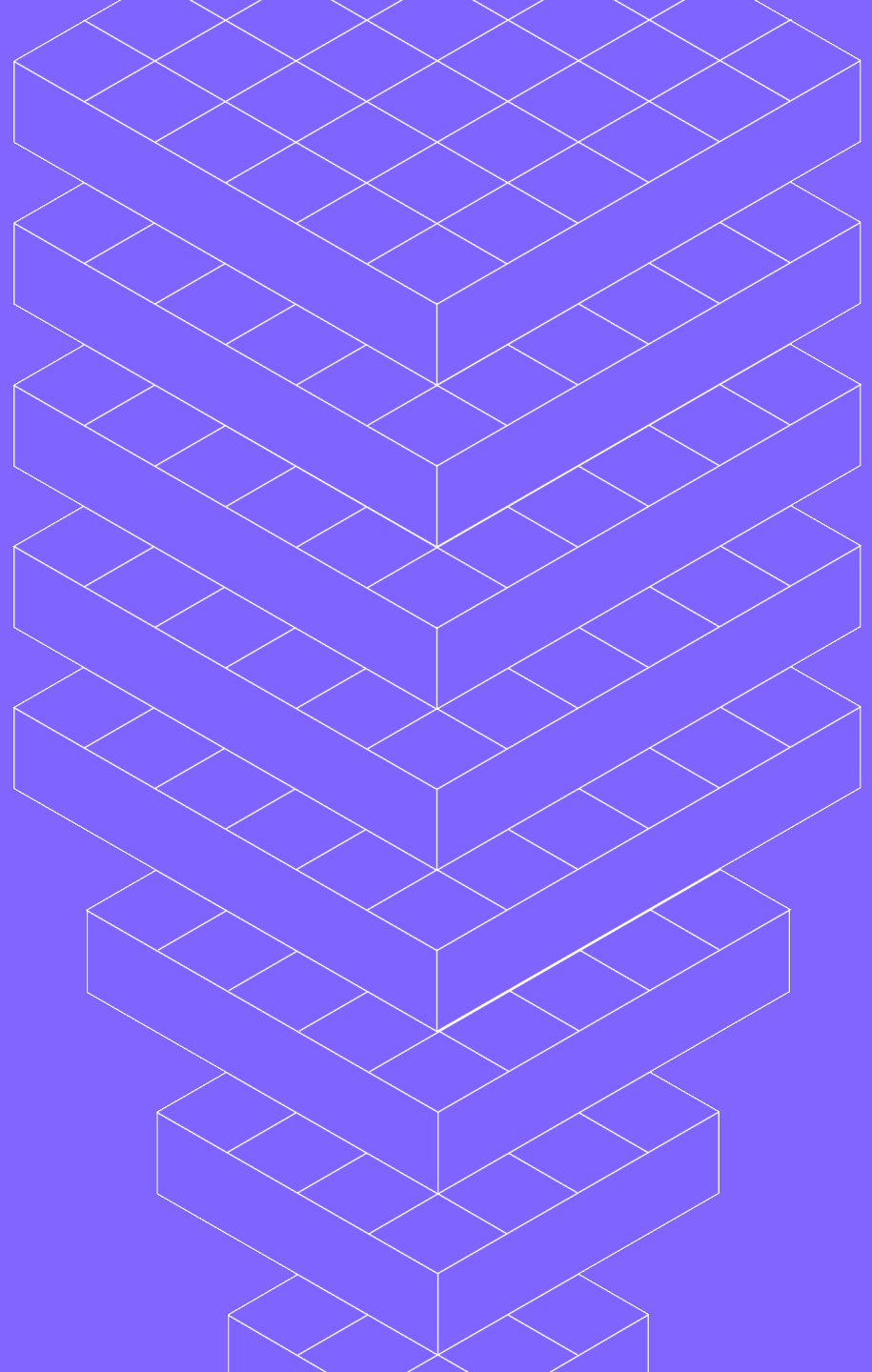


Derivatives Markets And SOPR Are Resetting To The Upside

	Bitcoin Metrics ¹	Unit	June 2024	1M Change	1Y Change	ARK's View	Upgrade/Downgrade ³
Long-Term Valuation	<u>Market Cost Basis</u> (Realized Price)	USD	\$30,691	+2.2%	+50.6%	Bullish	No Change
	<u>Percent Supply In Profit</u>	pp	82.5	-8.1	+3.7	Neutral	No Change
Short-Term Valuation	<u>Short-Term-Holder Cost Basis²</u> (STH Realized Price)	USD	\$62,569	+2.9%	+134%	Bullish	No Change
	<u>Realized Market Returns²</u> (SOPR-1, 7-day moving average)	pp	5.6%	-1.8	-5.4	Bullish	↑
Market Sentiment	<u>Perpetual Futures Basis</u> (Binance, Estimated)	pp	-0.02	-0.08	+0.02	Bullish	↑↑
	<u>Expirational Futures Basis</u> (Quarterly, All Exchanges, Annualized)	pp	11.6	-1.5	+5.7	Neutral	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, 2024. 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 June 30, 2024. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency.

