BLOCKWARE SOLUTIONS™

2024 Market Forecast

Prepared by Blockware Intelligence

Key Predictions

Disclaimer: All of the statements below are strictly theoretical predictions. Although data-driven, these hypotheses should not be interpreted as investment advice. Own your own trade.

Macro

- Fed Rate Cuts starting in Q2
- Stocks Perform Well on the Back of Yield Curve Steepening and Capital Rotation
- Moderate Softening of the Labor Market & Consumer Demand

Bitcoin

- ETF approvals send BTC to new all-time high
- Hashprice Retests Bottom Post-Halving
- Post-halving → TX Fees Greater than the Block Subsidy
- Continued Rise in Hashrate/Mining Difficulty Despite Drop in Block Subsidy
- Hashprice Bull Market from Higher BTC Price & Higher TX Fees
- Long-Term Holders Begin Slowly Distributing Supply After All-Time High

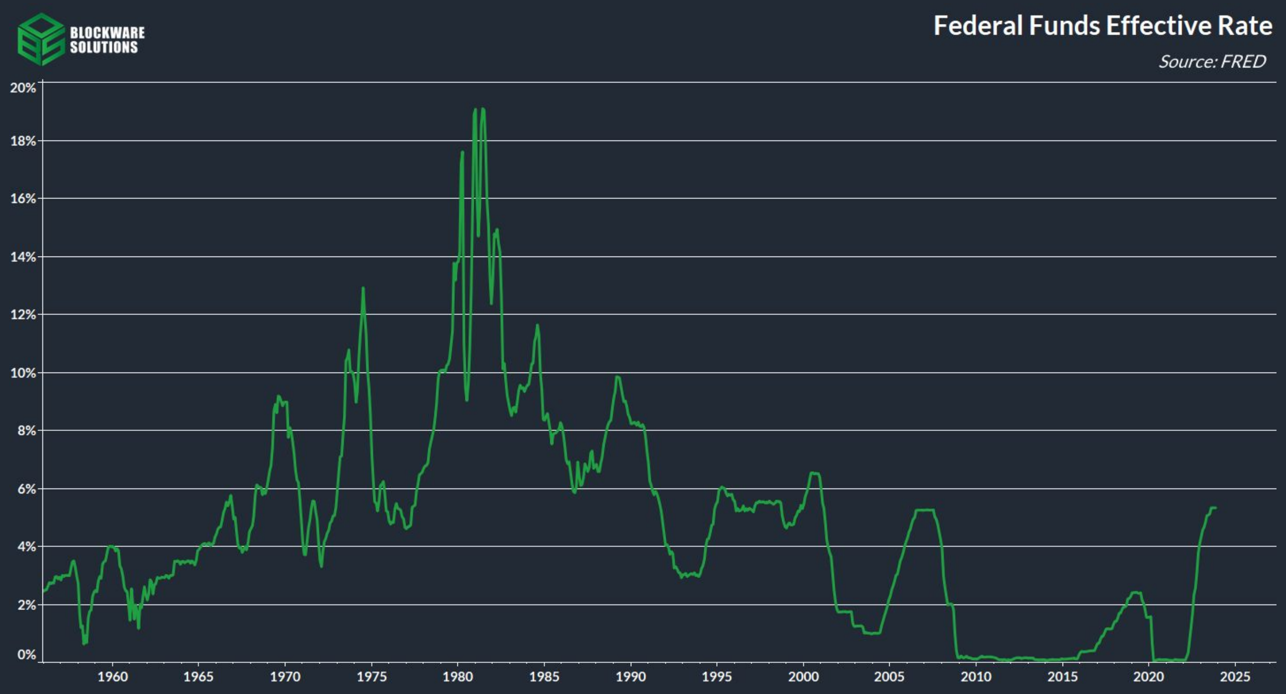
Fed Rate Cuts Starting in Q2

The Federal Reserve will begin cutting the FFR as disinflation continues

While CPI has not reached the notorious 2% target, it is down significantly from its June 2022 high of 9.06%, with November CPI coming in at 3.14%. Persistent disinflation has allowed the Fed to relent it's rate hiking crusade and hawkish rhetoric.

After finishing 2023 with three consecutive Fed meetings in which they left the Federal Funds rate unchanged, the stage is set for a dovish pivot sometime in 2023. CME FedWatch tool has placed a 99.9% probability of a rate cut by May, while the Treasury market sees Q3-Q4 cuts.

