



As of May 31, 2022

THE BITCOIN MONTHLY



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Please read risk disclosure carefully.



→ Aim for a cross-sector understanding of technology and combine top-down and bottom-up research.

→ Aim to understand the regulatory, market, sector, and company risks. (See Risk and Disclosure Page)



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Section 1

Bitcoin Market Summary






Bitcoin Market Summary | May 2022


ARK'S KEY TAKEAWAYS

1. Bitcoin closed the month of May down 17.2%, declining from \$38,480 to \$31,835.
2. Bitcoin still faces an uncertain macro environment, as the global economy shows signs of a recession.
3. Terra blowup marks one of the largest fiascos in crypto market history, sending a warning to crypto markets.
4. Bitcoin's on-chain fundamentals remain strong, as short-term holders capitulate.

Macro

ARK's View: Bearish


 As the latest GDP reading¹ falls short of expectations, the global economy is showing signs of a recession, calling into question the Fed's strategy.


 Bitcoin continues to witness record-high correlations against weak equities.


On-Chain Activity

ARK's View: Neutral

 Bitcoin's overall network activity remains healthy.


 We believe short-term holders have capitulated, while the market as a whole is still in profit.


 Centralized exchanges experienced record bitcoin inflows.


 Bitcoin's supply unmoved in over a year reaches an all-time high of 65.7%.

Market Sentiment

ARK's View: Bullish

 High levels of open interest in perpetual and expirational futures suggest further market volatility.

 Perpetual futures continue to trade at a healthy discount to spot.

 The 3-month expirational futures (annualized) continue to trade at healthy, historically low levels of contango.

[1] As per FRED: <https://fred.stlouisfed.org/series/GDP>

Source: ARK Investment Management, LLC, 2022. Bitcoin data from [Glassnode](#) unless otherwise specified. Data valid as of May 31, 2022, and subject to change. For more information on certain terms on page, please read our Appendix: Glossary of Terms on page 24 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.



News of the Month

- [Terra Blow Up Sends A Warning To Crypto Markets](#)
- [FTX's Sam Bankman-Fried takes a 7.6% stake in Robinhood](#)
- [JPMorgan Replaces Real Estate With Crypto As Its Preferred Alternative Asset](#)
- [Coinbase becomes the first crypto company to enter the Fortune 500](#)
- [David Marcus unveils new startup focused on Bitcoin](#)
- [Everyday Bitcoin usage in El Salvador remains low despite government push, US academic study finds](#)
- [El Salvador announces new purchase of 500 BTC](#)
- [Block details expanded Bitcoin efforts at 2022 Investor Day](#)
- [Emirates Airline to accept bitcoin as payment method](#)
- [France approves Binance to operate digital asset trading services](#)
- [Block reports \\$1.73 billion in bitcoin sales via Cash App during Q1 2022](#)
- [Court orders BitMEX co-founders pay a total of \\$30 million in CFTC civil case](#)
- [Argentina's central bank blocks financial institutions from offering crypto](#)
- [Australia's first Bitcoin and Ethereum ETFs launched](#)
- [Nigeria's markets regulator publishes set of rules for digital assets](#)
- [a16z announces \\$4.5 billion fund for crypto and blockchain startups](#)
- [Do Kwon's plan to rebirth the Terra blockchain gets approved](#)



Section 2

Bitcoin Sells Off Amidst Continued Macro Uncertainty





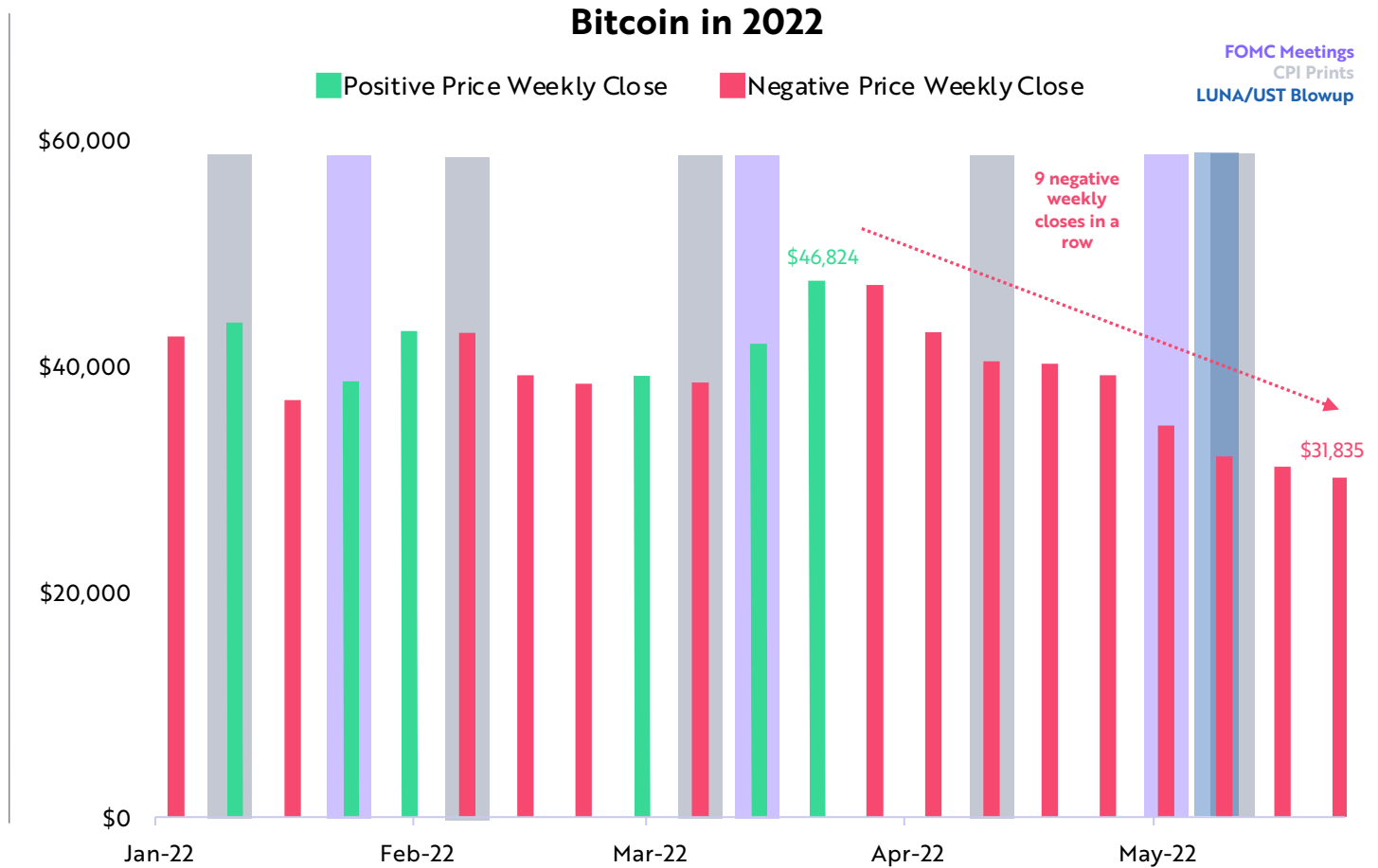
Bitcoin Prints Nine Consecutive Weekly Declines For The First Time In Its History

ARK's View: Neutral

Bitcoin closed the month down 17.2%, printing its ninth consecutive negative weekly decline for the first time in history, suggesting a possible oversold condition.