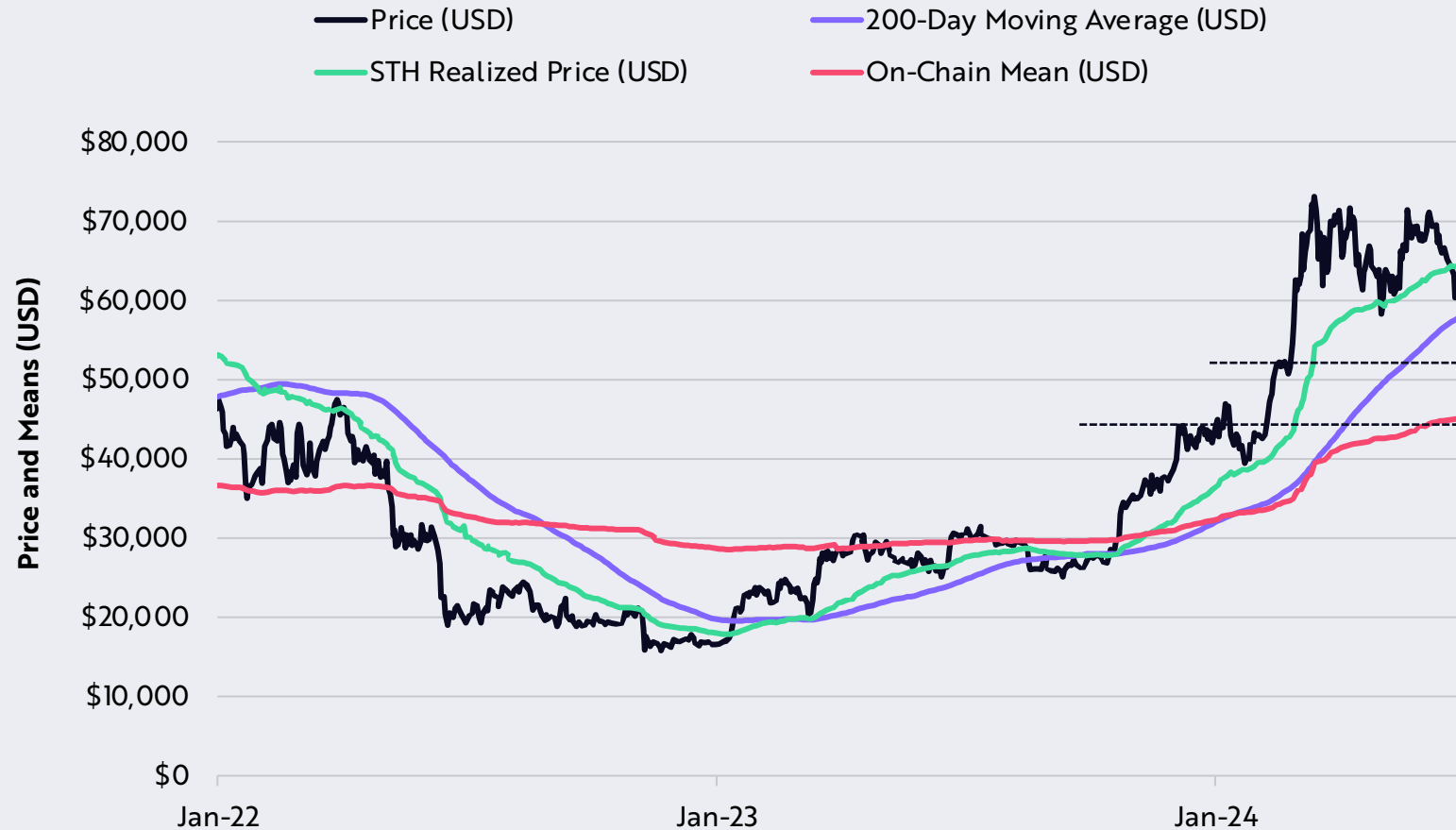
Bitcoin Oversold As German Government Sells