The Fed admittedly waited too long to start the 2022/23 rate hikes as inflation surged well before the first hike. In order to avoid making the same mistake in the other direction, the Fed plans to cut rates prior to the effects of the high rates, higher unemployment and decreased consumer spending, taking hold of the market.



The 2022/23 hiking cycle was the fastest increase of the Fed Funds Rate on a % basis in history. The late response by the Fed to rising inflation caused this knee-jerk reaction. The Fed plans to get out in front with cuts early, with the goal of achieving a soft landing.

Sources: FRED, CME

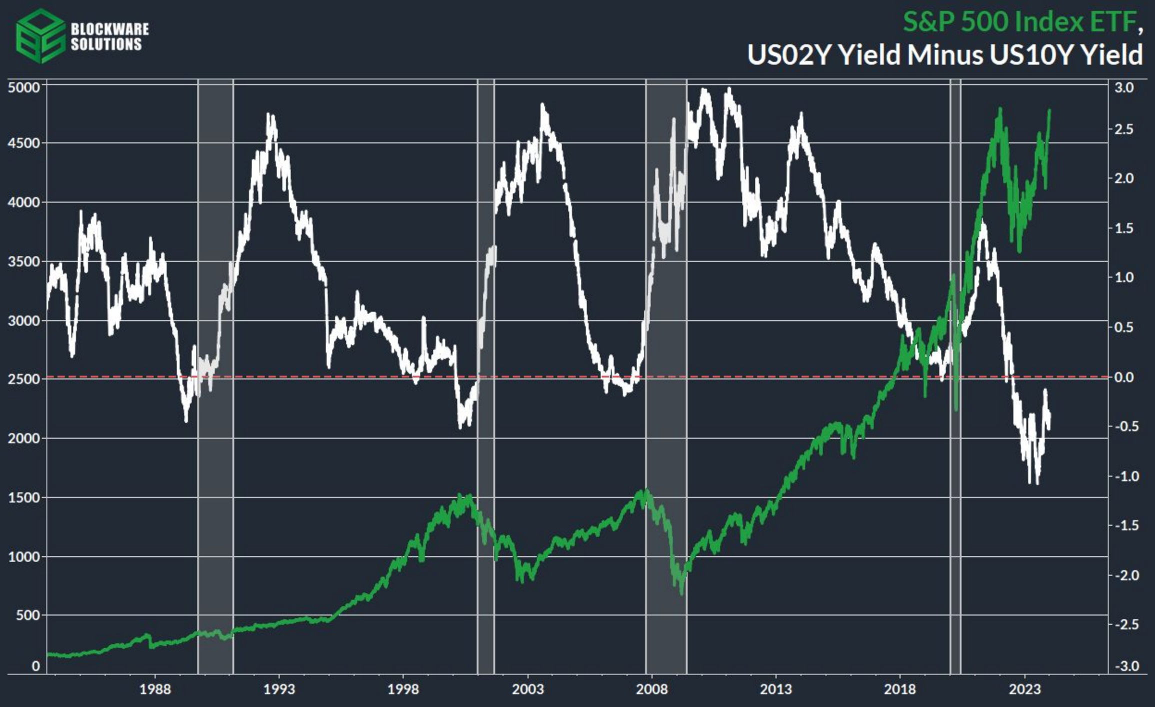
Strong Performance from Equities

Stock market rally on the back of yield curve steepening

2023 has been a high performing year for the US Stock Market (paling in comparison to BTC of course). We expect a similar bull market in equities to occur in 2024.

Attracted by the higher yields, investors have parked ~$5.8 trillion into money market accounts. This capital has already begun to FOMO its way back into risk as yields decline. This is likely a trend that continues in 2024 and drives stocks higher.

Moreover, the yield curve has begun steepening as short-duration treasuries catch a bid. A revert of the yield curve back into positive territory likely takes place in 2024. Historically, the yield curve flipping back to positive after an inversion has signaled the start of a recession. While recessions often bring about poor equity performance, the prospect of a soft landing should bring stocks higher in 2024.



The US Stock Market is poised for a continued bull run, with investors moving $5.8 trillion from money markets to risk assets. Moreover, the yield curve may steepen and revert to positive territory, signaling impending recession.