Bitcoin's selloff was driven mainly by the collapse of the Terra blockchain and continued Fed hawkishness amidst higher-than-expected inflation prints.

Bitcoin is down 57% since reaching an all-time high in November 2021. For perspective, the average peak-to-trough drawdown during previous bear markets stands at 76%.



Source: ARK Investment Management, LLC, 2022. Data sourced from [Glassnode](#). Information as of May 31, 2022. 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.



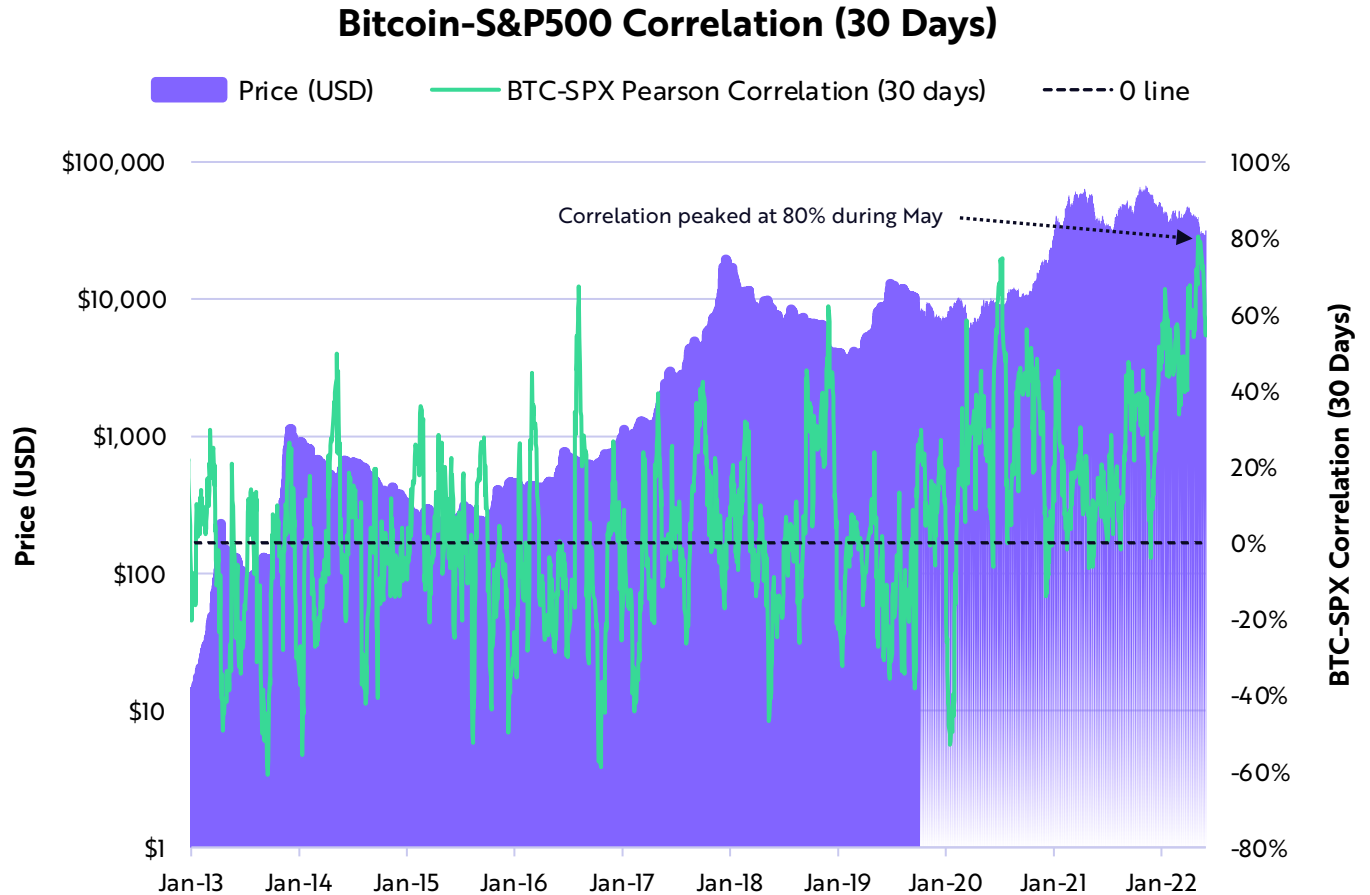
Bitcoin's Correlation With The S&P 500 Reaches An All-Time High

ARK's View: Neutral

Bitcoin's correlation with the S&P 500 reached an all-time high of 80% in May.

Bitcoin's high correlation with equities continues to suggest that market participants view bitcoin as a risk-on asset.

Based on fundamentals, we believe bitcoin and most equities should not be highly correlated, highlighting a potentially significant market inefficiency.



Source: ARK Investment Management, LLC, 2022. Correlation data sourced from [Coin Metrics](#). Bitcoin price data sourced from [Glassnode](#). Information as of May 31, 2022. 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.

