BITCOIN INVESTING IN 2023

Despite the price action and other macroeconomic factors, this is a rare buying opportunity for bitcoin. We take a closer look at Bitcoin's fundamentals and on-chain metrics in this in-depth report.

BITCOIN MAGAZINE PRO®

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CONTENTS

3 Market Landscape

5 Convicted Bitcoin Investors

9 Total Addressable Market

12 Transfer Volume

14 Rare Opportunity in Bitcoin's Price

18 Macroeconomic Environment

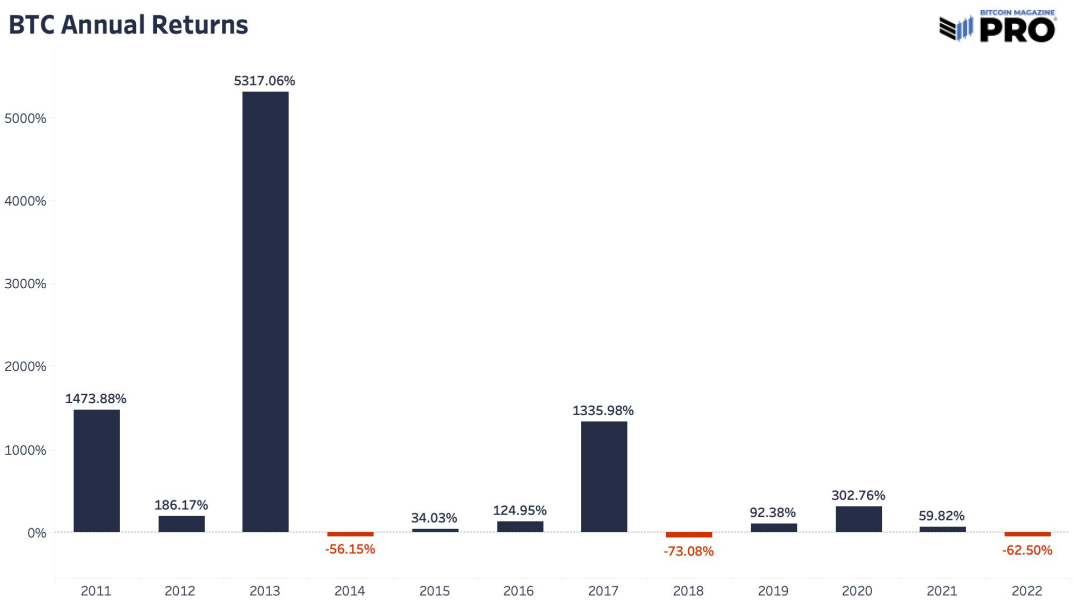
24 Bitcoin Mining & Infrastructure

30 Increasing Scarcity

34 Conclusion

MARKET LANDSCAPE

The bitcoin market for 2022 was nothing short of tumultuous. The price dropped sharply in response to scandal after scandal in the greater cryptocurrency ecosystem and bitcoin incurred significant collateral damage. However, we foresee 2023 to be a year of significant acquisition opportunities for those who understand the fundamentals of Bitcoin. A unique aspect of bitcoin as an asset is the ability to look at user behavior happening on the blockchain, and many of these trends show an extremely rare buying opportunity. This, coupled with the massive asymmetry of bitcoin's potential appreciation, suggest investors should consider a bitcoin allocation as an essential part of their risk management strategy.

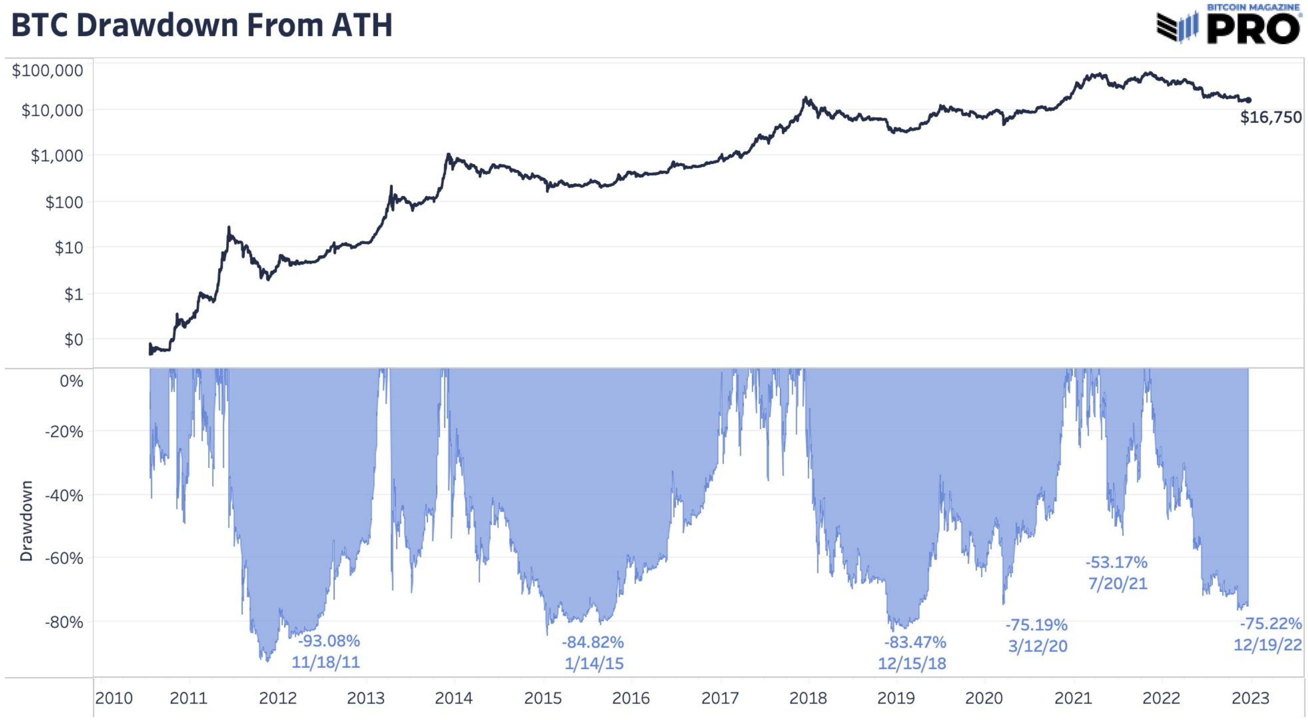


*Source: Glassnode | Dec 31 Closing Prices | *2022 Dec 15 Closing Price*

Bitcoin Magazine PRO sees incredibly strong fundamentals in the Bitcoin network and we are laser-focused on its market dynamic in the context of macroeconomic trends. Bitcoin aims to become the world reserve currency, an investment opportunity that cannot be understated.

MARKET LANDSCAPE

Though the bitcoin price decreased by about 65% in 2022, this is by no means unique in bitcoin's history. Bitcoin dropped 93.08% in 2011, 84.82% in 2015, 83.47% in 2018 and 75.19% in 2020. The fact that it continues to reclaim and surpass previous all-time highs demonstrates that bitcoin is resilient and its volatility is a necessary process in the emergent monetization of an entirely new asset class.

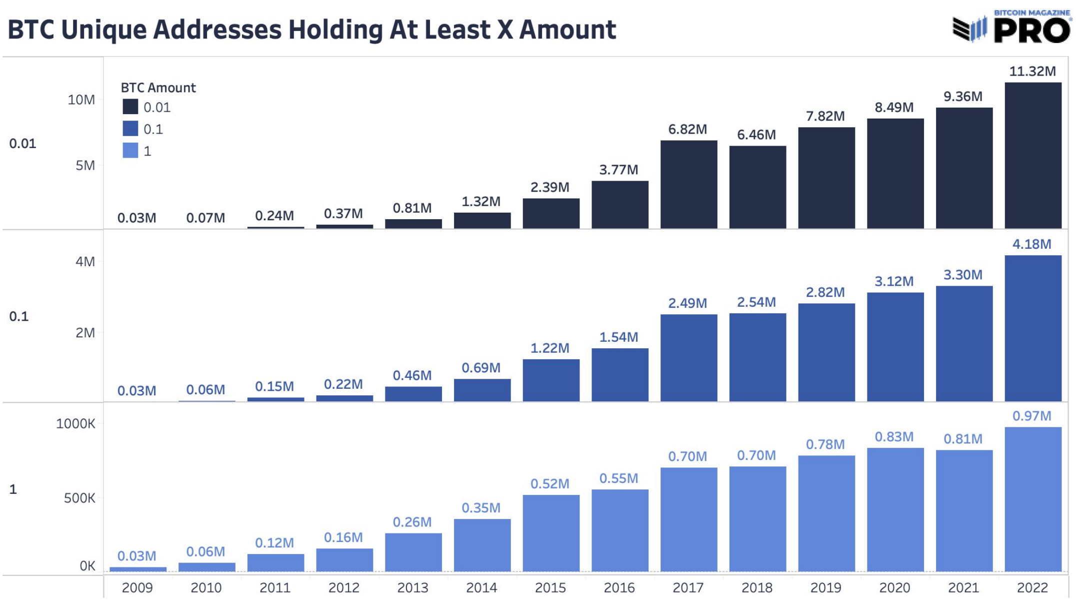


Source: Glassnode

There is a growing contingent of bitcoin investors who are taking a deeper look at Bitcoin's fundamentals and what's going on beneath the surface. The ones who are looking closely have more conviction than ever for this nascent digital asset.