Bitcoin Dropped Below Its 200-Day Moving Average

Bitcoin Mean Reversion



ARK'S VIEW: NEUTRAL

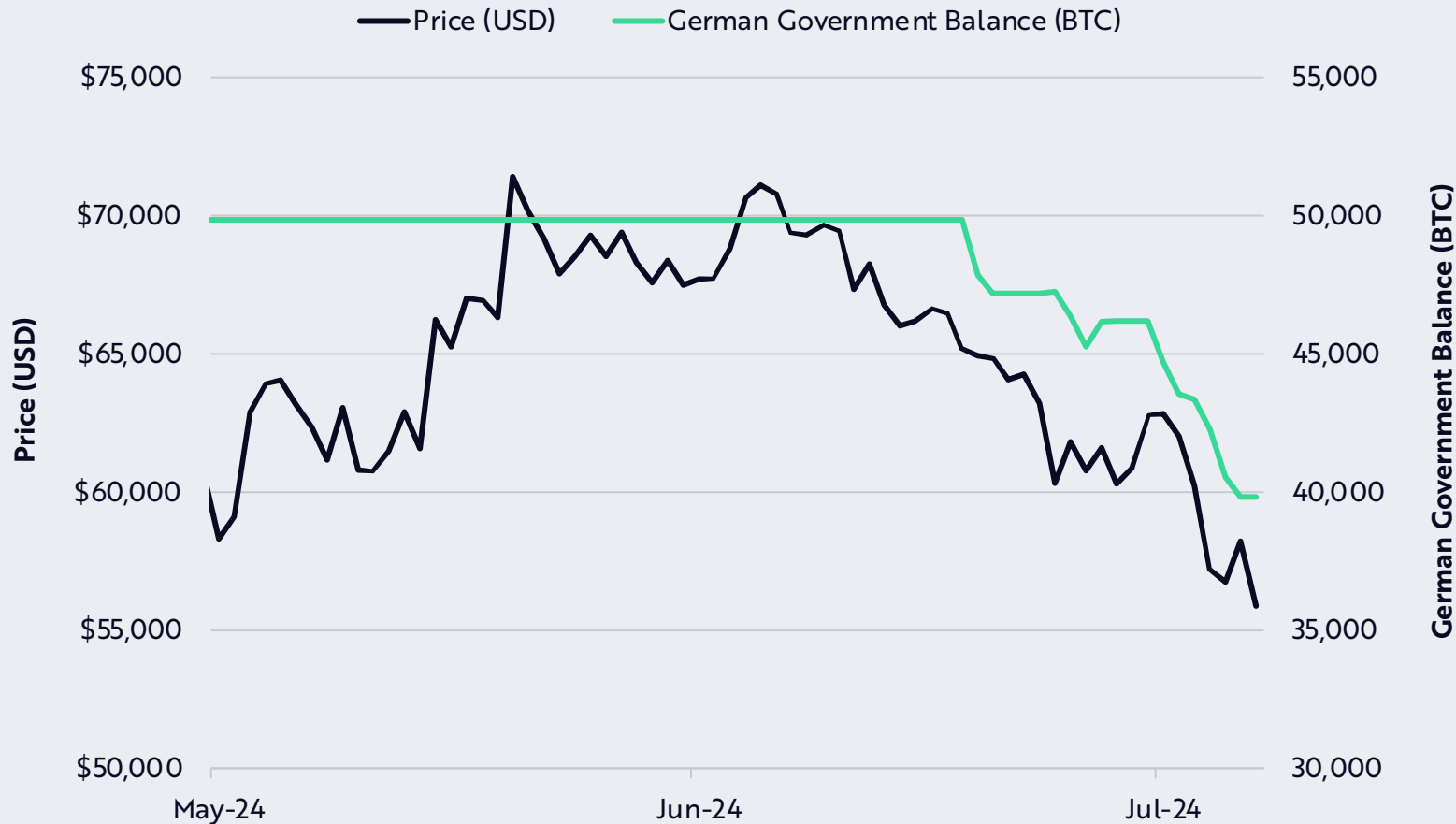
- In June, bitcoin's price dropped 7.12% to \$62,702.
- On July 7, bitcoin crossed below its 200-day moving average at \$58,770, a level from which it must recover before bullish momentum resumes.
- If it were to break from current levels, the bitcoin price would find technical support at \$52,000 and \$44,900.

Source: ARK Investment Management LLC, 2024. Chart data from [Glassnode](#). Information as of July 7, 2024. 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 German Government Sold Confiscated Bitcoin Aggressively

Bitcoin Balance Held by the German Government



ARK'S VIEW: BEARISH

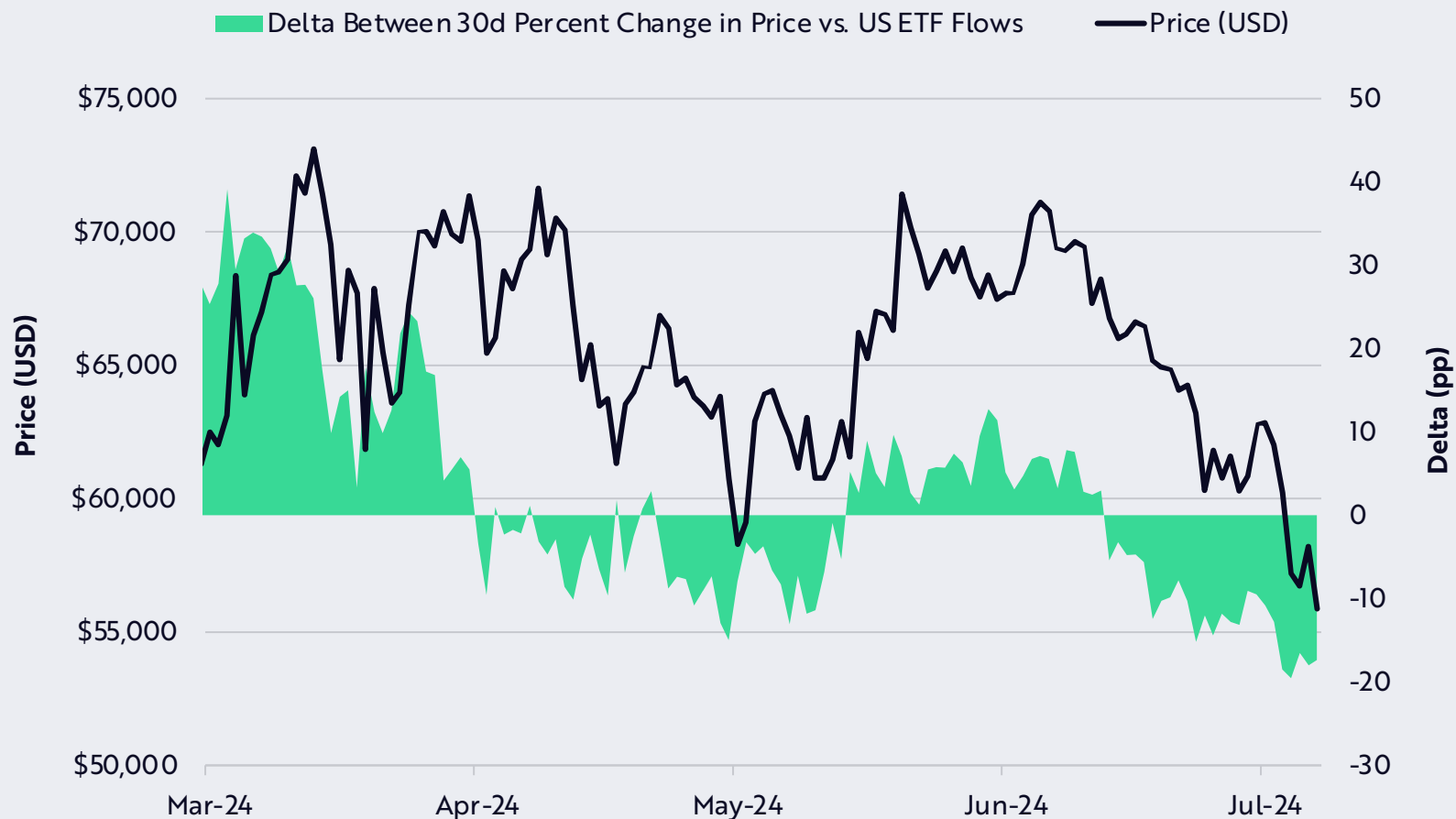
- In early 2024, the German government confiscated ~50,000 bitcoin from Movie2K, a defunct pirated films website.
- On June 19, the German government's balance started moving onto exchanges, presumably for sale.
- Combined with low liquidity during the US holiday week of July 4, the German government's sales contributed to bitcoin's price correction in June.
- As of July 9, the German government still held ~22,800 bitcoin.