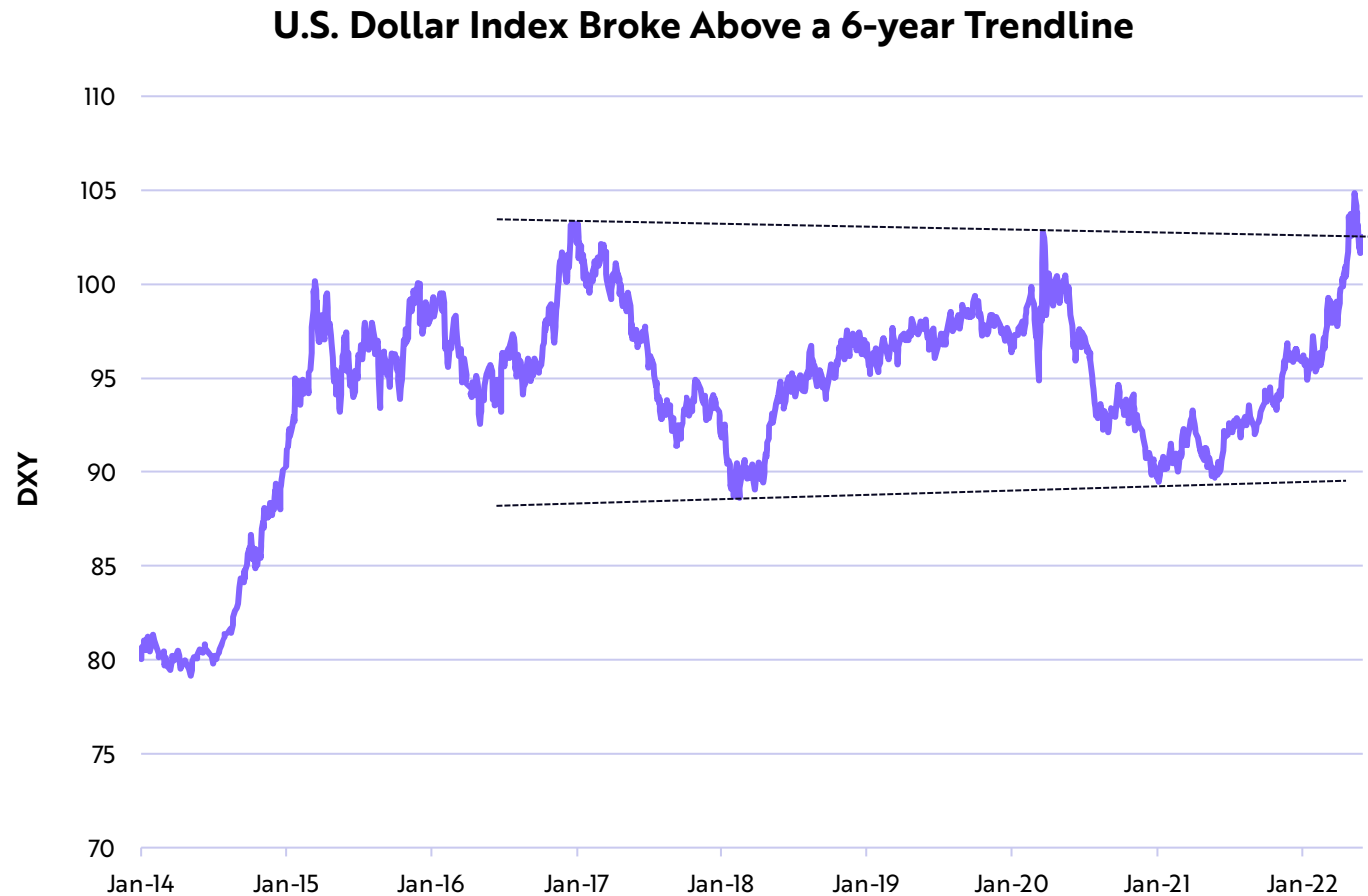


Bitcoin Could Remain Weak If DXY Confirms The Breakout To Multi-Year Highs

ARK's View: Bearish

The U.S. Dollar Index (DXY), which measures the strength of the USD against a basket of foreign currencies, recently broke above a 6-year trendline.

Should the recent negative correlation between bitcoin and DXY persist, further dollar strength could be negative for bitcoin.



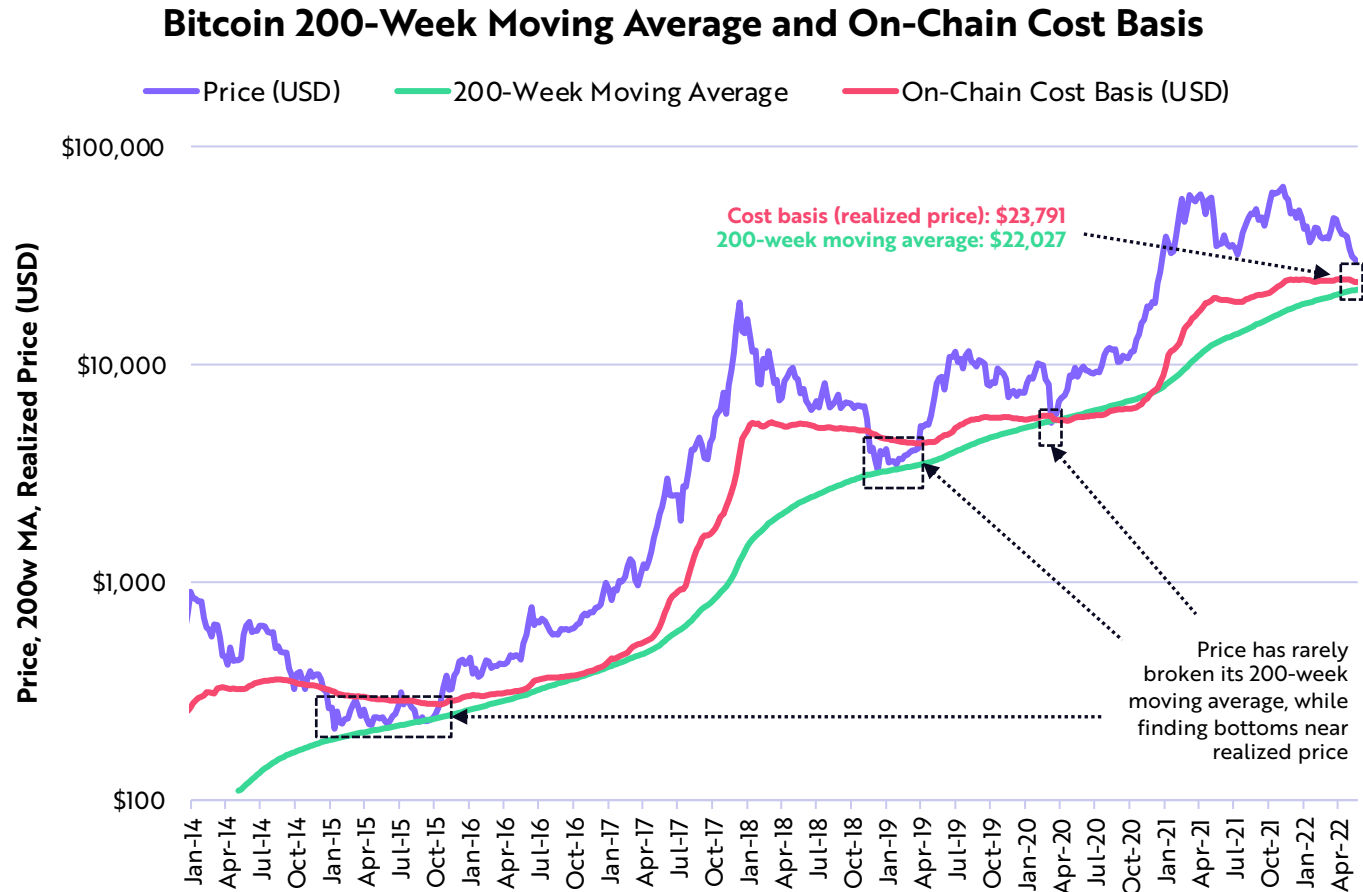


While Bitcoin Has Not Broken Technical Support Levels, Downside Risk Sits At Its 200-Week Moving Average

ARK's View: Neutral

Despite the continued sell-off, bitcoin has not broken below any major trendline. It is trading above its on-chain cost basis at ~\$24,000 and its 200-week moving average at ~\$22,000.

Although price has closed below its on-chain cost basis during major bear markets, rarely has it closed a week below its 200-week moving average. The confluence of both lines between the \$22,000 and \$24,000 range provides strong support.