CONVICTED BITCOIN INVESTORS

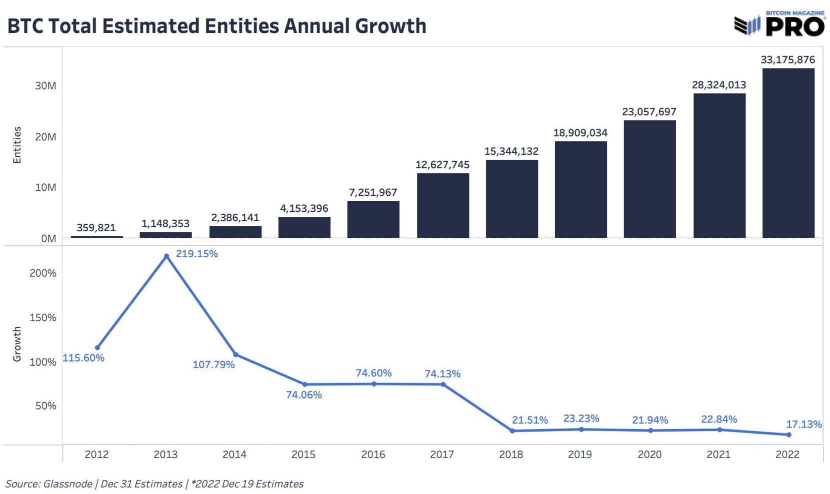
We can put investor conviction into perspective by looking at the number of unique Bitcoin addresses holding at least 0.01, 0.1 and 1 bitcoin. This data shows that bitcoin adoption continues to grow with a growing number of unique addresses holding at least these amounts of bitcoin. While it is entirely possible for individual users to hold their bitcoin in multiple addresses, the growth of unique Bitcoin addresses holding at least 0.01, 0.1 and 1 bitcoin indicate that more users than ever before are buying bitcoin and holding it in self-custody.



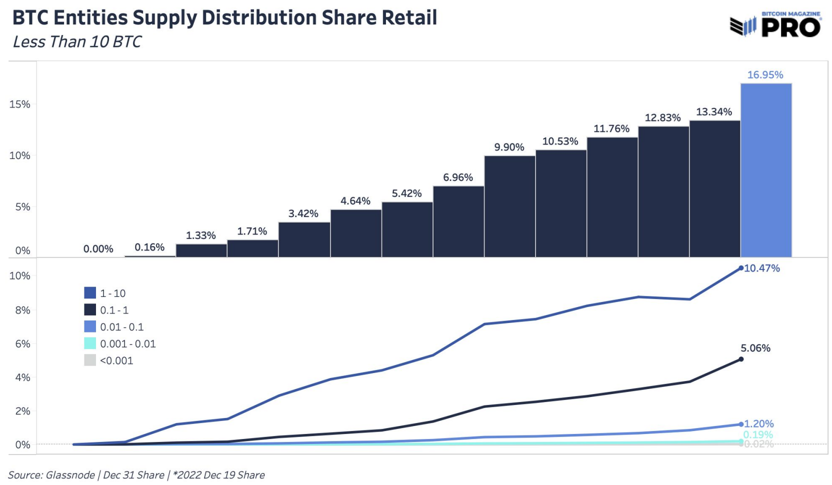
Source: Glassnode

A more sophisticated view to estimate user growth is to use Glassnode's estimated entities data which are modeled from proprietary data science techniques that cluster many addresses to a single entity (either an individual or institution).

CONVICTED BITCOIN INVESTORS



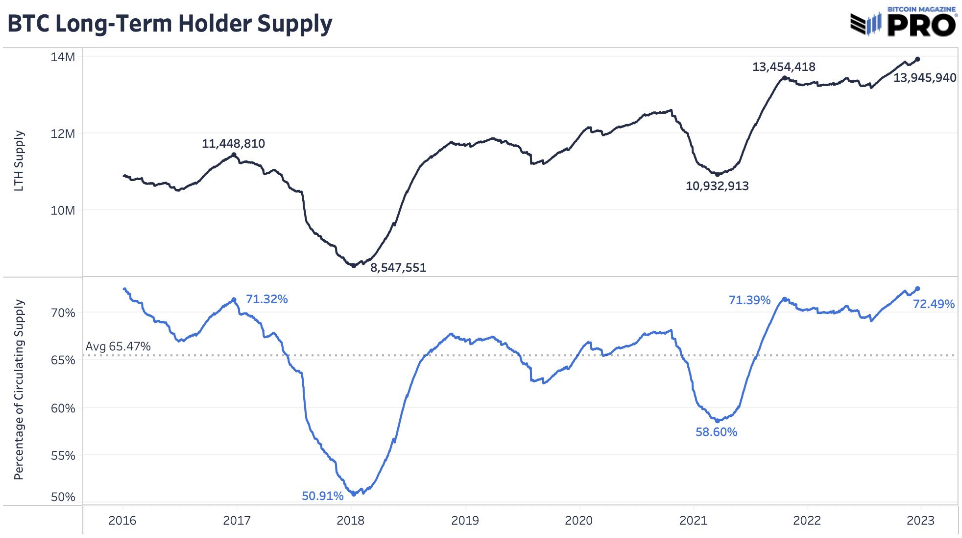
It's another imperfect measure, but one that shows us that bitcoin entities grew over 17% in 2022 after consistently growing over 20% annually over the last four years. We roughly know that there are over 33 million separate entities with a nonzero bitcoin balance. The number of bitcoin users is likely much higher for many reasons. One of those is that an exchange would be classified as a single entity that holds bitcoin on behalf of many users.



When we look at all of this combined data, there was a clear trend of an increasing number of Bitcoin users in 2022. It's also clear that the share of bitcoin supply finding its way to retail users is growing. With the definition that retail users are those holding less than 10 bitcoin, the share of bitcoin supply held by this group is now just shy of 17%, despite being just below 10% five years ago.

CONVICTED BITCOIN INVESTORS

Another promising metric is the amount held by long-term holders, which has increased to almost 14 million bitcoin. Long-term holder supply is calculated using a threshold of a 155-day holding period, after which dormant coins become increasingly unlikely to be spent. As of now, 72.49% of the bitcoin in circulation is not likely to be sold at these prices.



Source: Glassnode

Source: Glassnode | Dec 31 Supply | *2022 Dec 19 Supply

CONVICTED BITCOIN INVESTORS

There is a large subset of bitcoin investors who are accumulating the digital asset no matter the price. In a December 2022 interview on "Going Digital," Head of Market Research Dylan LeClair said, "You have people all over the world that are acquiring this asset and you have a huge and growing cohort of people that are price-agnostic accumulators."

With a growing number of unique addresses holding bitcoin and such a significant amount of bitcoin being held by long-term investors, we are optimistic for bitcoin's advancement and rate of adoption. There are many variables that demonstrate the potential for asymmetric returns as demand for bitcoin increases and adoption increases worldwide.

TOTAL ADDRESSABLE MARKET

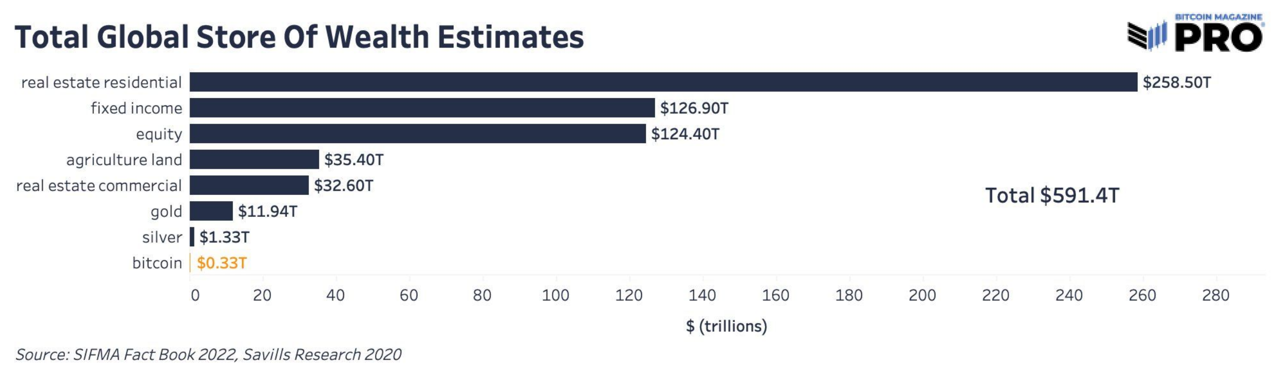
During monetization, a currency goes through three phases in order: store of value, medium of exchange and unit of account. Bitcoin is currently in its store-of-value phase as demonstrated by the long-term holder metrics above. Other assets that are frequently used as stores of value are real estate, gold and equities. Bitcoin is a better store of value for many reasons: it is more liquid, easier to access, transport and secure, easier to audit and more finitely scarce than any other asset with its hard-cap limit of 21 million coins. For bitcoin to acquire a larger share of other global stores of value, these properties need to remain intact and prove themselves in the eyes of investors.

Bitcoin is a globally distributed network where anyone can audit the entire supply in a very trivial fashion. Before bitcoin existed, third parties were needed to act as intermediaries between people who were not physically near one another but who wanted to transact and needed a layer of trust in order to trade.

"The reason that you needed third parties is because there was no way to transfer value across the internet without a trusted intermediary, without a centralized third party. What bitcoin did with basically solving the double-spend problem and combining proof-of-work and the difficulty adjustment is it combined the physical and the digital world and it did that through proof-of-work, so there's a tangible cost to not only produce a bitcoin, but when you send a bitcoin, I can transfer digital value in a bearer-asset type way." — Dylan LeClair on "Going Digital"

TOTAL ADDRESSABLE MARKET

Bitcoin solves the problem of needing third-party intermediaries for people who engage in commerce to transact with each other. This is a huge value proposition and by looking at other global stores of value, we can get a glimpse of how much the bitcoin market capitalization can grow once people recognize bitcoin's superior qualities compared to these assets.