Source: ARK Investment Management LLC, 2024. Chart data from [Classnode](#). Information as of July 7, 2024. 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.



Flows Suggest That ETFs Are Not Driving The Current Correction

Delta Between 30d Percent Change in Price vs. US ETF Flows



ARK'S VIEW: BULLISH

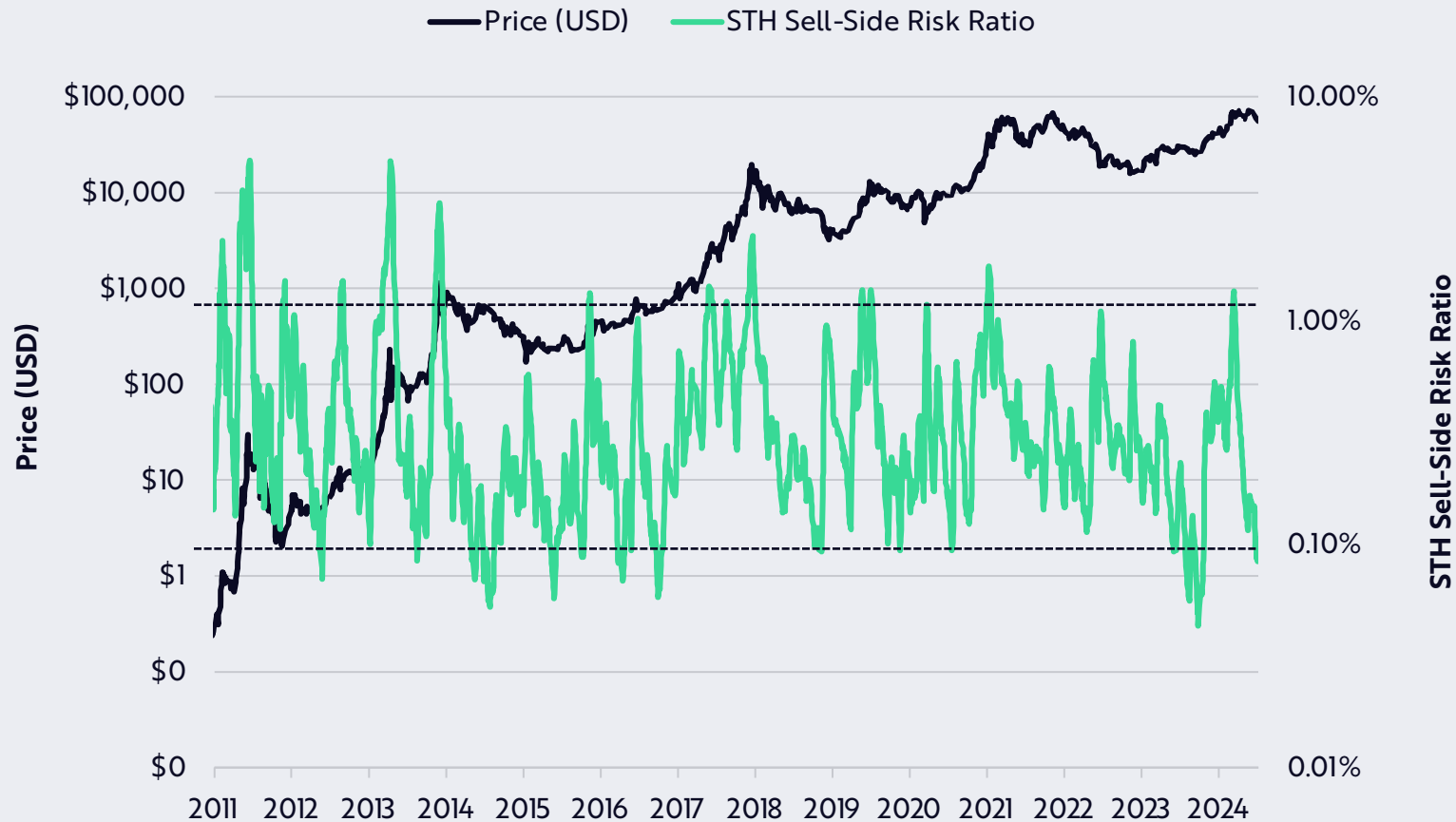
- Given the negative 17.3 percentage point difference between the percent decline in bitcoin's price and that of US ETF balances during the past 30 days, bitcoin appears oversold.
- In our view, exogenous factors, as opposed to bitcoin ETF flows, caused the price decline.
- The German government's aggressive selling of bitcoin seems to be the most likely explanation.