Sources: FRED, ici.org

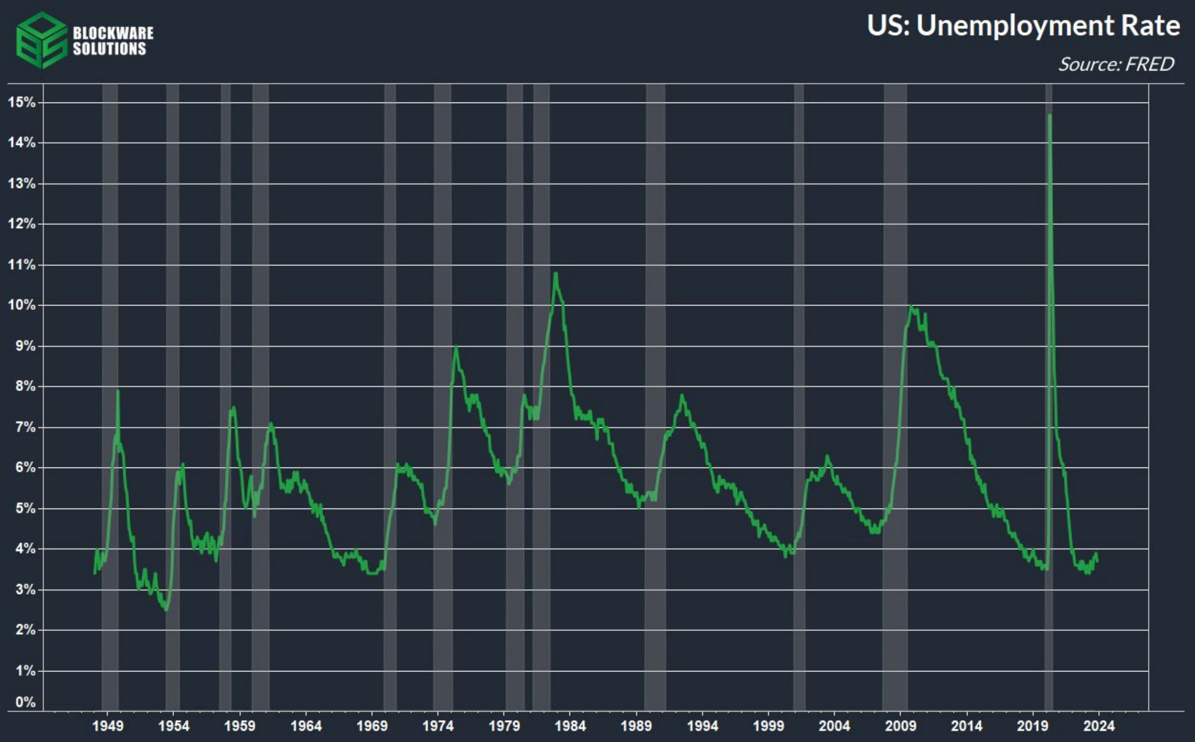
Softening of Labor Market and Consumer Demand

The lagged effects of restrictive monetary policy will manifest moderately

The recession that many analysts deemed as inevitable for 2023 simply never arrived. Aside from stress on long-bond exposed banks, which was papered over with BTFP, the effects of the Fed's restrictive monetary policy have yet to manifest in the economy. This will likely change in 2024.

As alluded in the previous slide, the un-inversion of the yield curve has historically been an accurate recession indicator. The tell-tale signs of a recession, rising unemployment and decreased demand from consumers, may occur in 2024 as the lagged effects of the rate hikes begin to take hold. Our team believes that based on current strength in the labor market and forward earnings, this softening will be moderate.

While macro bears have been proven wrong time and time again throughout the past year, the fastest hiking cycle in history following the largest monetary expansion in history is bound to have some impact. The magnitude and timing of said recession are what remains unknown.



Although the unemployment rate has begun slowly trickling up, it remains at historically low levels, with zero indication of a recession. However, the lagged effects of tight monetary policy will soon take a toll on the labor market.

Sources: FRED, BLS

Bitcoin - Spot ETFs Send BTC to new All-time Highs

The approval of Spot BTC ETFs by the SEC will ignite a bull market

The spot Bitcoin ETF has been the talk of the town throughout 2023, and 2024 will be no different. The betting odds that the Securities & Exchange Commission approves an ETF by January 10th, 2024 are -1,667; which is an implied probability of 94.3%.