As readers can see, bitcoin is a tiny fraction of global wealth. Should bitcoin take even a 1% share from these other stores of value, the market cap would be $5.9 trillion, putting bitcoin at over $300,000 per coin. These are conservative numbers from our viewpoint because we estimate that bitcoin adoption will happen gradually, and then suddenly.

TOTAL ADDRESSABLE MARKET

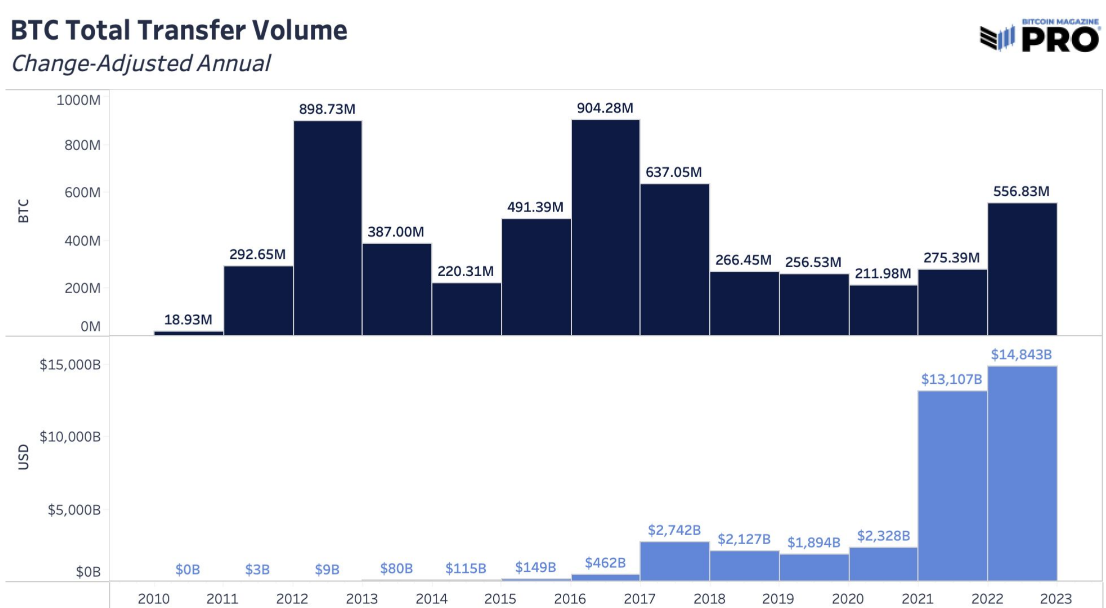
From his “Going Digital” interview, LeClair said, “Bitcoin is the best asymmetric bet over the next decade and really no one understands it.” We believe that global adoption of bitcoin is inevitable. American consumers experienced 7.1% year-over-year inflation in 2022, but almost half of the world faced double-digit inflation. A significant factor to this rising inflation around the is continued monetary and fiscal stimulus policies that have led to global monetary debasement and the erosion of purchasing power.

Bitcoin is a potential solution to this inevitable path towards increased monetary debasement and alternative to the current fiat system, where interest rates are determined on the whim of a handful of central bankers, and instead places certainty of monetary issuance in Bitcoin’s code. As Bitcoin continues to function as designed and trust in current monetary systems continues to erode, we expect more people to turn to Bitcoin as the alternative option.

TRANSFER VOLUME

The Bitcoin network offers a censorship-resistant method of transferring value with final settlement over communications channels. Because it is a settlement layer, the Bitcoin network can be best equated to SWIFT or Fedwire. It is extremely difficult to create a valuation for these systems, but neither offer true censorship resistance should a country, bank or entity who is attempting to use them be placed on a sanctions list. Regardless of this use case, the value of transactions on the Bitcoin blockchain is higher than ever.

When looking at the amount of value that was cleared on the Bitcoin network throughout its history, there is a clear upward trend in USD terms with a heightened demand for transferring bitcoin this year. In 2022, there was a change-adjusted transfer volume of over 556 million bitcoin settled on the Bitcoin network, up 102% from 2021. In USD terms, the Bitcoin network settled just shy of $15 trillion in value in 2022.



*Source: Glassnode | *2022 Dec 19*

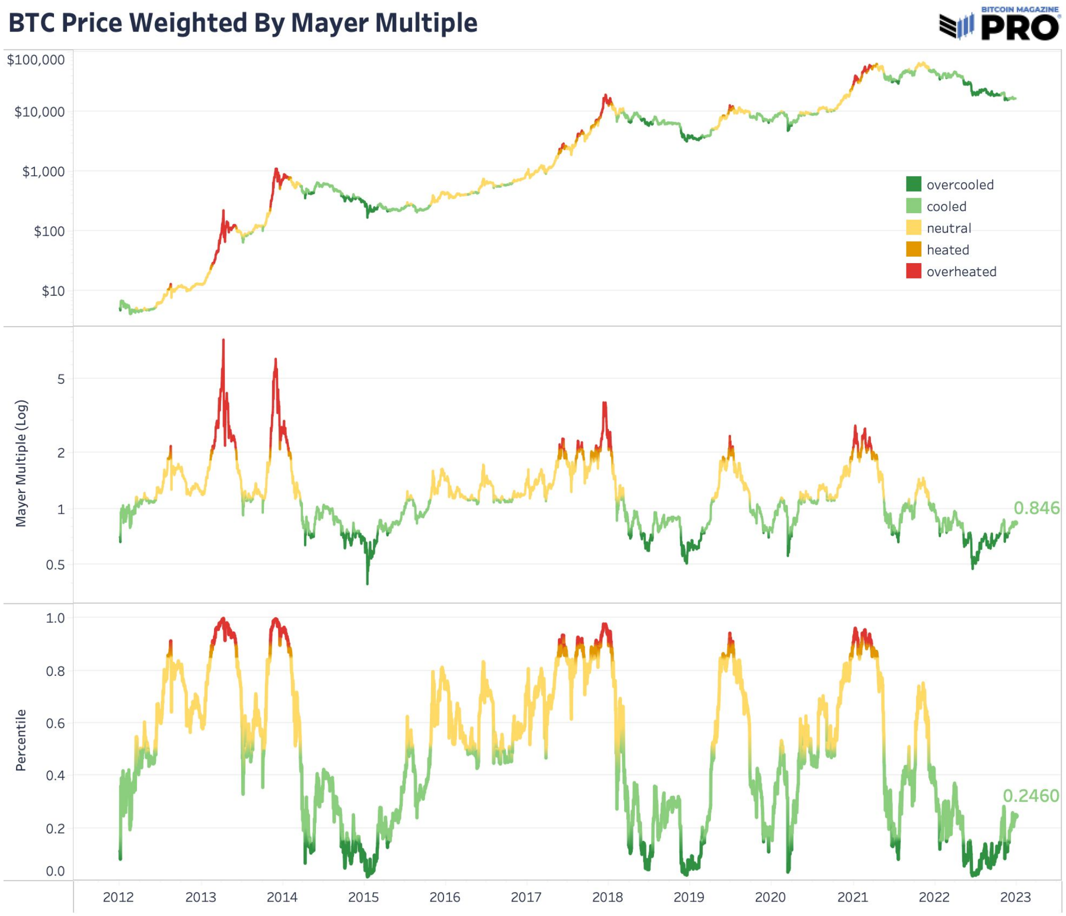
TRANSFER VOLUME

Bitcoin's censorship resistance is an extremely valuable feature as the world enters into a period of deglobalization. With a market capitalization of only $324 billion, we believe bitcoin is severely undervalued. Despite the drop in price, the Bitcoin network transferred more value in USD terms than ever before.

Additionally, other on-chain metrics paint a picture of the prices when bitcoin was last bought and sold. This along with long-term price averages can show how rare of an opportunity investors have for an entry.

RARE OPPORTUNITY IN BITCOIN'S PRICE

By looking at certain metrics, we can analyze the unique opportunity investors have to purchase bitcoin at these prices. The Mayer Multiple is calculated by dividing the bitcoin price by its 200-day moving average. Using this metric, we can observe that the bitcoin price is significantly undervalued and in the 24th percentile after its fourth-ever period of being this low .