Section 2

Terra Blowup Sends A Warning To Crypto Markets





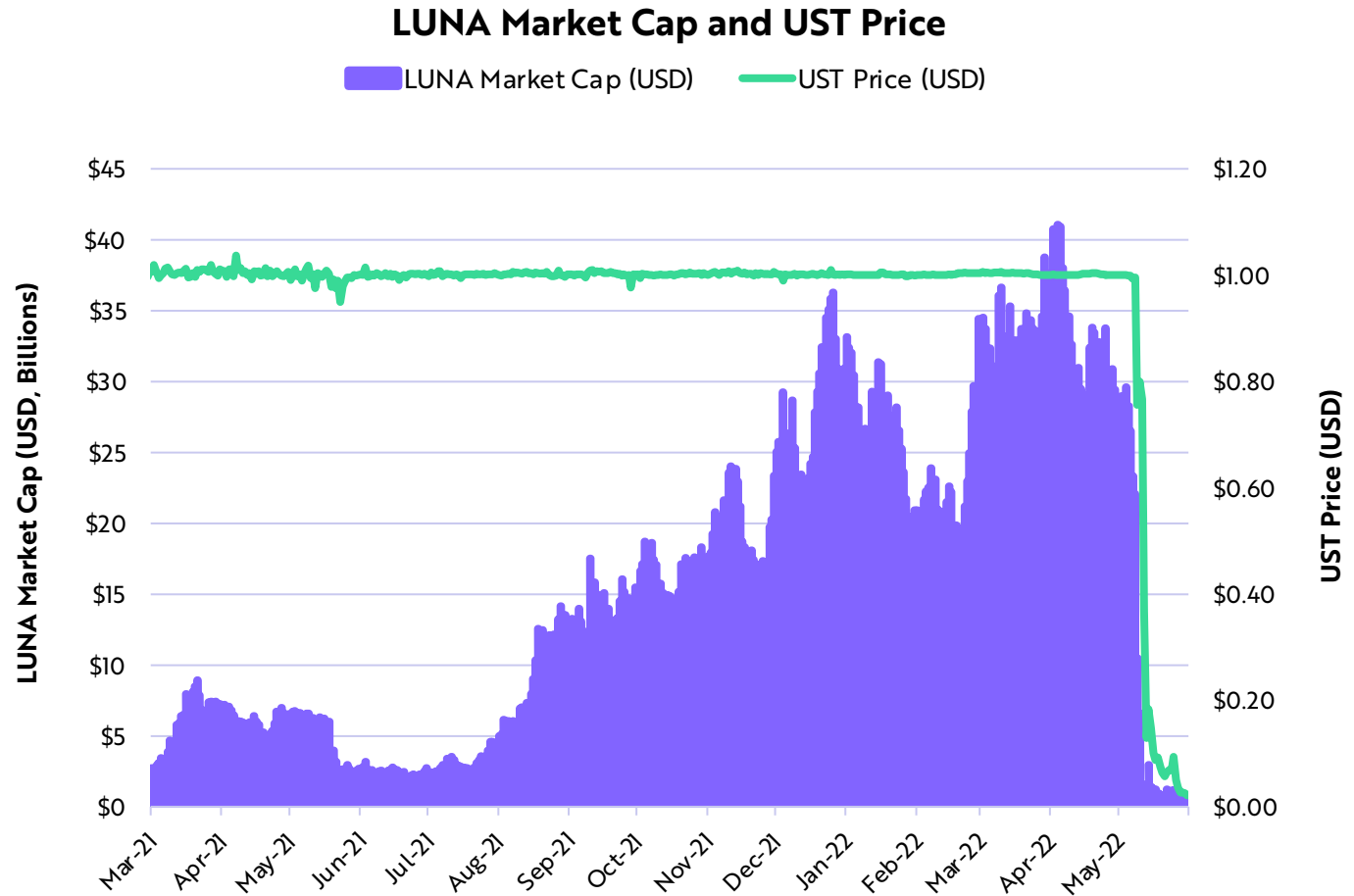
Terra's Demise Marks One Of The Largest Fiascos In Crypto Market History

ARK's View: Bearish

The largest algorithmic stablecoin, UST, broke its peg to the dollar, triggering a death spiral that led to its collapse.

In addition to causing the crash in UST and Luna, we believe Terra is the largest layer-1 blockchain failure in crypto history, wiping out a combined \$60 billion of market capitalization between UST and Luna.

Compared to the Mt. Gox hack that stole 5.7% of total crypto market cap in 2014, Terra's collapse destroyed roughly 2.7% of crypto's total market capitalization.¹



[1] Figures were sourced and calculated from Fortune (<https://fortune.com/longform/bitcoin-mt-gox-hack-karpeles/>) and CoinMarketCap. Source: ARK Investment Management, LLC, 2022. Data sourced from Messari. Information as of May 31, 2022. 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.



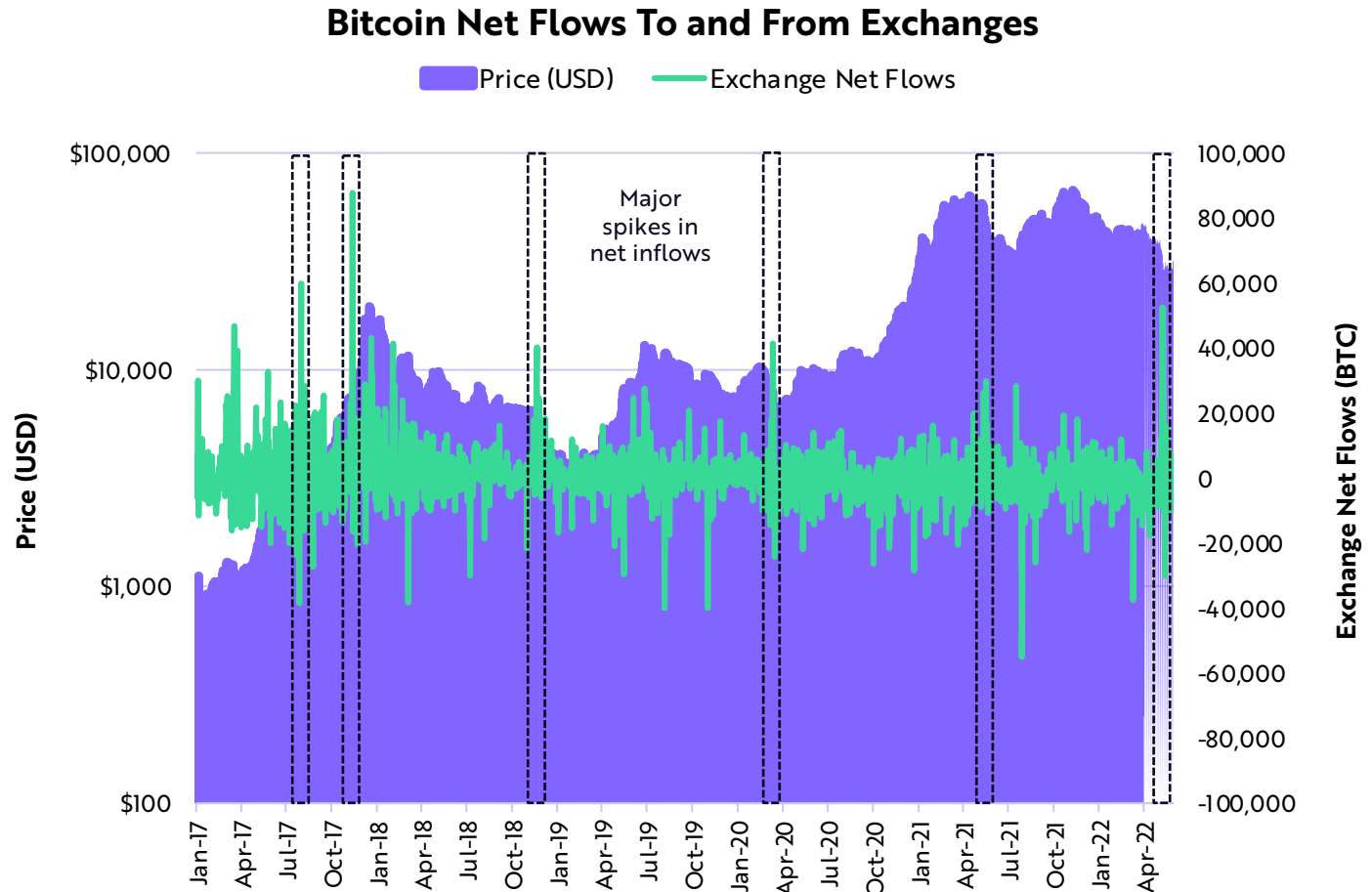
Exchanges Reported Record Inflows Amidst Terra's Collapse