It should go without saying that owning a Bitcoin ETF is not the same thing as owning real Bitcoin in which you possess the private keys. However, it's apparent that a majority of investors are not yet comfortable with taking that responsibility and prefer to receive exposure to Bitcoin's price action through a registered investment vehicle. The ease of access and outsourcing of custody that an ETF provides will open the floodgates for portfolio managers, financial advisors, and public institutions looking to build a Bitcoin position.

This will likely have a significant impact on the Bitcoin price as some % of the hundreds of trillions of dollars allocated to equities and treasuries rebalance into Bitcoin. The price of gold increased by 250% in the years following it's spot ETF approval in 2004.

The listing of a gold ETF in 2004 marked the beginning of a massive bull-market in the price of gold that lasted for 8 straight years. We expect the Bitcoin market to react similarly following the approval of a spot ETF in January.

Sources: Glassnode

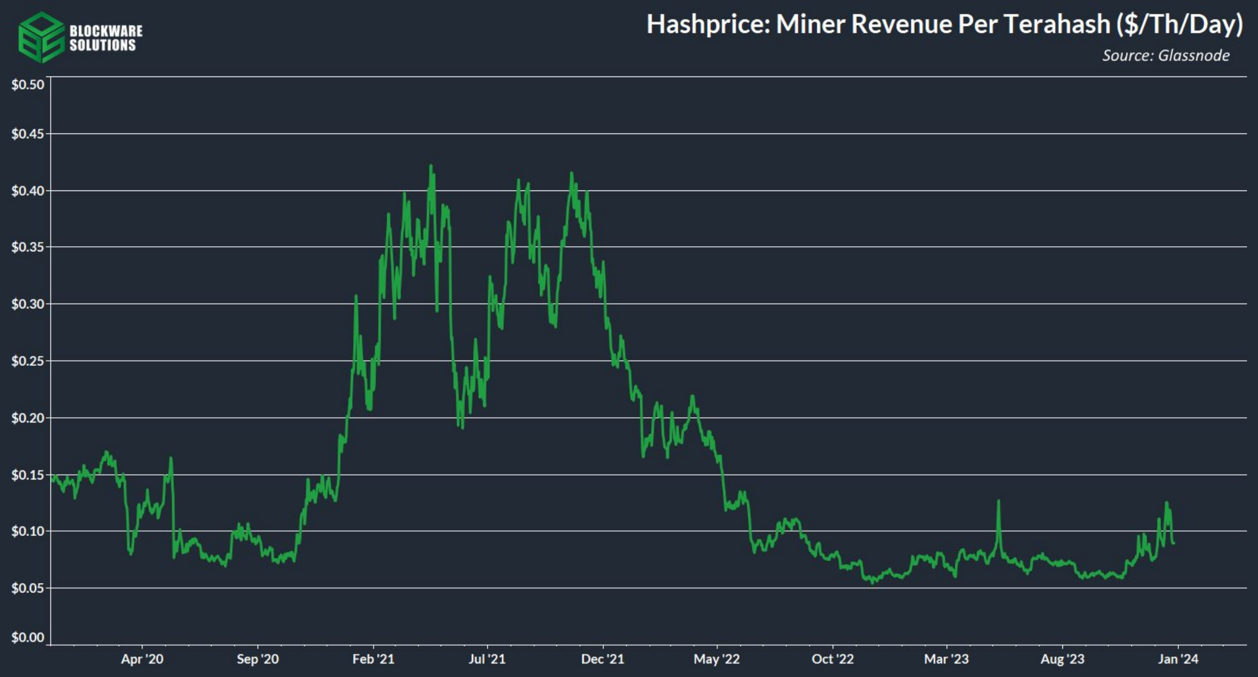
Hashprice Retests Cycle Lows Post-Halving

Hashprice will hit 6¢ after the block subsidy drops to 3.125

Hashprice ($/Th/Day) is a measure of revenue earned from Bitcoin mining. Due to rising mining difficulty and the four-year block subsidy halvings, hashprice has endured a perennial downtrend. However, mining difficulty is not immediately reflexive to increases in the Bitcoin price as growth in difficulty requires significant amounts of real-world development: ASIC manufacturing, energy production, mining infrastructure, etc.

The lagged growth of mining difficulty provides the opportunity for incumbent Bitcoin miners to profit significantly during bull markets. Notice the massive spike in hashprice during the 2021 bull market.