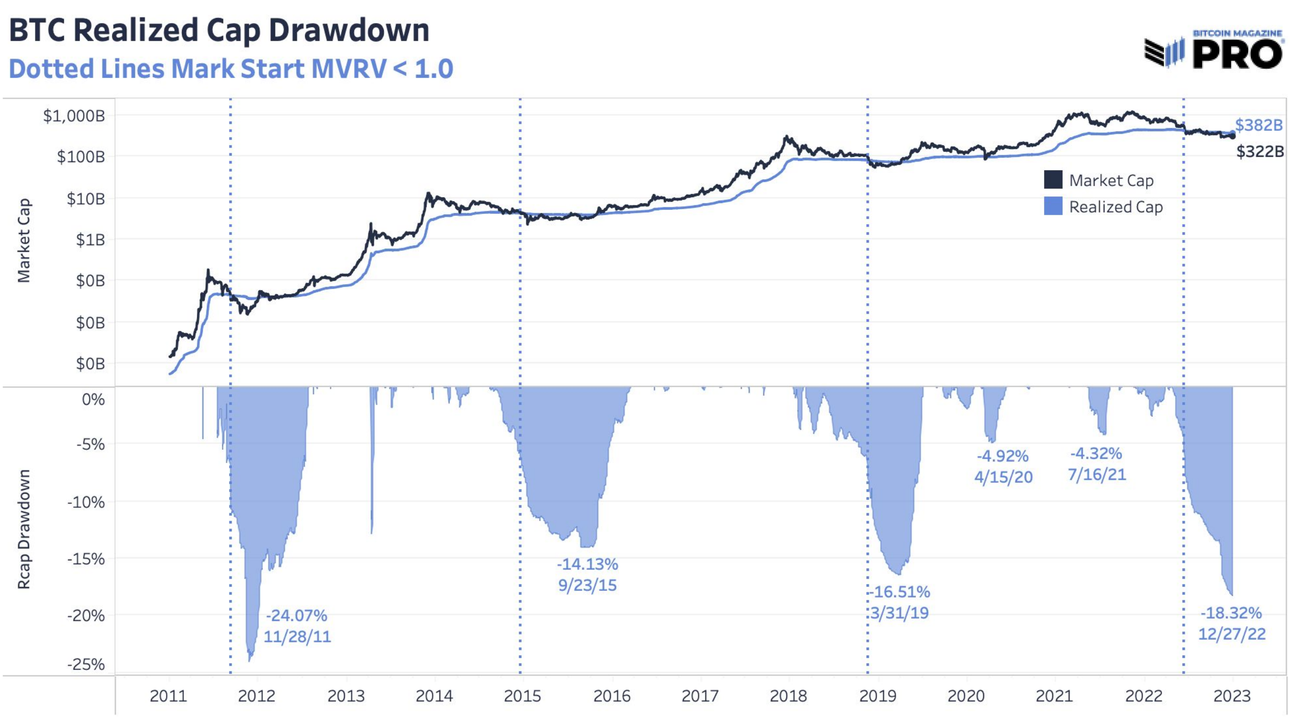


Source: Glassnode

RARE OPPORTUNITY IN BITCOIN'S PRICE

Another way we can evaluate the growth of bitcoin is through its realized price. The realized price accounts for all bitcoin at the price where they last moved on-chain, which often serves as a superior measure of its growth over the instantaneous exchange rate. Realized price can be thought of as the average cost basis of the entire network.

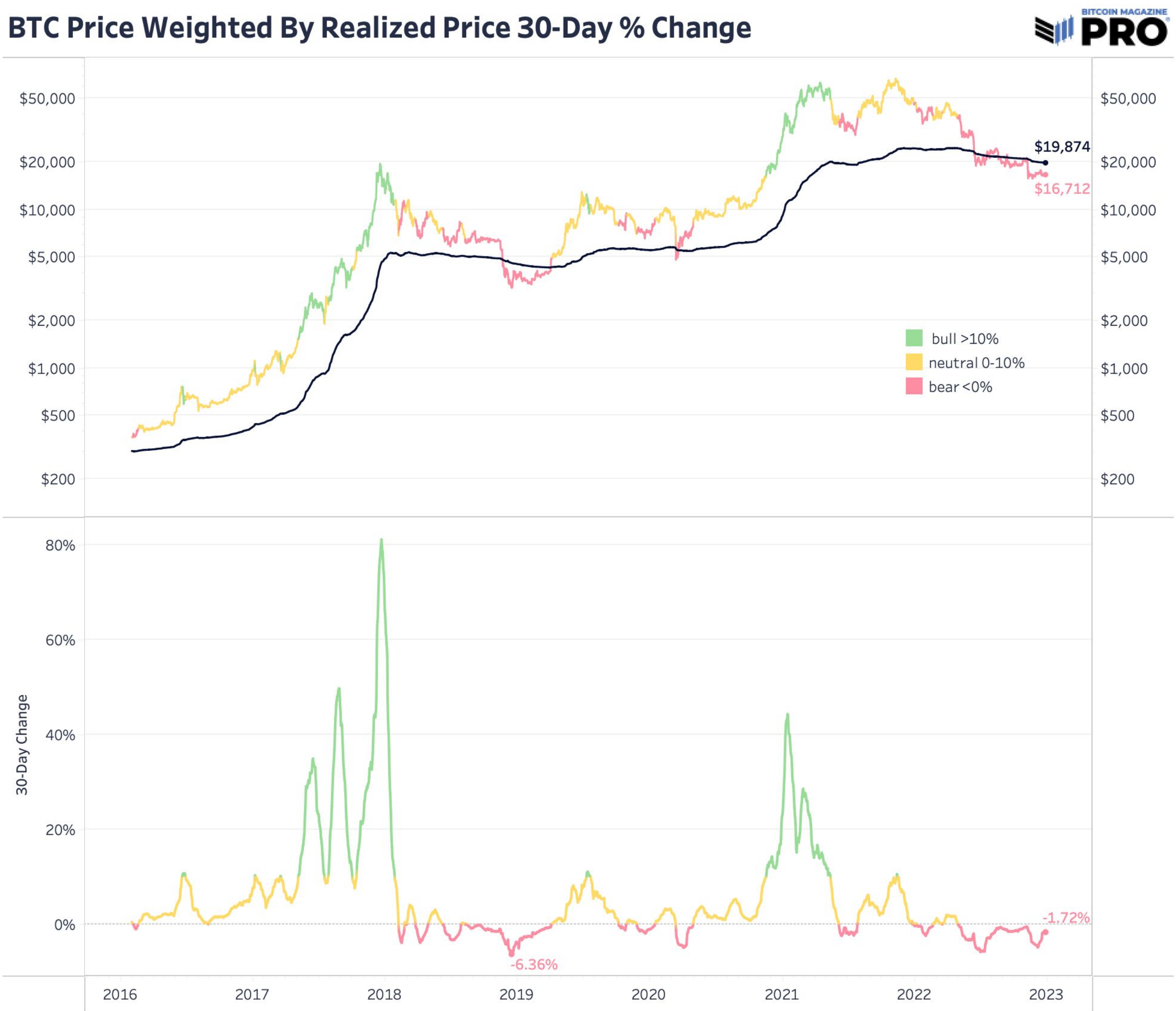
The bitcoin realized market cap is down 18.8% from all-time highs, which is the second-largest drawdown in its history. While the macroeconomic factors are something to keep in mind, we believe that this is a rare buying opportunity.



Source: Glassnode

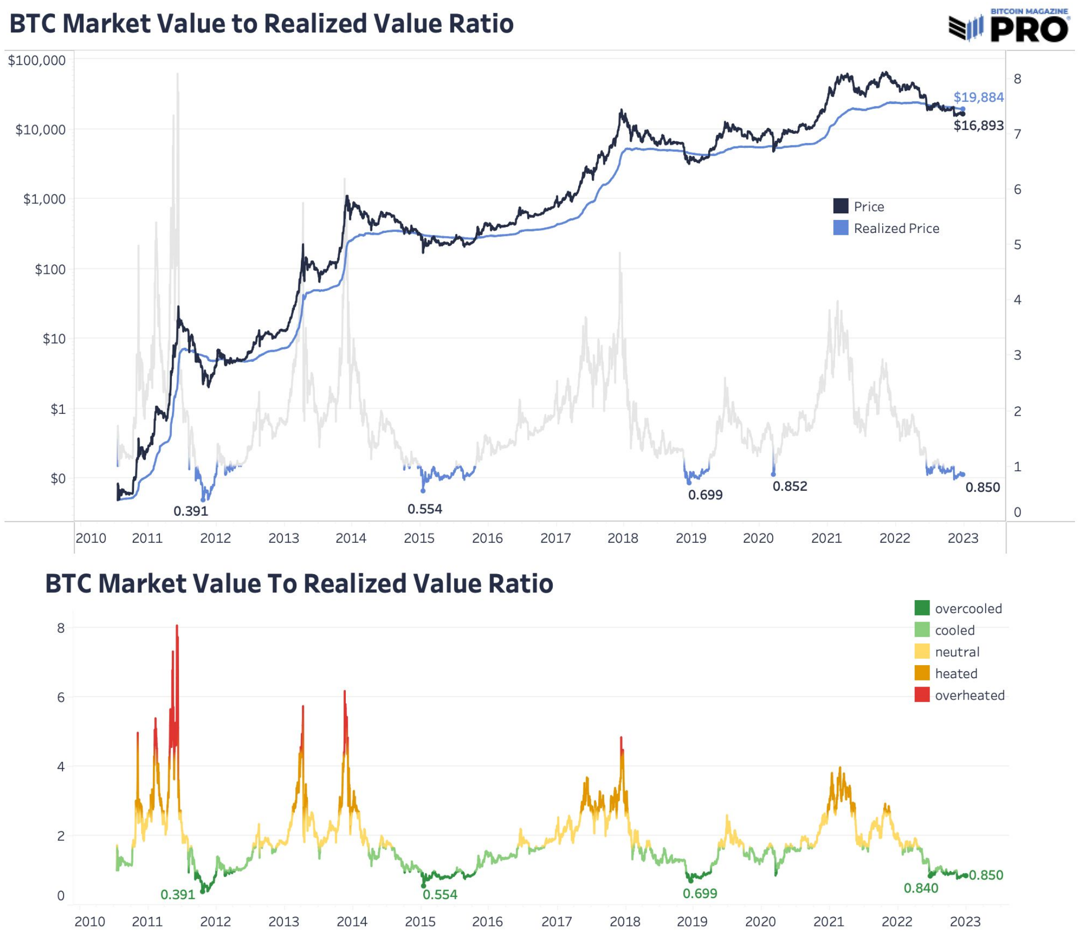
RARE OPPORTUNITY IN BITCOIN'S PRICE

It can be useful to evaluate the growth in bitcoin's realized price as a gauge to its true capital inflows and outflows. As shown below, given the macroeconomic environment and deteriorating liquidity conditions across the globe, bitcoin's realized price/market cap saw relative outflows over the course of the year with the bitcoin realized price now below $20,000.