ARK's View: Neutral

As a result of Terra's collapse, exchanges recorded net inflows of 52,000 bitcoin, the largest daily inflow in BTC terms since November 2017 and the largest inflow ever in USD terms.

According to our research, large net inflows occur at moments of high volatility in both exuberant market tops and capitulation market bottoms.

To backstop UST's peg, The Luna Foundation Guard (LFG) reportedly sold most of its ~80,000-bitcoin reserves¹, contributing to this record inflow.



[1] A per their public announcement here: https://twitter.com/LFG_org/status/1526126716388749313

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While The Systemic Impacts Of Terra's Collapse Should Not Be Underestimated, Its Impact On Bitcoin Appears To Have Been Contained

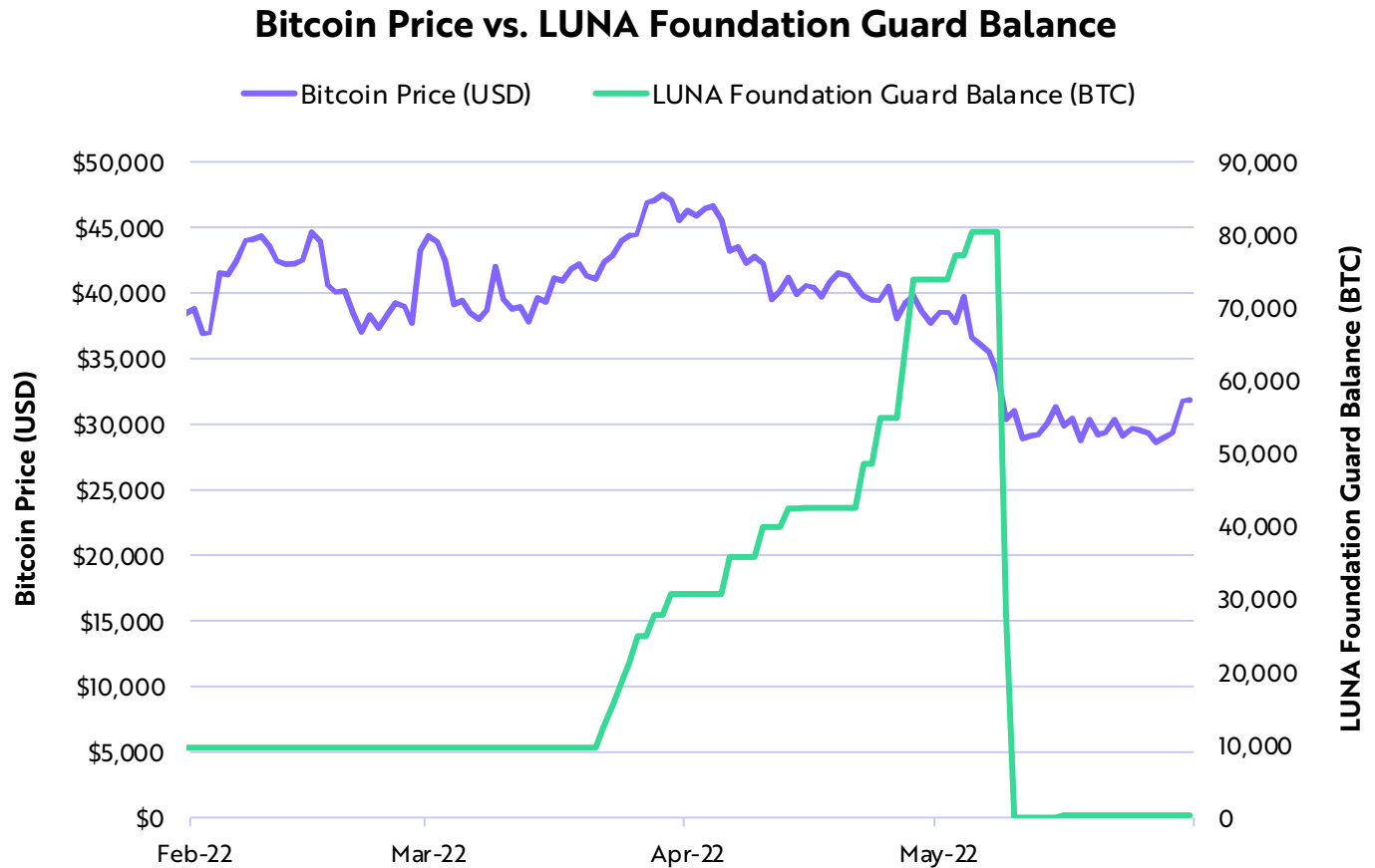
ARK's View: Bullish

In a failed attempt to maintain UST's stablecoin peg, The Luna Foundation Guard (LFG) appears to have emptied its bitcoin reserves.

LFG currently holds 313 BTC, down from 80,934 BTC held prior to Terra's unraveling.¹

Now decoupled from the Terra blockchain, bitcoin's selling pressure should subside, yet contagion in the crypto markets is still inconclusive.

As the Terra blowup prompts more stringent regulation of crypto in general and algorithmic stablecoins in particular, we believe Bitcoin's more secure and conservative blockchain should gain market share.



