NYDIG | MAY 2022

Bitcoin **Brief**

Market Update

May was another difficult month for digital assets, with bitcoin ending the month 18% lower. On May 4th, the Federal Reserve Open Market Committee delivered its largest rate hike (50bps) in 22 years[1] in an effort to curb the highest level of inflation seen in the United States in nearly 40 years.[2] This macroeconomic environment, coupled with the collapse of LUNA and the largest algorithmic stablecoin (UST), caused a broad sell-off in digital assets.

While bitcoin had a tough month, it was one of the best performing non-stablecoin cryptocurrencies. This data is consistent with historical cycles. As the premier store of value within the cryptocurrency ecosystem, bitcoin has historically had shallower drawdowns than its digital cousins.

Although the macroeconomic environment may pose continued challenges for risk assets moving forward, market participants industry-wide remain constructive on digital assets. Recently, J.P. Morgan strategists noted that they currently prefer digital assets to real estate within the alternatives portfolio allocation, given positioning metrics and potentially oversold price action in the digital asset space.[3] Morgan Stanley Research also noted that retail investors have historically been meaningful players in the cryptocurrency space, and while institutional flows have picked up, retail investors could potentially provide support in times of market volatility.[4]

The Meaning Behind the LUNA/UST Crash

The first two weeks of May brought significant volatility to the cryptocurrency industry as market capitulation sparked the failure of the Terra protocol, LUNA, and its stablecoin, TerraUSD (UST).

HIGHLIGHTS.

- Market Update
- The Meaning Behind the LUNA/UST Crash
- Bitcoin Mining Algorithm Adjusts to Lower Prices

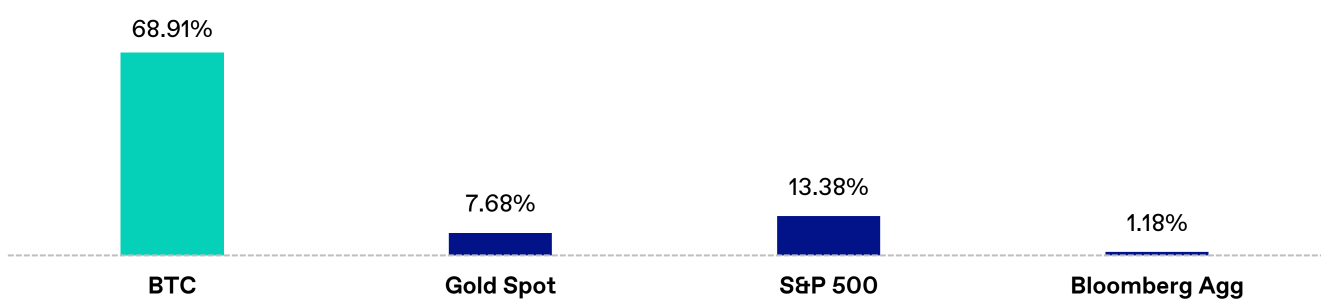
MARKET STATS. *As of 5/31/22*

BTC Price	$31,597
BTC Market Cap	$606B
% of BTC Total Supply in Circulation	>90%
3M Average Daily Bitcoin Transactions	~258K

NOTEWORTHY HEADLINES.

- Crypto Prices Slip After Bitcoin's Most Volatile Week in Years
- New Terra Blockchain Expected to Launch
- Crypto Exchanges Set Their Sights on The Sleepy Futures Industry
- Aptos Revealed as PayPal Ventures' First Layer 1 Investment
- Chipotle Will Now Accept Cryptocurrency in US Stores

5 Year Annualized Return



	BTC	Gold Spot	S&P 500	Bloomberg Agg
5 Yr Sharpe Ratio	0.99	0.56	0.79	0.05

The magnitude of this destruction was unprecedented in the crypto industry as $60B in investor wealth across LUNA and UST vanished in a few days.

The goal of the Terra blockchain was to create stablecoins without fiat backing. In this "algorithmic stablecoin," the native LUNA token was either created ("minted") or destroyed ("burned") to stabilize the price of UST at $1. Algorithmic stablecoins like this have failed before—as withdrawals from the stablecoin accelerate, a significant amount of the native token is printed, leading it and the stablecoin to lose value. Terra was no exception, as a broader sell-off in the crypto market exposed the fragility of the UST peg. The subsequent run on UST prompted the Luna Foundation Guard, an entity tasked with defending the UST peg, to sell $3B of bitcoin from its reserves to prop up LUNA/UST. That failed to re-establish the $1 value of UST and may have helped drive bitcoin's price lower.