Source: Glassnode

RARE OPPORTUNITY IN BITCOIN'S PRICE



Source: Glassnode

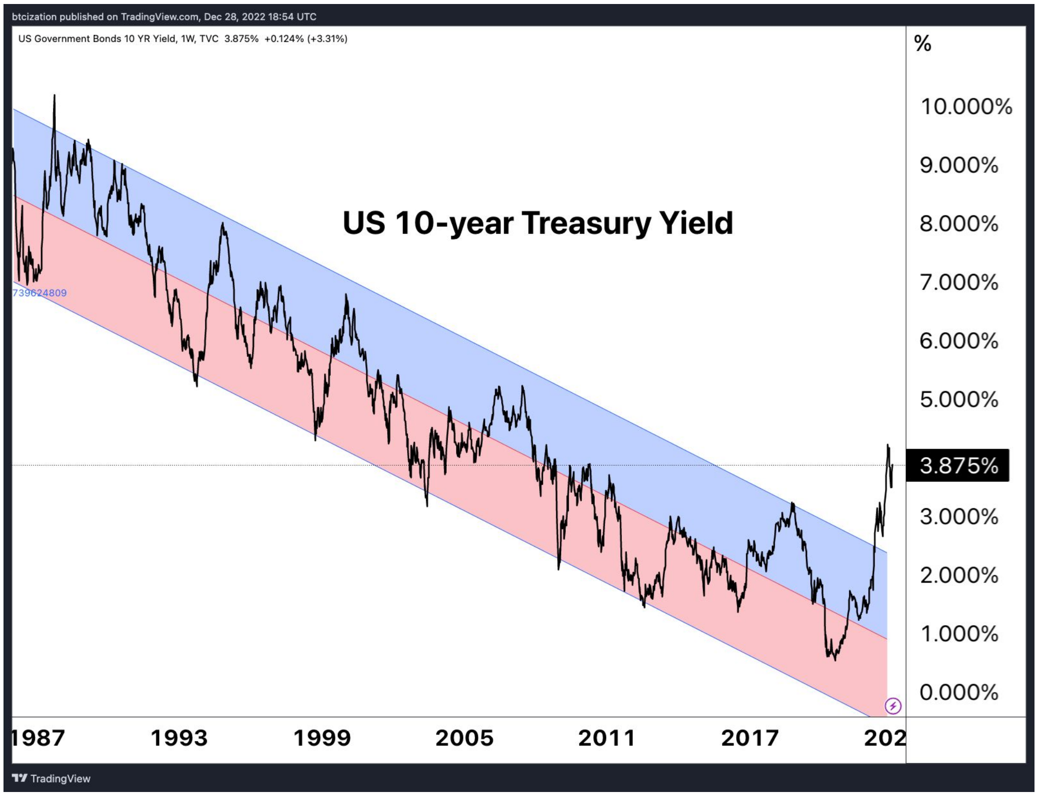
Relative to its history, bitcoin is at the phase of the cycle where it's about as cheap as it gets. Its current market exchange rate is approximately 20% lower than its average cost basis on-chain, which has only happened at or near the local bottom of bitcoin market cycles.

Current prices of bitcoin are in rare territory for investors looking to get in at a low exchange rate. Historically, purchasing bitcoin during these times has brought tremendous returns in the long term. With that said, readers should consider the reality that 2023 likely brings about bitcoin's first experience with a prolonged economic recession.

MACROECONOMIC ENVIRONMENT

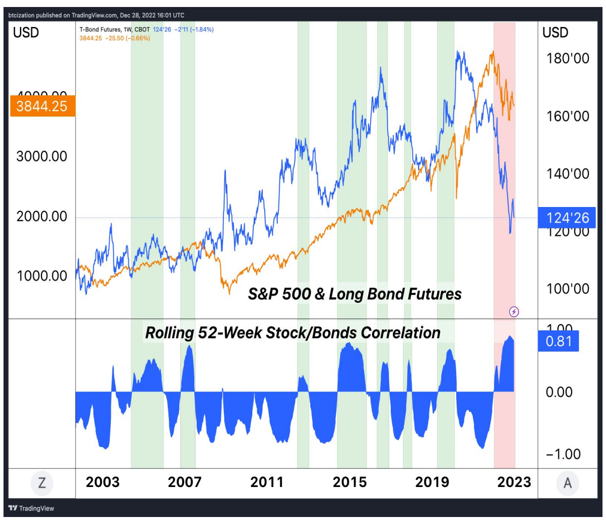
As we move into 2023, it's necessary to recognize the state of the geopolitical landscape because macro is the driving force behind economic growth. People around the world are experiencing a monetary policy lag effect from last year's central bank decisions. The U.S. and EU are in recessionary territory, China is proceeding to de-dollarize and the Bank of Japan raised its target rate for yield curve control. All of these have a large influence on capital markets.

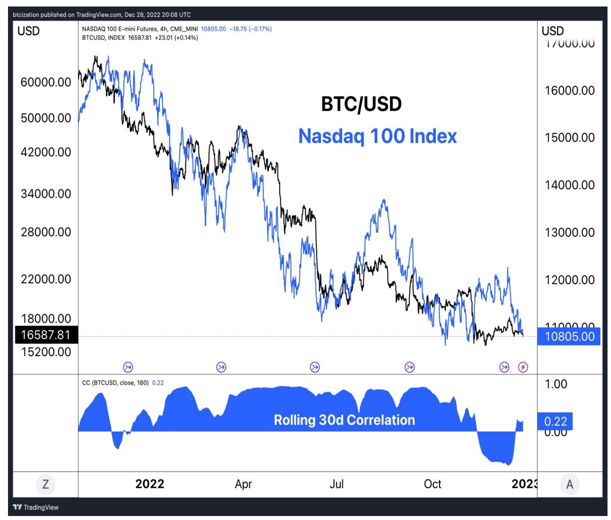
Nothing in financial markets occurs in a vacuum. Bitcoin's ascent through 2020 and 2021 — while similar to previous crypto-native market cycles — was very much tied to the explosion of liquidity sloshing around the financial system after COVID. While 2020 and 2021 was characterized by the insertion of additional liquidity, 2022 has been characterized by the removal of liquidity. Inflation rates not seen in four decades have caused the cost of capital to rapidly reprice higher.



MACROECONOMIC ENVIRONMENT

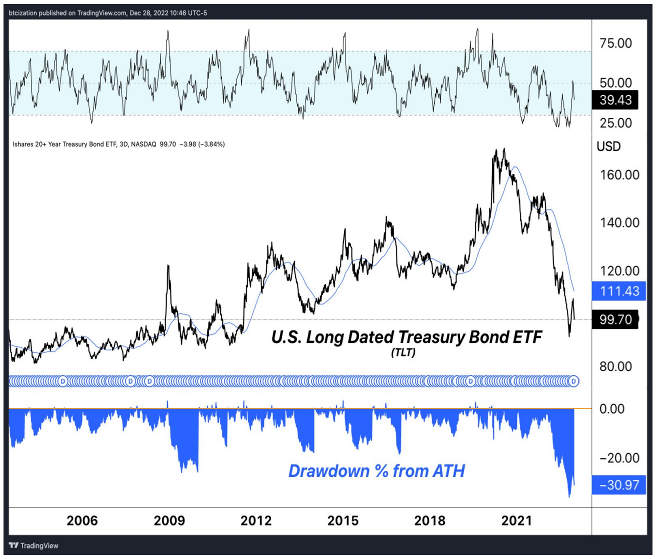
As a result of the rapid upwards repricing in interest rates, the global financial system saw its first stock-bond correlation crises since the ’60s/’70s, ending a 40-year period of inverse correlation for bonds during stock market drawdowns.



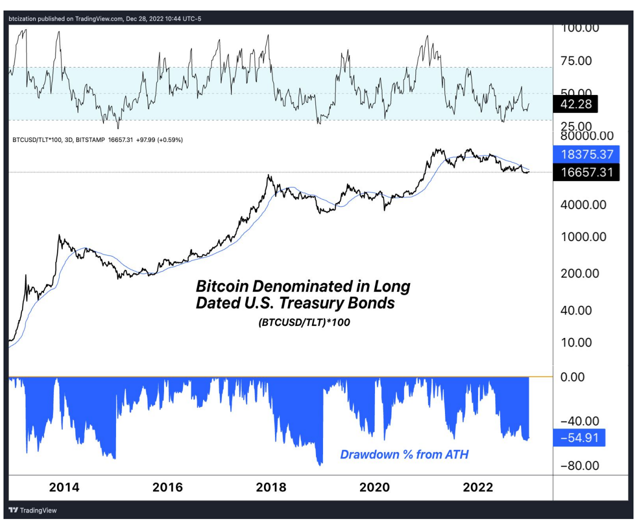


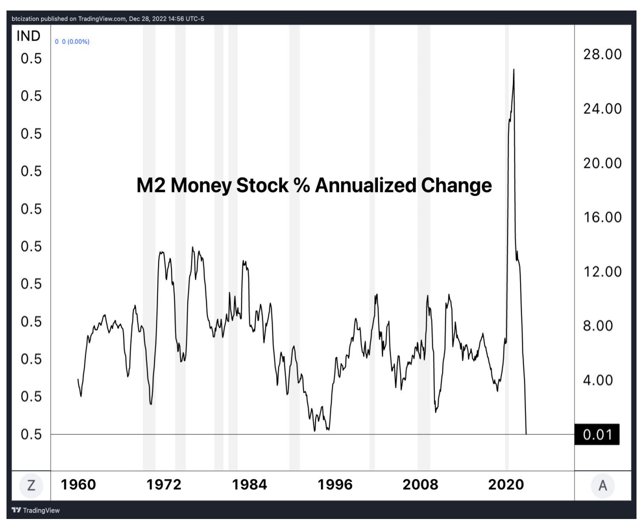
As the global reserve asset (U.S. Treasury bonds) saw its largest drawdown in modern history, valuations and liquidity across global markets suffered, dragging every asset along with it; bitcoin was obviously included.