[1] A per their public announcement here: https://twitter.com/LFG_org/status/1526126716388749313

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Section 4

Bitcoin's Fundamentals Remain Strong As Short-Term Holders Show Signs of Capitulation





Bitcoin's Network Security, Usage, And Holder Behavior Remain At Healthy Levels Despite Terra's Collapse

	Bitcoin Metrics ¹	Unit	May 2022	1M Change	1Y Change	ARK's View
Network Security	Mining Difficulty	Exahash/sec ¹ (thousands)	128.4	+0.39%	+42.12%	Bullish
	Miner Revenue (7-Day Moving Average)	USD (millions)	\$27.5	-27.63%	-12.42%	Bearish
Network Usage	Active Owners² (Active Entities, 7-Day Moving Average)	thousands	260.9	-6.04%	+9.42%	Neutral
	Transaction Volume² (7-Day Moving Average)	BTC (thousands)	178.3	+35.07%	-0.22%	Bullish
Holder Behavior	Long-Term-Holder Supply² (Coins Held for 155 Days+)	BTC (millions)	13.48	-0.44%	+18.34%	Bullish
	Locked Supply² (Illiquid Supply)	BTC (millions)	14.49	-0.27%	+4.09%	Bullish
	Time-Weighted Turnover² (Coindays Destroyed, 7-Day Median)	coindays (millions)	9.01	+27.43%	-0.44%	Neutral

[1] For more information on these metrics and their units of account, please read the Appendix: Glossary of Terms on page 24 of this report.

[2] Data may be subject to change over time since it is entity-adjusted in real time via a machine-learning algorithm.

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Sentiment Is Constructive, Favoring Demand For Spot Bitcoin Over Derivatives

	Bitcoin Metrics ¹	Unit	May 2022	1M Change	1Y Change	ARK's View
Long-Term Valuation	Market Cost Basis (Realized Price)	USD	\$23,728	-3.24%	+20%	Bullish
	Percent Supply in Profit	pp	62.08%	+2.06 pp	-11.96 pp	Neutral
Short-Term Valuation	Short-Term-Holder Cost Basis² (STH Realized Price)	USD	\$31,835	-15.59%	-14.69%	Neutral
	Realized Market Returns² (SOPR-1, 7-day moving average)	pp	-5.7%	-2.7 pp	-1.6 pp	Bullish
Market Sentiment	Perpetual Futures Basis (Binance, Estimated, 7-Day Exponential Moving Average)	pp	-0.03%	+0.02 pp	-0.09 pp	Bullish
	Expirational Futures Basis (Quarterly, All Exchanges, Annualized)	pp	3.53%	+1.02 pp	-5.46 pp	Bullish

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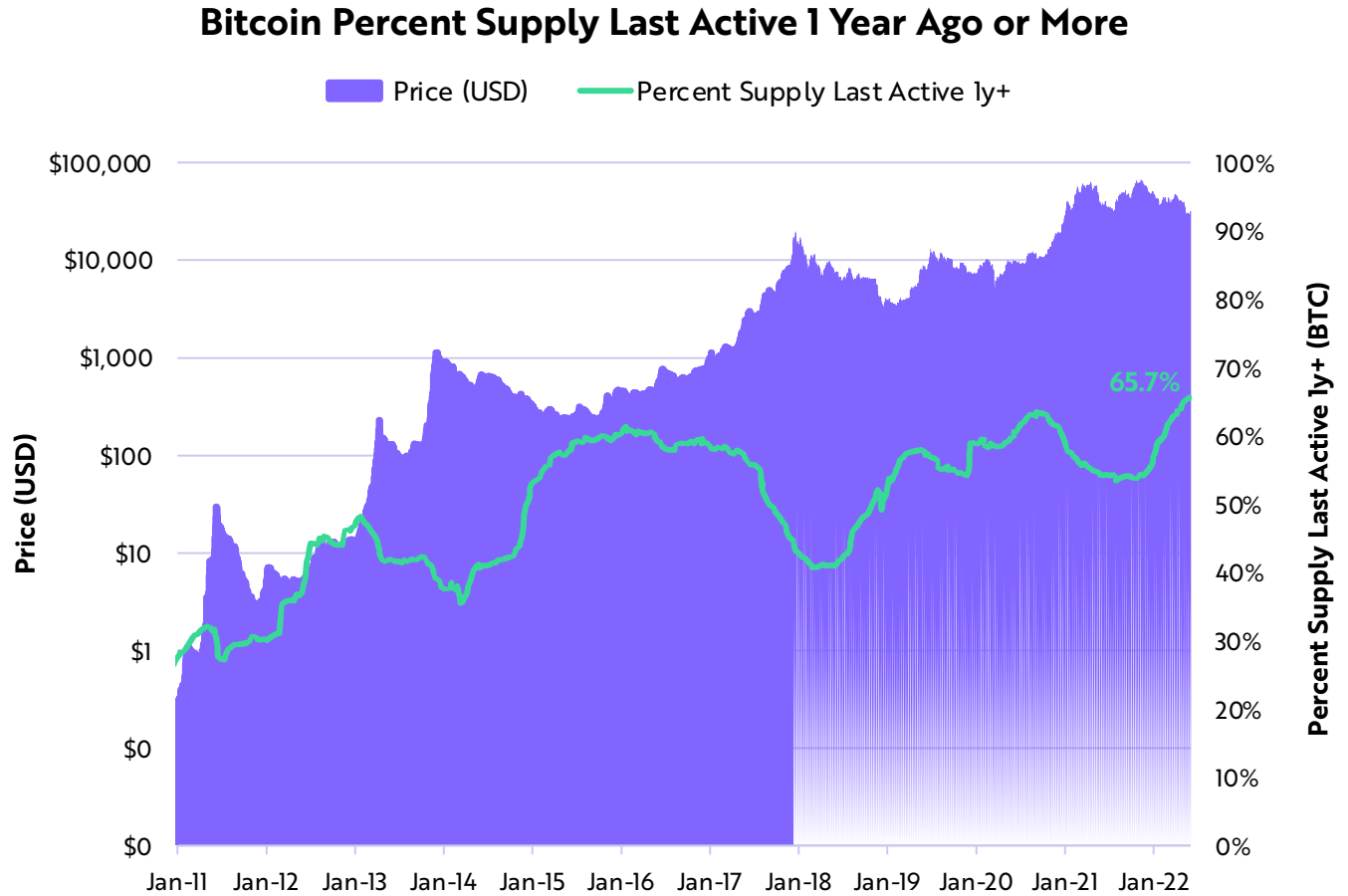
Source: ARK Investment Management, LLC, 2022. Data sourced from [Glassnode](#). Some data may be subject to change over time since they are entity-adjusted in real time. Information as of May 31, 2022. Perpetual futures basis was estimated internally off data from TradingView, and it is subject to change.. 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.



Bitcoin Holders Never Have Been More Long-Term Focused

ARK's View: Bullish

An all-time of nearly 66% of bitcoin's supply has not moved in over a year, a testament to the market's longer-term focus and a holder base with stronger conviction.



Source: ARK Investment Management, LLC, 2022. Data sourced from [Glassnode](#). Some data may be subject to change over time since they are entity-adjusted in real time. Information as of May 31, 2022. 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.