Source: ARK Investment Management LLC, 2024. Chart data from [Glassnode](#). Data is not inclusive of the DEFI ETF. Information as of July 7, 2024. 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.



Short-Term Holders Are Realizing Losses

Bitcoin Short-Term-Holder Sell-Side Risk Ratio



ARK'S VIEW: BULLISH

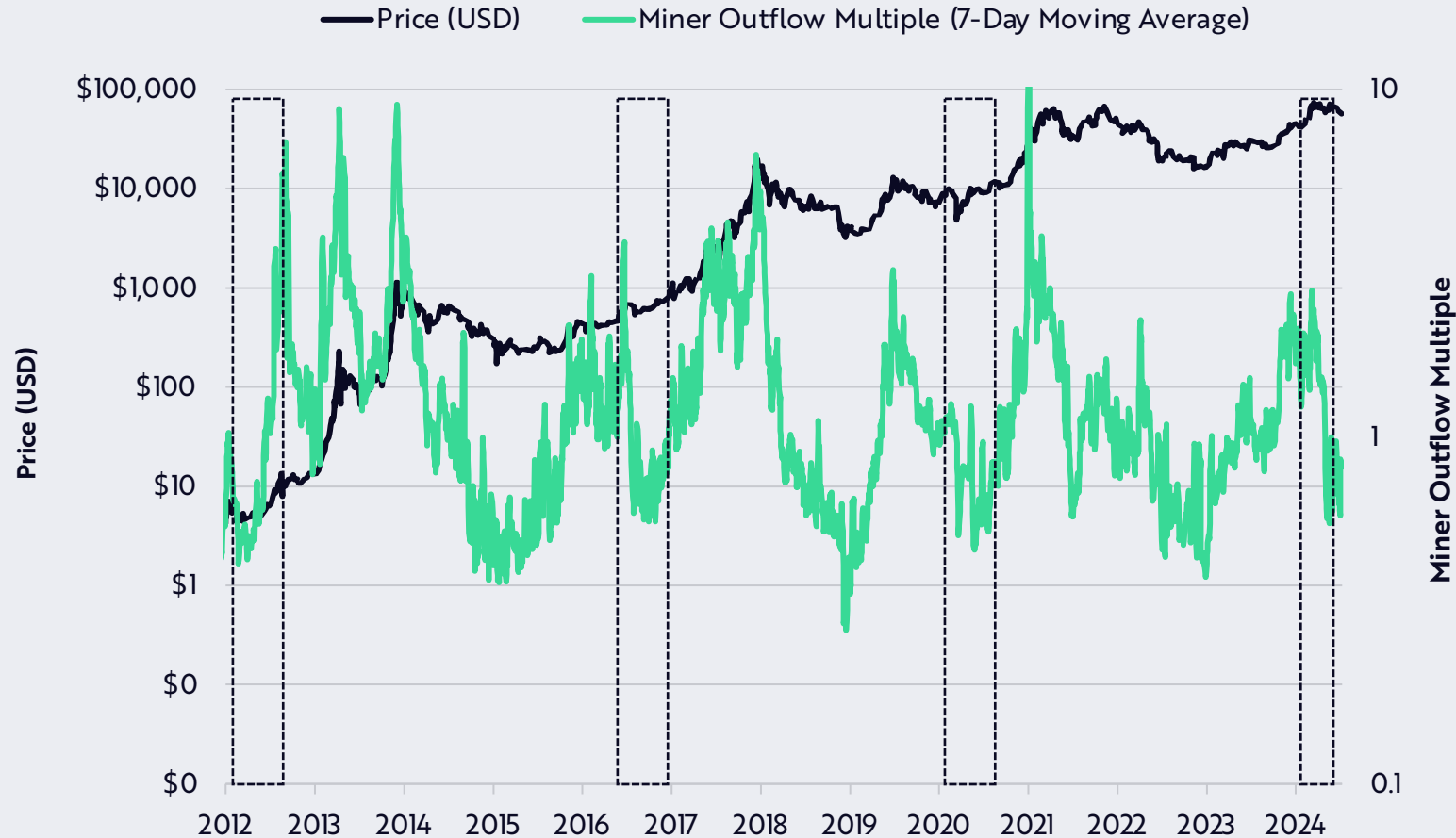
- Based on the short-term-holder sell-side risk ratio, the speculative market seems oversold.
- We calculate the sell-side risk ratio by dividing the *sum of short-term holder profits and losses realized on-chain* by the *short-term-holder cost bases*.
- The sell-side risk ratio measures the percentage of bitcoin sold at a profit relative to the percentage sold at a loss.

Source: ARK Investment Management LLC, 2024. Chart data from [Glassnode](#). Information as of July 7, 2024. 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.