MACROECONOMIC ENVIRONMENT



Interestingly enough, when denominating bitcoin against U.S. Treasury bonds (which we believe to be bitcoin's largest theoretical competitor for monetary value over the long term), comparing the drawdown during 2022 was rather benign compared to drawdowns in bitcoin's history.





MACROECONOMIC ENVIRONMENT

Looking at the bitcoin chart overlaid with the dollar index shows a clear inverse relationship between dollar strength and the bitcoin price. This will be something to watch with a hawkish Federal Reserve.

Source: Trading View

As we wrote in "[The Everything Bubble: Markets At A Crossroads](#)," "Despite the recent bounce in stocks and bonds, we aren't convinced that we have seen the worst of the deflationary pressures from the global liquidity cycle."

China continues to de-dollarize by selling U.S. Treasuries. The country's holdings are at a 12-year low: less than $1 trillion of U.S. debt for the sixth consecutive month. Both Japan and the U.K. have also reduced their holdings of U.S. debt. The three countries are the top three U.S. creditors, so their reduction in holdings may signify a loss of confidence for the U.S. Out of the top 10 holders of U.S. debt, only two countries increased their holdings while the other eight countries reduced them.

MACROECONOMIC ENVIRONMENT

In "The Bank of Japan Blinks And Markets Tremble," we noted, "As we continue to refer to the sovereign debt bubble, readers should understand what this dramatic upward repricing in global yields means for asset prices. As bond yields remain at elevated levels far above recent years, asset valuations based on discounted cash flows fall." Bitcoin does not rely on cash flows, but it will certainly be impacted by this repricing of global yields. We believe we are currently at the third bullet point of the following playing out:

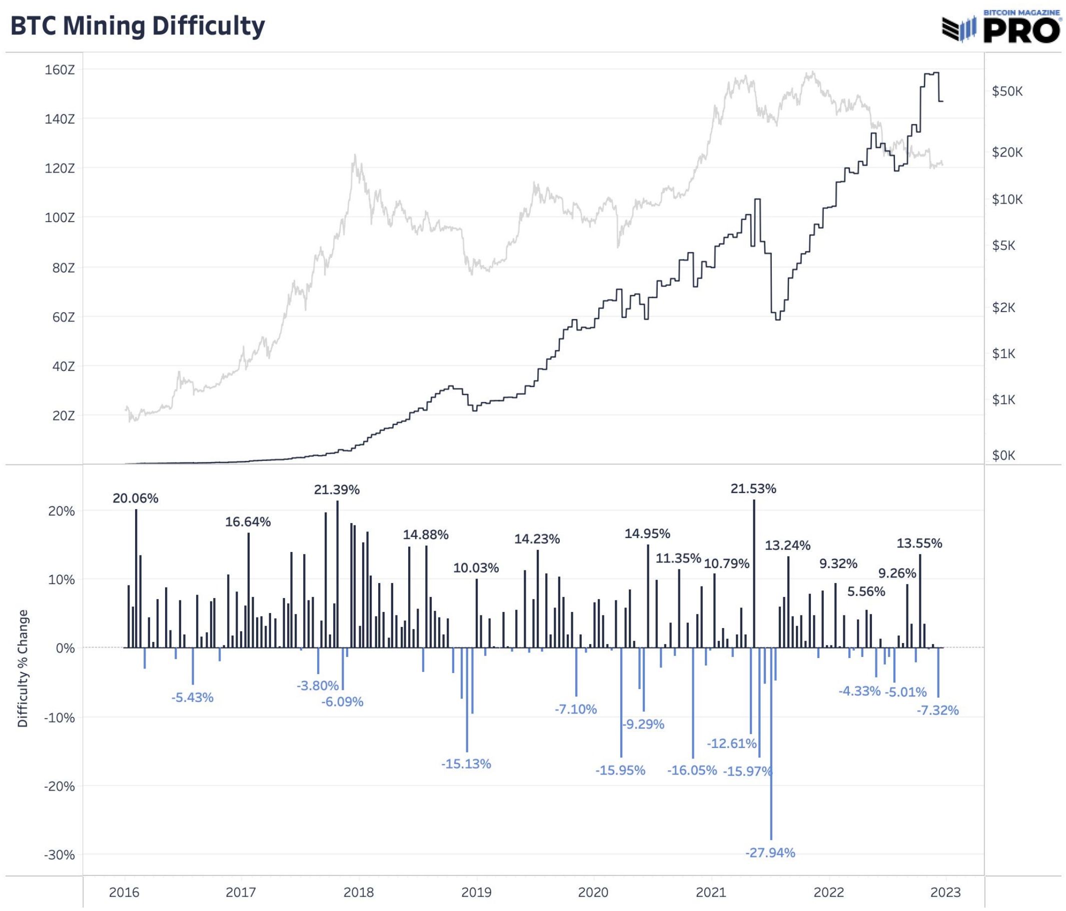
Source: Dylan LeClair

MACROECONOMIC ENVIRONMENT

These macroeconomic factors are important to keep in mind for investors who are also looking to bitcoin as an alternative investment to keep in their portfolio. Bitcoin now faces the headwinds of a global macroeconomic recession, a once-in-a-century performance for sovereign debt, rising persistent inflation around the globe and the popping of the global everything bubble that has affected nearly every asset, especially those further out on the risk curve. Somehow though, Bitcoin is once again “not dead.” Let’s zoom out and take a deeper look at bitcoin mining data and see why the Bitcoin network is stronger than ever.

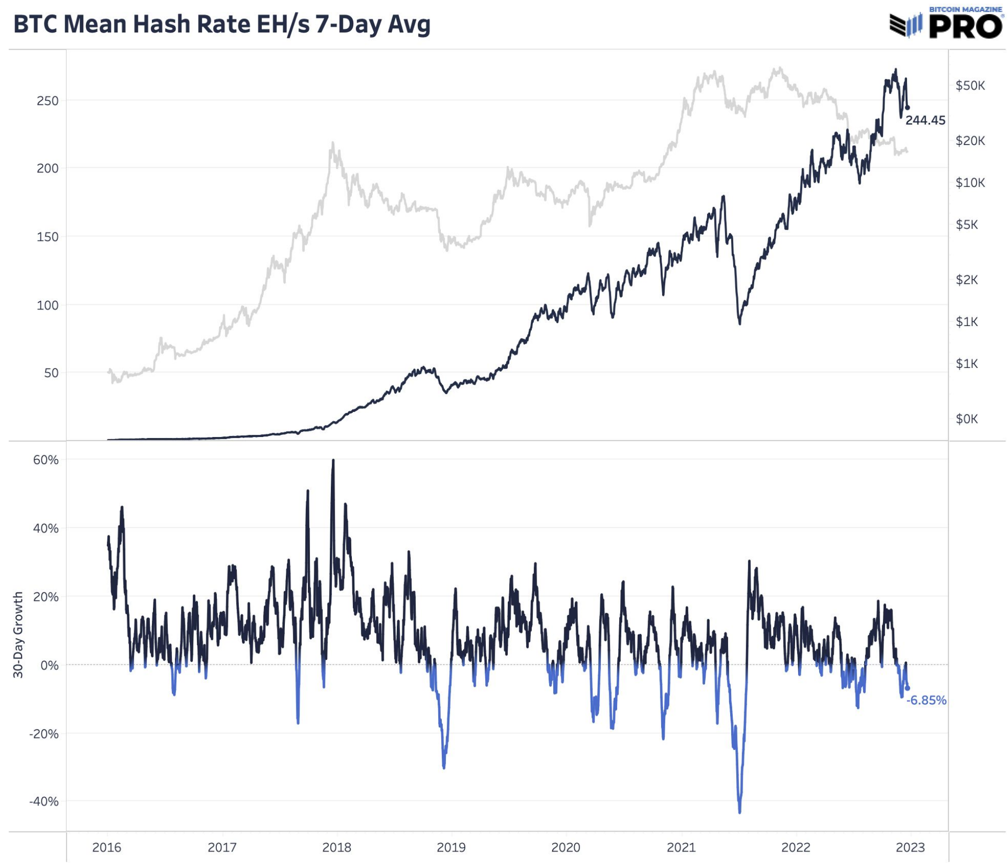
BITCOIN MINING & INFRASTRUCTURE

While the multitude of negative industry and worrying macroeconomic factors have had a major dampening on bitcoin's price, looking at the metrics of the Bitcoin network itself tell another story. The hash rate and mining difficulty gives a glimpse into how many ASICs are dedicating hashing power to the network and how competitive it is to mine bitcoin. These numbers move in tandem and both have almost exclusively gone up in 2022, despite the significant drop in price.