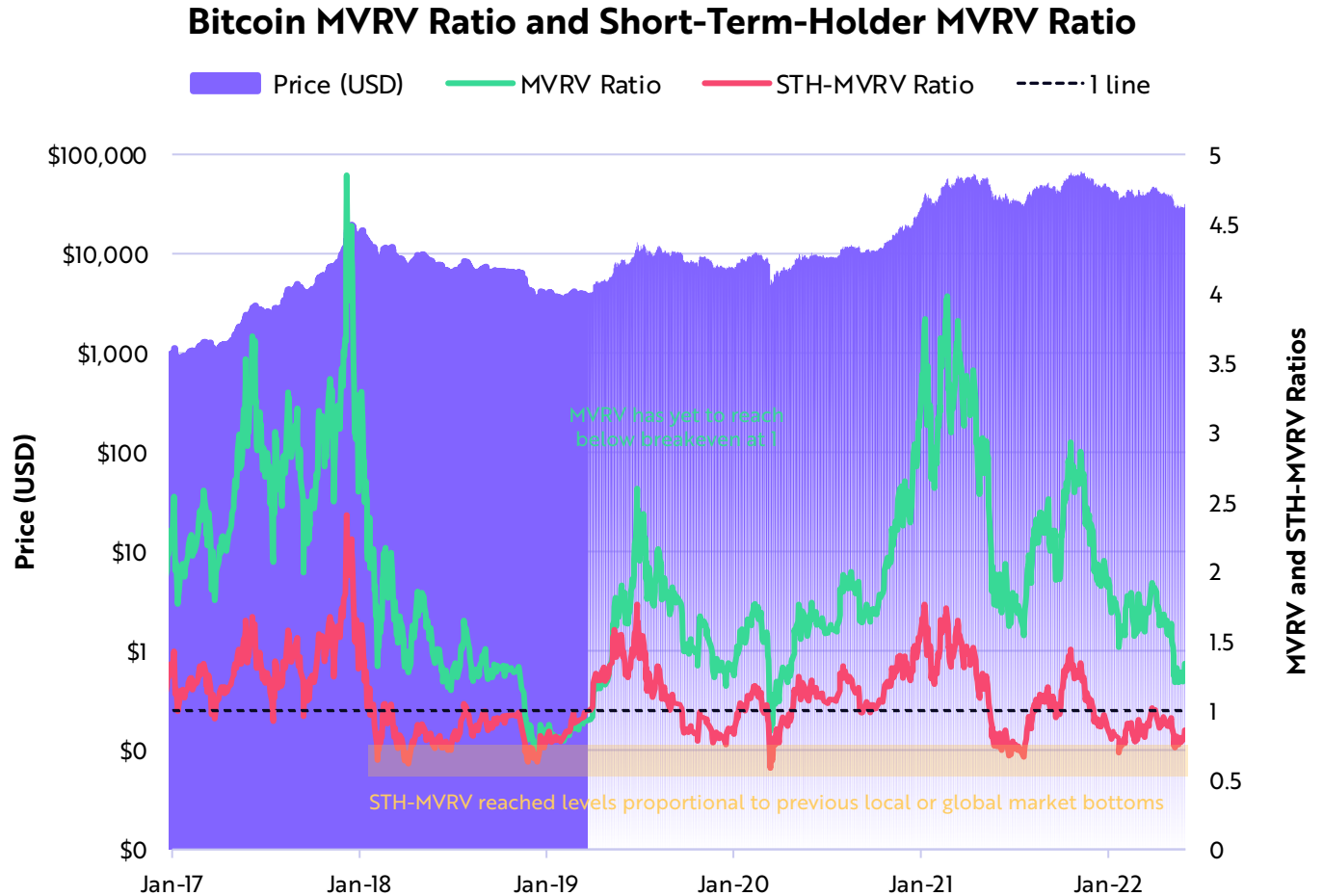


Short-Term Holders Appear To Have Capitulated

ARK's View: Neutral

Short-term holder positions fell -35% below their breakeven price, on average, a percent last seen in January 2022, July 2021, and March 2020. Meanwhile, the position of aggregate holders—both short- and long-term—remains above its breakeven price, suggesting that widespread capitulation may not have occurred.

MVRV ratios (market-value-to-realized-value) are calculated by dividing market capitalization by the average on-chain cost basis of specified participants in the market. When MVRV is below 1, participants are below breakeven and selling at a loss.



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Open Interest In The Futures Market Suggests Further Market Volatility