Miners' Realized Profits Have Dropped To 80% Of The Historical Average

Bitcoin Miner Outflow Multiple



ARK'S VIEW: BULLISH

- In June, miner outflows mirrored those around previous halving events which cut bitcoin issuance in half.
- Current levels suggests that miners are capitulating, a harbinger of a bullish reversal.
- We calculate the miner outflow by dividing the daily outflow from unspent miner addresses by its yearly average.

Source: ARK Investment Management LLC, 2024. Chart data from Glassnode. Information as of July 7, 2024. 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

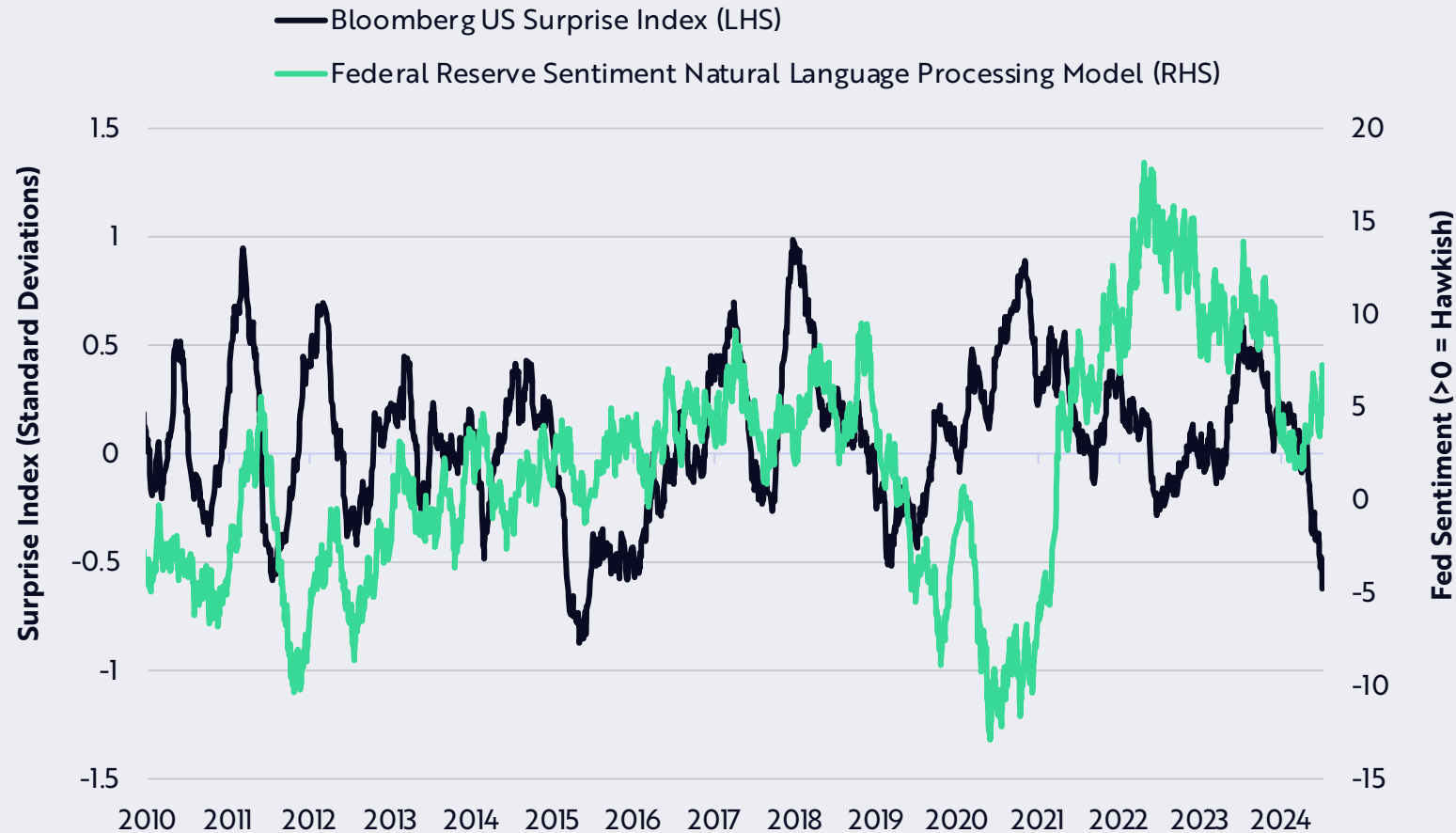
Macro Data Surprising To The Downside





The U.S. Federal Reserve's Rhetoric Seems Out Of Sync With The Data

Bloomberg's Economic Surprise Index vs Fed Sentiment



ARK'S VIEW: NEUTRAL

- Recent macroeconomic data have been weaker than consensus forecasts.
- According to the Bloomberg US Economic Surprise Index, the negative surprises are the highest in roughly ten years.
- Despite negative surprises in the data, the Fed's rhetoric has been hawkish.

Note: "Standard deviation" as used in the chart above is defined as follows: a statistical measure that quantifies the amount of variation or dispersion in a set of data values. Source: ARK Investment Management LLC, 2024. Chart data from Bloomberg. Information as of June 30, 2024. 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.



Profit Margins Are Deteriorating

US Domestic Corporate Business, After Tax Profit Margin (with CCAdj, IVA)



Note: "CCAdj" refers to Capital Consumption Adjustment. "IVA" refers to Inventory Valuation Adjustment. Source: ARK Investment Management LLC, 2024. Chart data from Macrobond. Information as of June 30, 2024. 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.