Source: Glassnode

BITCOIN MINING & INFRASTRUCTURE

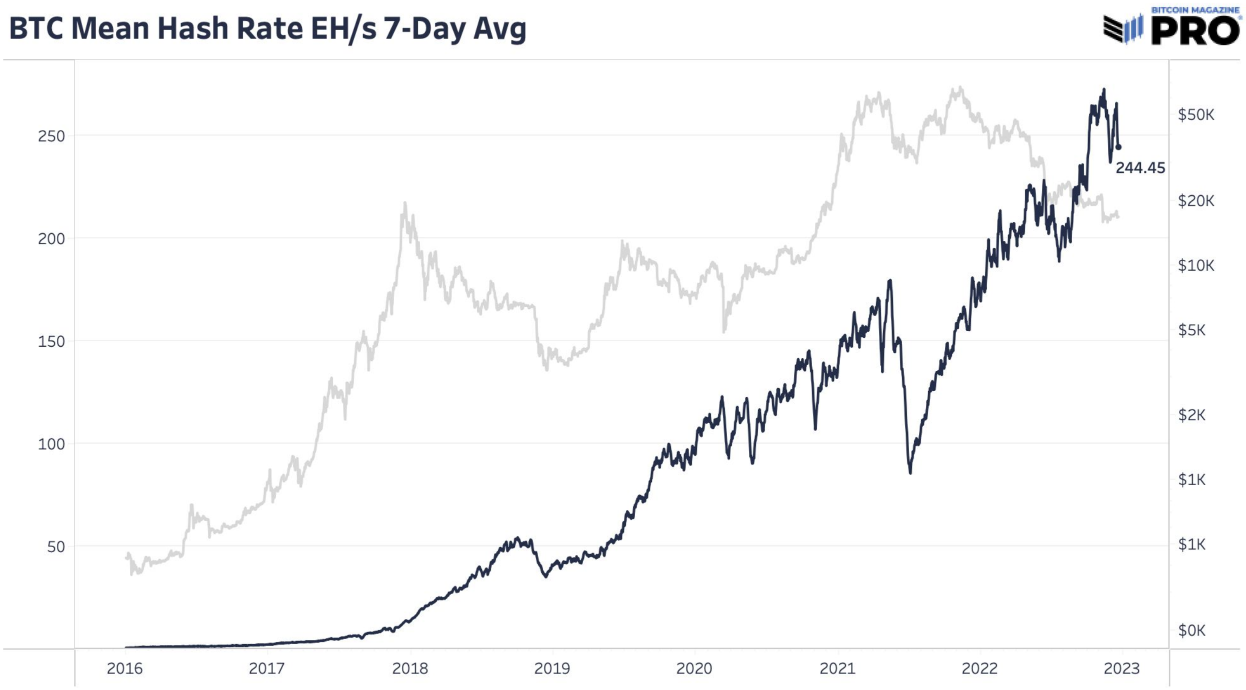


Source: Glassnode

By deploying more machines and investing in expanded infrastructure, bitcoin miners demonstrate that they are more bullish than ever. The last time the bitcoin price was in a similar range in 2017, the network hash rate was one-fifth of current levels. This means that there has been a fivefold increase in bitcoin mining machines being plugged in and efficiency upgrades to the machines themselves, not to mention the major investments in facilities and data centers to house the equipment.

In his appearance on “Going Digital” LeClair explained, “The marginal production cost of a single bitcoin is going up forever in a programmatic way, as the hash rate goes up and to the right.” It is likely that the price of bitcoin will trend toward its marginal cost of production.

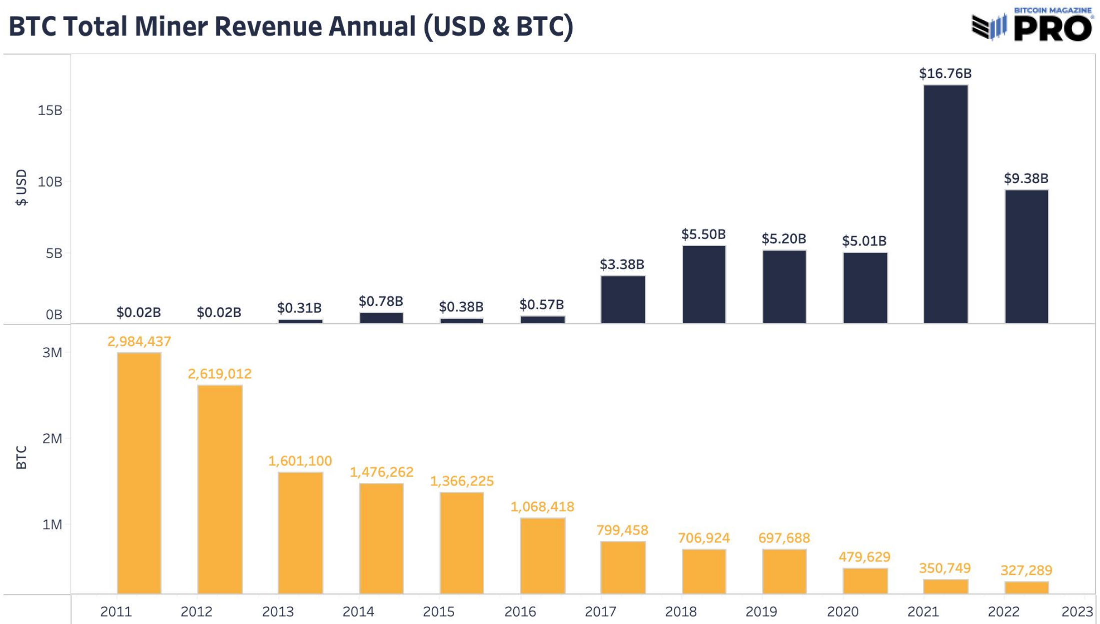
BITCOIN MINING & INFRASTRUCTURE



Source: Glassnode

Because the hash rate increased while the bitcoin price decreased, miner revenue took a beating this year after a euphoric rise in 2021. Public miner stock valuations followed the same path with valuations falling even more than the bitcoin price, all while the Bitcoin network's hash rate continued to rise. This dynamic of price collapsing with hash rate increasing has pummeled bitcoin miners' hash price, total miner revenue per terahash and squeezed miner profit margins after a golden era of mining in 2021. Public miner valuations collapsed across the board, with most losing 90% or more in equity valuations this year. Miner revenue in USD terms was down 44% in 2022 after rising 234% in 2021. In BTC terms, revenue was down 6.7% as of December 19.

BITCOIN MINING & INFRASTRUCTURE



Source: Glassnode | *2022 Dec 19

In the "State Of The Mining Industry: Survival Of The Fittest," we looked at the total market capitalization of public miners which fell by over 90% since January 2021.

Source: Trading View

BITCOIN MINING & INFRASTRUCTURE

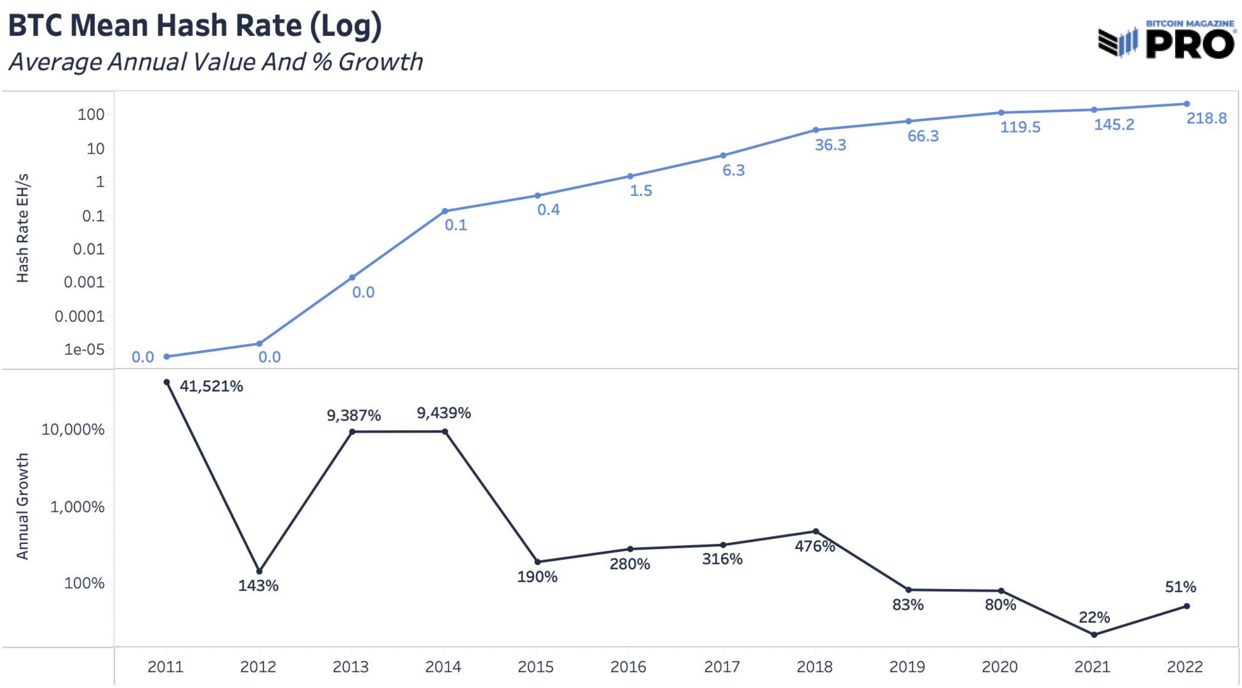
”While the worst of the drawdown of public miner market capitalizations and hash price (miner revenue per tera hash) has already taken place, we expect that the tough conditions can last for a sustained period of time, squeezing many market participants along the way... The elephant in the room for the state of the mining industry is the reality that some of the industry’s biggest hosting facilities are either already bankrupt, teetering on the edge of bankruptcy or are completely out of deployable hash rate for idle ASICs.”

We expect more of these companies to face challenging conditions because of the skyrocketing global energy prices and interest rates mentioned above. Core Scientific and Compute North have both filed for Chapter 11 bankruptcy with Argo Blockchain being close behind. It is likely that additional companies will declare bankruptcy, losing their market share to more profitable companies, but destabilizing the industry at large in the process.

“We will be intently watching hash rate and the state of the mining industry going forward. Although the industry has been bludgeoned over the course of 2022, we suspect it isn’t out of the woods quite yet.”

BITCOIN MINING & INFRASTRUCTURE

The pressure on the mining industry likely isn't letting up anytime soon as the competition only heats up for the continued decline in annual bitcoin issuance. We're likely to see more mining fallout in 2023 for many reasons, but the bigger story is the continued rise in network hash rate over time as discussed above. In Bitcoin's entire existence, network hash rate has yet to see a year of negative growth.