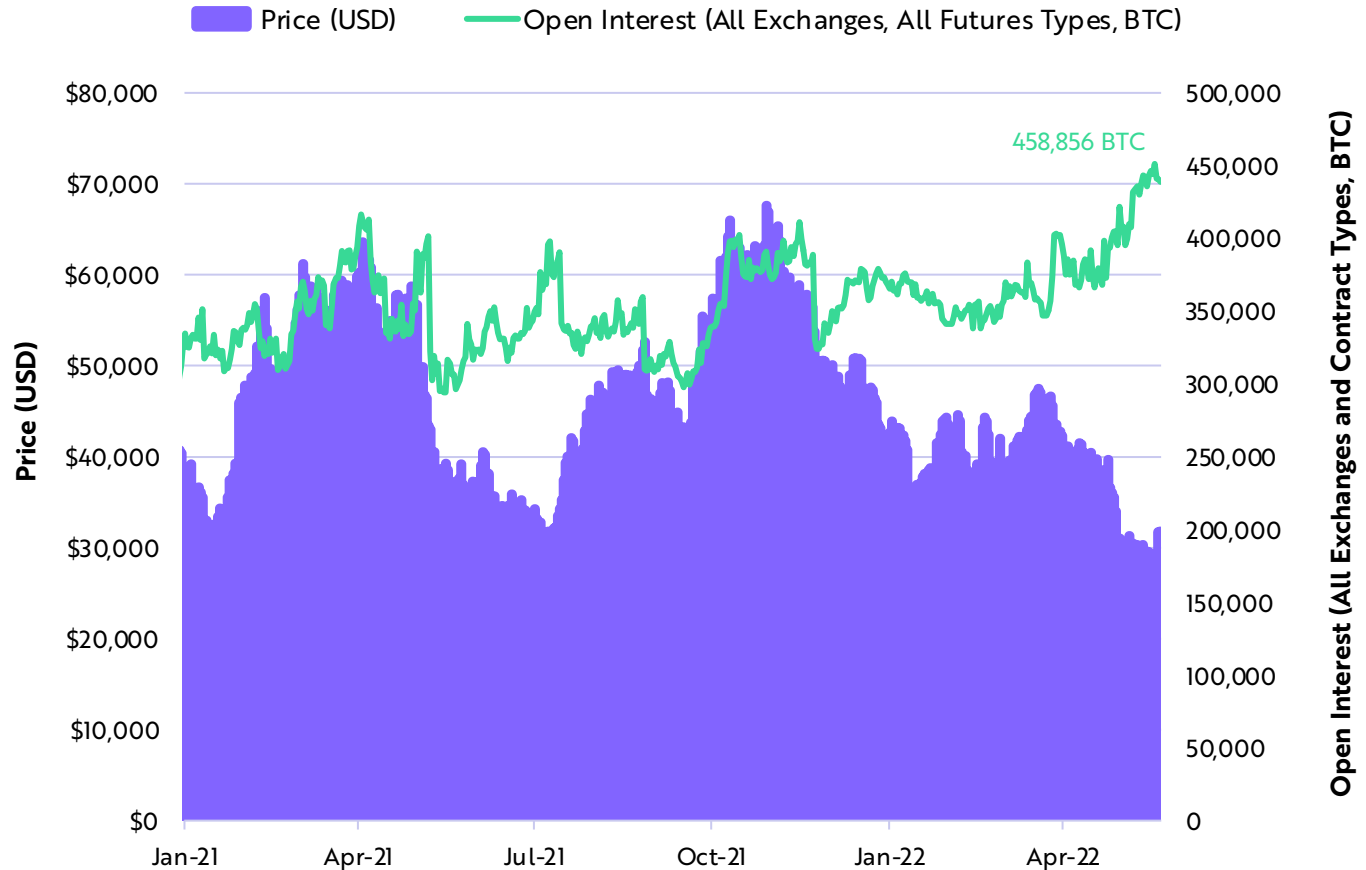
ARK's View: Neutral

Bitcoin's open interest in the futures market has reached an all-time high of approximately 450,000 BTC.

According to our research, aggregate futures open interest across all exchanges and contract types is a reliable measure of coming volatility. With increased volatility, open interest should decline.

Perpetual contract basis typically hints at market direction. Currently, it is trading at a bullish discount to spot.

Bitcoin Futures Open Interest (Perpetual and Expirational)



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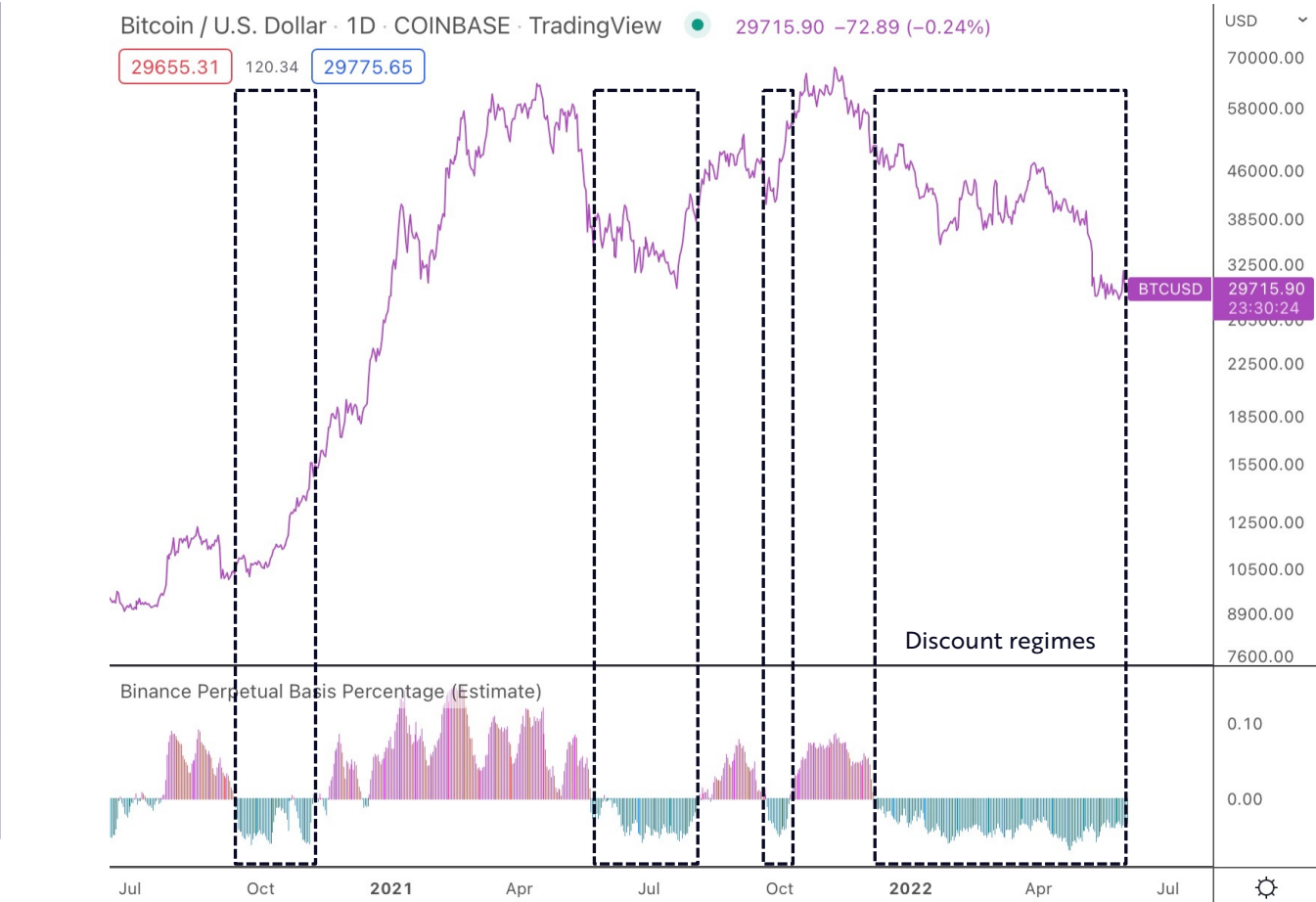


Perpetual Futures Discount Suggests Upside Volatility

ARK's View: Bullish

Given the high open interest outstanding, we believe the perpetual futures discount indicates a potential upward trajectory in BTC's next major price movement.

Historically, when the futures price has traded at a discount to the spot price, the underlying demand for an asset exceeds the speculative demand.



Source: ARK Investment Management, LLC, 2022. Data sourced and estimated from [TradingView](https://tradingview.com). Estimate may be adjusted or perfected over time. Information as of May 31, 2022. 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.



Section 5

Appendix: Glossary of Terms





Glossary of Terms

- **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.
- **Contango:** Describes when expirational futures contracts are trading at a price higher than spot, suggesting bearish market environment.
- **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.
- **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.
- **Futures Basis:** The difference between the price of spot and the price of a perpetual or expirational contract.
- **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 cutoff point at which the possibility of a bitcoin to remain unmoved increases drastically.
- **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.
- **Perpetual Futures Basis:** The difference between the price of spot and the price of non-expirational futures contracts.
- **Realized Returns:** 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 between price sold and price bought for the coins that moved that day. Also known as spent output ratio, or SOPR.
- **Short-term Holding and Holders (STH):** Related to supply that moved in the last 155 days, the cutoff point at which the possibility for a bitcoin to move again increases drastically.
- **Supply in Profit:** The percentage of bitcoins currently at a higher price compared to the price at which they last moved.
- **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.

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