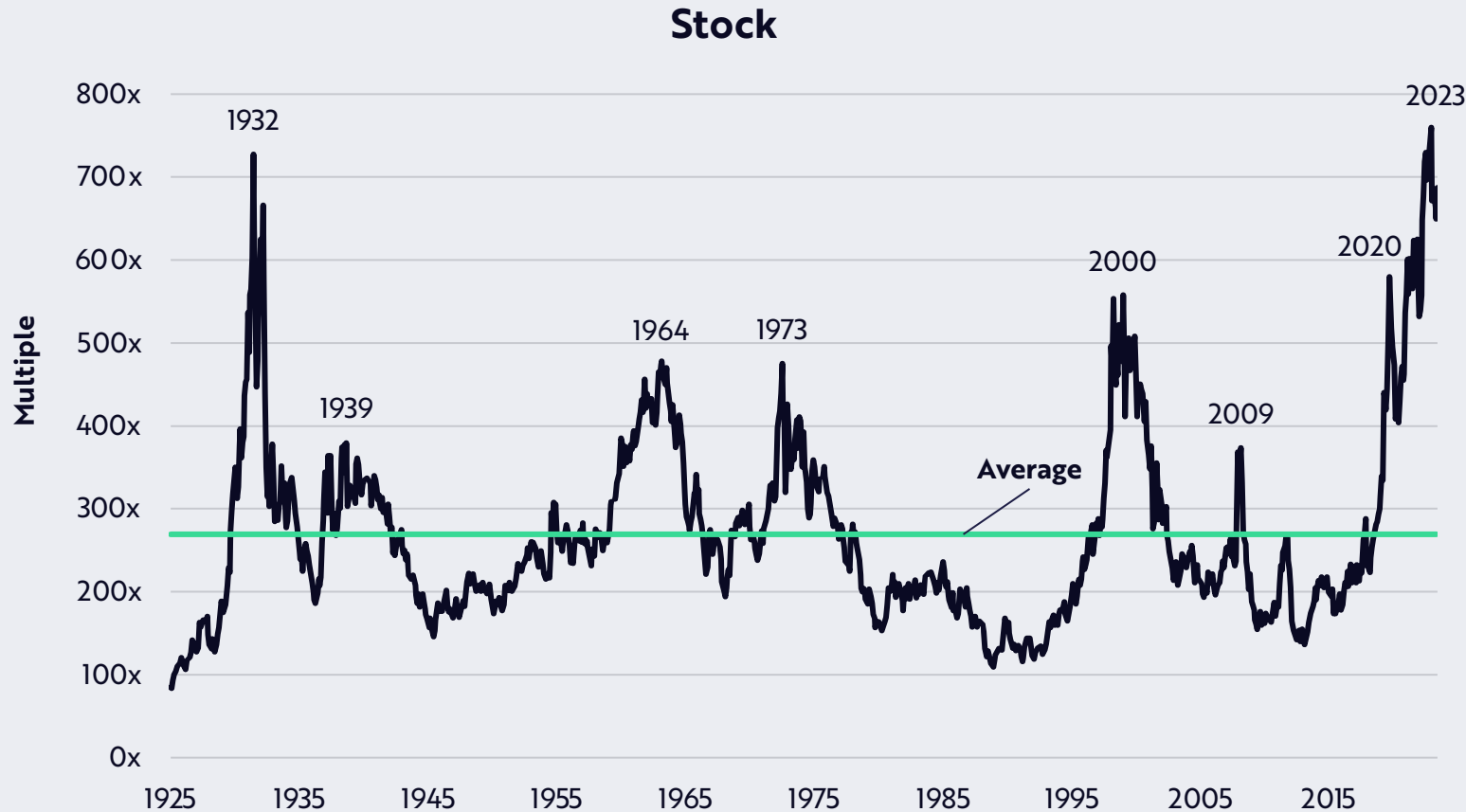
ARK'S VIEW: BEARISH

- Corporate profit margins peaked in 2021 and have been falling since then.
- Corporations are losing pricing power, which has hit profit margins.
- In many Fortune 500 companies, unit sales are declining, prompting price cuts.