Source: Glassnode

INCREASING SCARCITY

It is important to note that these companies going under will have little-to-no effect on the Bitcoin network itself. When China banned bitcoin mining in 2021, much of the network's hash rate turned off until machines had been moved to new locations and the network could recover without a discernible change in transactions being confirmed — all thanks to the Bitcoin network's difficulty adjustment.

Investors should also be aware of bitcoin's history of four-year cycles. While past performance does not guarantee future results, there has typically been a major price run-up after the issuance schedule of bitcoin changes to release half as much bitcoin with each 10-minute block. This halving event happens every 210,000 blocks or roughly every four years. After the last halving in May 2020, miners were rewarded 6.25 bitcoin for each block they mined, down from 12.5 during the previous cycle. The next halving is on schedule to occur in April 2024. Once this happens, miners will be competing for 3.125 bitcoin released to the network with every block, cutting down the daily supply of bitcoin being issued from about 900 bitcoin per day to approximately 450 bitcoin per day. Miners will be spending the same amount of resources to be rewarded half the amount of bitcoin they are currently earning. Considering many long-term holders haven't shown signs of being willing to let go of their coins, this reduction in newly created bitcoin makes the asset even more scarce.

Another way to analyze bitcoin's scarcity is by looking at the illiquid supply of coins. Liquidity is quantified as the extent to which an entity spends their bitcoin. Someone that never sells has a liquidity value of 0 whereas someone who buys and sells bitcoin all the time has a value of 1. With this quantification, circulating supply can be broken down into three categories: highly liquid, liquid and illiquid supply.

INCREASING SCARCITY

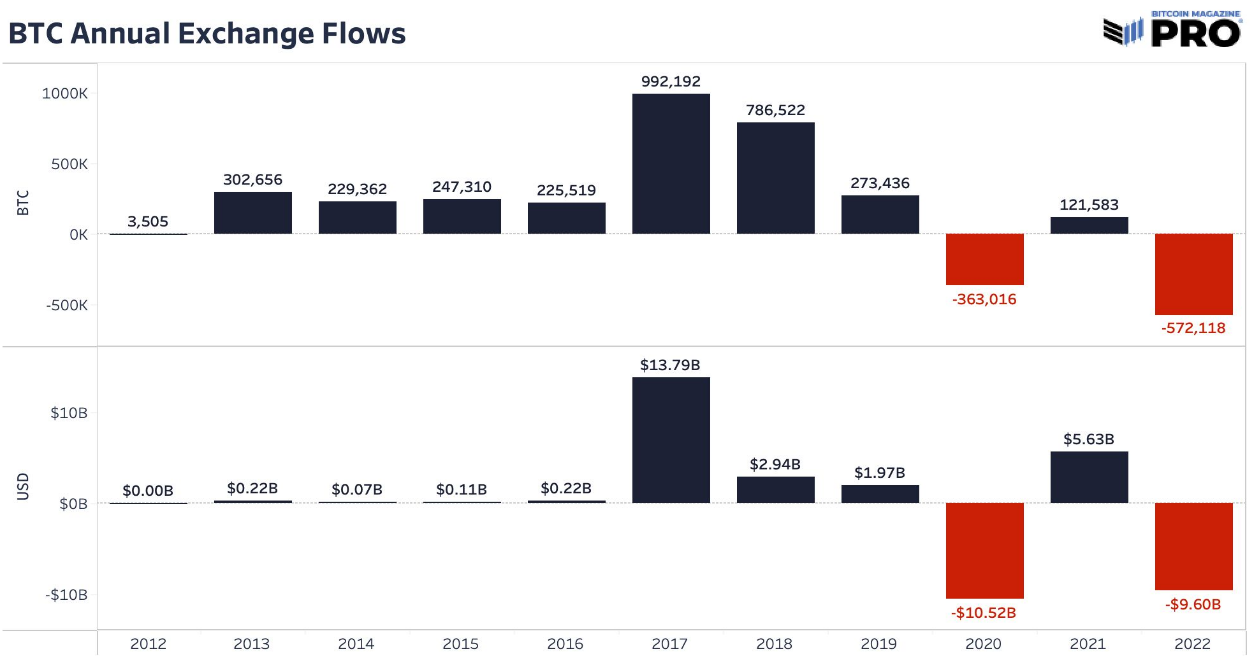
Illiquid supply is defined as entities that hold over 75% of the bitcoin they deposit to an address. Highly liquid supply is defined as entities that hold less than 25%. Liquid supply is between the two. This illiquid supply quantification and analysis was developed by Rafael Schultze-Kraft, co-founder and CTO of Glassnode.

Source: Glassnode

INCREASING SCARCITY

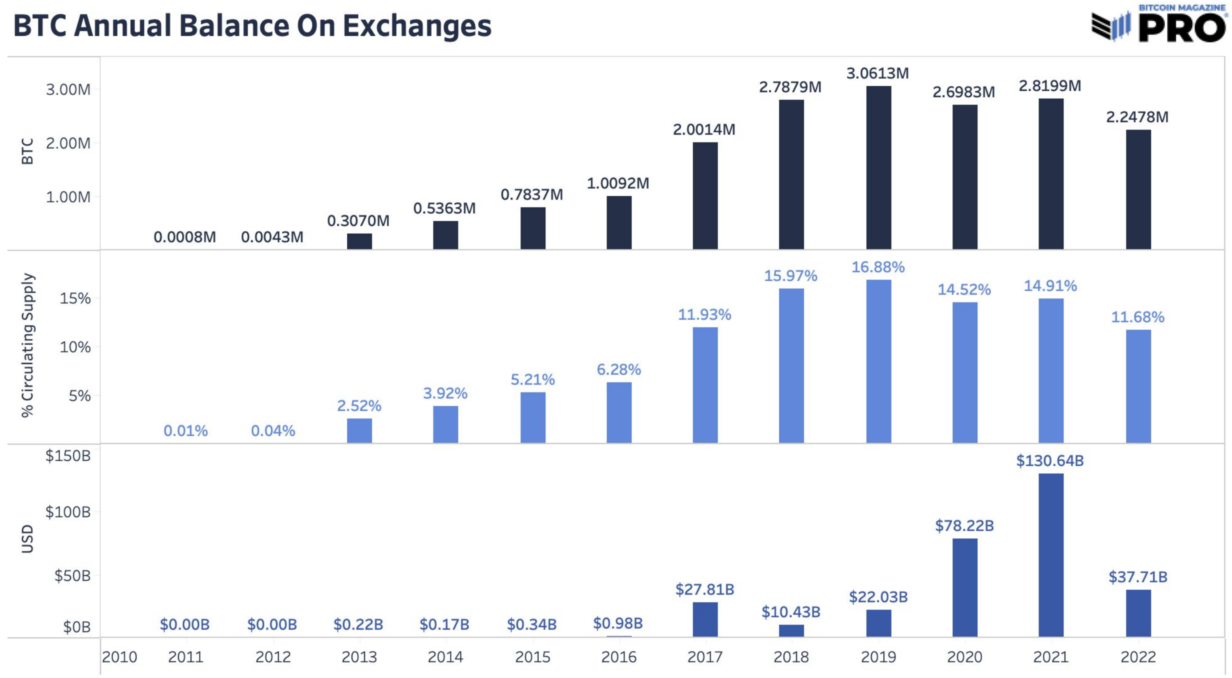
2022 was the year of getting bitcoin off exchanges. Every recent major panic became a catalyst for more individuals and institutions to move coins into their own custody, find custody solutions outside of exchanges or sell off their bitcoin entirely. When centralized institutions and counterparty risks are flashing red, people rush for the exit. We can see some of this behavior through bitcoin outflows from exchanges.

In 2022, 572,118 bitcoin worth $9.6 billion left exchanges, marking it the largest annual outflow of bitcoin in BTC terms in history. In USD terms, it was second only to 2020, which was driven by the March 2020 COVID crash. The Terra/LUNA and FTX (FTT token) crashes were the sparks to drive the outflow trend this year as bank runs and rushes for liquidity ensued. After years of a rising share of circulating supply finding its way onto exchanges, we're now seeing that trend reversing. 11.68% of bitcoin supply is now estimated to be on exchanges, down from 16.88% back in 2019.



*Source: Glassnode | Dec 31 Balance Change & Closing Prices | *2022 Dec 19 Balance Change & Closing Price*

INCREASING SCARCITY



*Source: Glassnode | Dec 31 Balance | *2022 Dec 19 Balance*

These metrics of an increasingly illiquid supply paired with historic amounts of bitcoin being withdrawn from exchanges — ostensibly being removed from the market — paint a different picture than what we're seeing with the factors outside of the Bitcoin network's purview. While there are unanswered questions from a macroeconomic perspective, bitcoin miners continue to invest in equipment and on-chain data shows that bitcoin holders aren't planning to relinquish their bitcoin anytime soon.

CONCLUSION

The varying factors detailed above give a picture for why we are long-term bullish on the bitcoin price going into 2023. The Bitcoin network continues to add another block approximately every 10 minutes, more miners keep investing in infrastructure by plugging in machines and long-term holders are unwavering in their conviction, as shown by on-chain data.

With bitcoin's ever-increasing scarcity, the supply side of this equation is fixed, while demand is likely to increase. Bitcoin investors can get ahead of the demand curve by averaging in while the price is low. It's important for investors to take the time to learn how Bitcoin works to fully understand what it is they are investing in. Bitcoin is the first digitally native and finitely scarce bearer asset. We recommend readers learn about self-custody and withdraw their bitcoin from exchanges. Despite the negative news cycle and drop in bitcoin price, our bullish conviction for bitcoin's long-term value proposition remains unfazed.

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