The collapse of the Terra blockchain was certainly painful for its many holders, however NYDIG believes that the Terra blockchain is not critical to the cryptocurrency ecosystem. Rather, Terra simply provides a stark and painful example of the perils of insecure economic and technological design in a digital asset ecosystem, especially as investors cease propping up other coins. In this environment, investors may be best positioned allocating to digital assets that are mature, stable, and have weathered storms like this before. Bitcoin has maintained its position as the top digital asset by market cap during the last three crypto market cycles.[5]

Bitcoin Mining Algorithm Adjusts to Lower Prices

A unique feature of the Bitcoin network is the self-regulating nature of the protocol that ensures both its functionality and its security. The market saw these mechanisms at work during the volatility in May. The Bitcoin network is programmed to adjust its difficulty level—how much work it takes for a miner to mine a new block of transactions—every two weeks. The protocol reduces the difficulty level if blocks take longer than an average of 10 minutes to produce and increases the difficulty level if blocks take under 10 minutes on average. As bitcoin miners contribute more (less) hash rate, the difficulty will increase (decrease) to keep the average at about 10 minutes per block.

While the breakeven price for the newest generation mining rigs is still around $10,000, older machines (especially ones with higher energy costs) have much higher breakevens. The price drop and higher energy input costs led these older machines to levels at which they are not profitable to run. As operators turned off those machines, the hash rate of the network decreased and blocks took longer to mine, which led difficulty lower and increased the profitability of these older machines, making them economical to run again. This automatic process built into the network demonstrates that the economic incentives for a decentralized monetary system not only work but also ensure that miners continue to safeguard the network. If bitcoin prices continue to languish, then miners may also gain an edge over their competitors by using more energy-efficient equipment.

Performance	1MO	3MO	YTD	1YR	3YR*	5YR*
Bitcoin	-17.55%	-24.64%	-31.11%	-11.75%	55.26%	68.91%
Gold	-3.14%	-3.75%	0.45%	-3.65%	12.06%	7.68%
S&P 500	0.18%	-5.16%	-12.76%	-0.30%	16.44%	13.38%
Bloomberg Agg	0.64%	-5.86%	-8.92%	-8.22%	0.0%	1.18%

*Returns greater than 1 year are annualized.

	5YR Standard Deviation	5YR Sharpe Ratio	5YR Correlation to BTC
Bitcoin	88.1%	0.99	-
Gold	12.9%	0.56	0.16
S&P 500	16.4%	0.79	0.30
Bloomberg Agg	4.0%	0.05	0.18

Sources:

NYDIG, Bloomberg as of 5/31/22, unless noted otherwise. All prices are 4:00 pm ET prices on the last business day of each month. Barclays Agg represents the Bloomberg US Aggregate Total Return Bond Index. Bitcoin returns based on month-end 4pm prices. Monthly bitcoin prices prior to October 2018 are based on Coinbase 4pm pricing. In October 2018, NYDIG began generating bitcoin prices in accordance with NYDIG Asset Management's valuation policy for its bitcoin funds. The monthly bitcoin prices used after October 2018 reflect 4pm prices determined in accordance with such valuation policy, which is the same valuation policy that is used for NYDIG's funds. As there are two different pricing sources for bitcoin reflected, the historical performance of bitcoin shown may be different if the bitcoin prices in accordance with NYDIG Asset Management's valuation policy were used for the entire period or if the Coinbase pricing were used for the entire period. Performance data quoted represents past performance of bitcoin. Past performance of bitcoin is not indicative of future results. Bitcoin has historically exhibited high price volatility relative to more traditional asset classes. The value of an investment in bitcoin or the funds could decline rapidly, including to zero.

[1] Federal Reserve Monetary Policy Archive
[2] Inflation Surges, Axios
[3] JP Morgan Says Bitcoin Has Significant Upside from Here
[4] What is Causing the Crypto Downturn?
[5] Coin Market Cap, NYDIG