Recent Equity Market Concentration Hit An All-Time High

Market Cap of Largest Stock Relative to the 75th Percentile



ARK'S VIEW: NEUTRAL

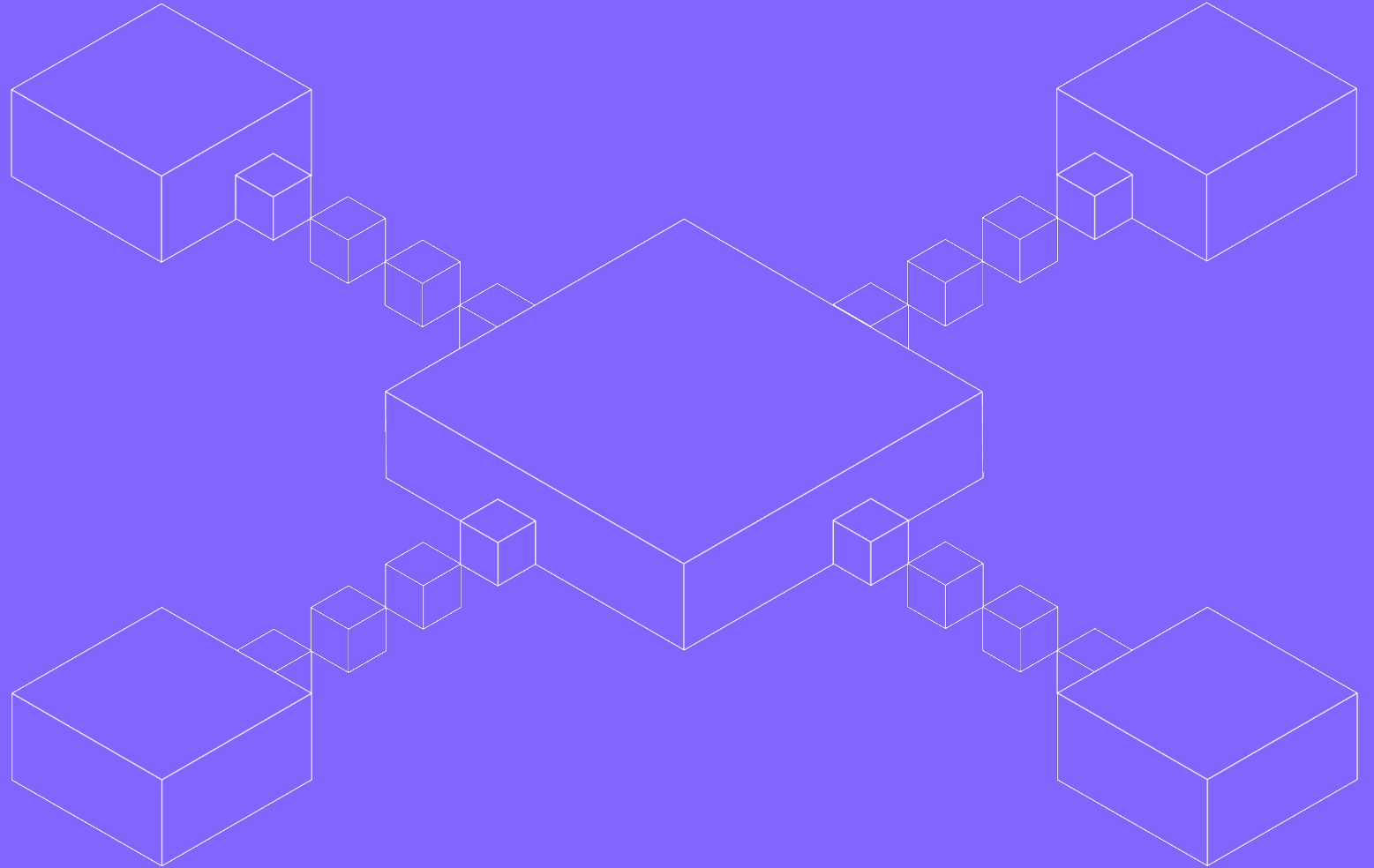
- Recently, equity market capitalization concentration hit levels not seen since the Great Depression in 1932.
- Despite a relatively benign economic environment, current equity markets are rewarding companies with large cash reserves and free cash flow.
- Historically, when market concentration breaks, small-cap stocks have outperformed large-cap stocks substantially.
- For a nuanced analysis of market concentration peaks, please see Cathie Wood's new Letter To Investors.¹

[1] Wood, C. 2024. "What We Do: A Letter To Investors From Cathie Wood." ARK Investment Management LLC. Source: ARK Investment Management LLC, 2024. Chart data from Macrobond. Information as of June 30, 2024. 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 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.

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.

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.

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



Glossary Of Terms, Continued

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.

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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Please note, companies that ARK believes are capitalizing on disruptive innovation and developing technologies to displace older technologies or create new markets may not in fact do so and/or may face political or legal attacks from competitors, industry groups, or local and national governments.

ARK aims to educate investors and to size the potential opportunity of Disruptive Innovation, noting that risks and uncertainties may impact our projections and research models. Investors should use the content presented for informational purposes only, and be aware of market risk, disruptive innovation risk, regulatory risk, and risks related to Deep Learning, Digital Wallets, Battery Technology, Autonomous Technologies, Drones, DNA Sequencing, CRISPR, Robotics, 3D Printing, Bitcoin, Blockchain Technology, etc. **Cryptocurrency Risk.** Cryptocurrencies (also referred to as "virtual currencies" and "digital currencies") are digital assets designed to act as a medium of exchange. Cryptocurrency is an emerging asset class. There are thousands of cryptocurrencies, the most well-known of which is bitcoin. Cryptocurrency generally operates without central authority (such as a bank) and is not backed by any government. Cryptocurrency is not legal tender. Federal, state and/or foreign governments may restrict the use and exchange of cryptocurrency, and regulation in the U.S. is still developing. The market price of bitcoin and other cryptocurrencies have been subject to extreme fluctuations. Similar to fiat currencies (i.e., a currency that is backed by a central bank or a national, supra-national or quasi-national organization), cryptocurrencies are susceptible to theft, loss and destruction. Cryptocurrency exchanges and other trading venues on which cryptocurrencies trade are relatively new and, in most cases, largely unregulated and may therefore be more exposed to fraud and failure than established, regulated exchanges for securities, derivatives and other currencies. Cryptocurrency exchanges may stop operating or permanently shut down due to fraud, technical glitches, hackers or malware, which may also affect the price of cryptocurrencies. **Cryptocurrency Tax Risk.** Many significant aspects of the U.S. federal income tax treatment of investments in bitcoin and other cryptocurrencies are uncertain and still evolving.

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