The 2024 Bitcoin halving, projected to occur in mid-April, will be the final stress test for Bitcoin miners, as hashprice likely retraces the lows it made during the bear market. Miners with efficient machines and low energy costs will survive the drop in revenue, and then enjoy the profits of the subsequent bull market.



Hashprice measures the amount of daily revenue earned by Bitcoin miners. $0.05/Th/Day is a key long-term support level, and it likely gets tested following the 2024 halving, flushing out the weakest miners on the network one last time before the bull market.

Sources: Glassnode

Transaction Fees will Surpass Block Subsidy

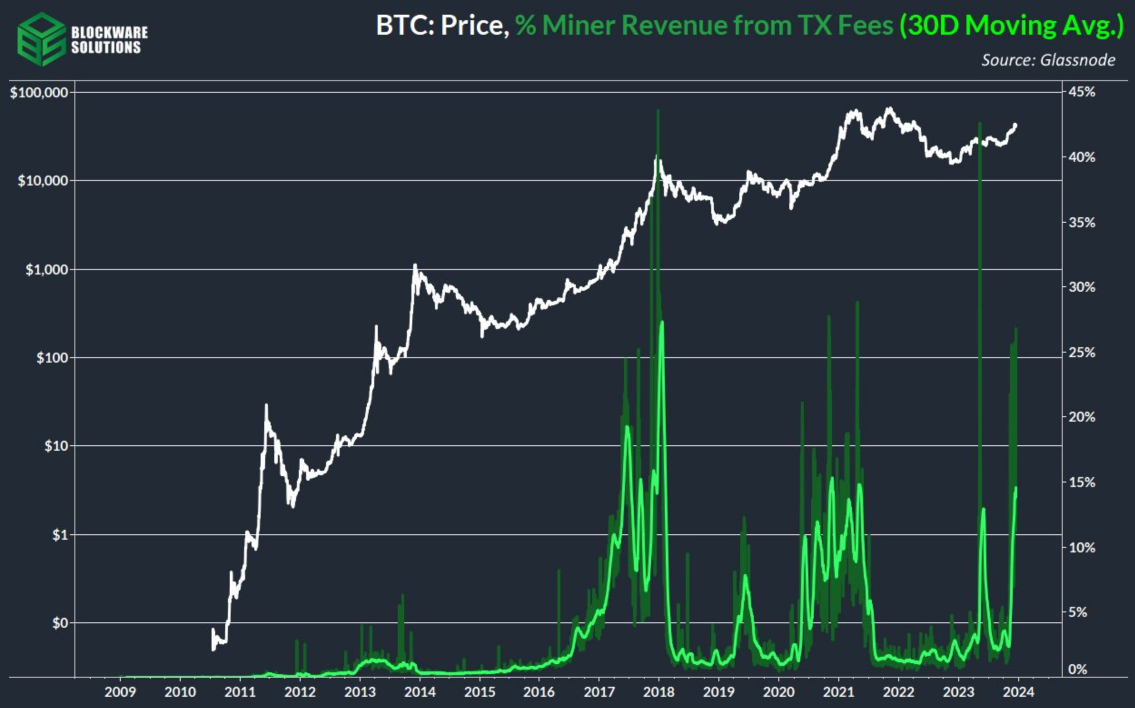
After the halving miners will earn more BTC from TX fees than the subsidy

Transaction fees have historically been an insignificant fraction of total Bitcoin mining revenue, this is subject to change as the block subsidy decreases in size with each halving.

Fees have been the highest during bull markets. Occasionally there have been blocks in which fees made up a greater portion of revenue than the block subsidy, but this is not a frequent enough occurrence to appear when looking at moving averages.

The rise in popularity of inscriptions in 2023 has shown the effect of a marginal increase in demand for block space has on transaction fees. Users must bid fees higher in order to incentivize miners to include their transactions in the limited block space (~4mb per block).

With the block subsidy dropping to 3.125, and an impending surge in demand coinciding with the bull market, fees, during the height of the bull run, will be a greater % of total miner revenue than the block subsidy.



This will be the first epoch in which transaction fees consistently make up a greater share of total miner revenue than the block subsidy (new BTC being issued to miners). The inscription craze foreshadowed the effect that heightened demand for block space has on transaction fees.

Sources: Glassnode

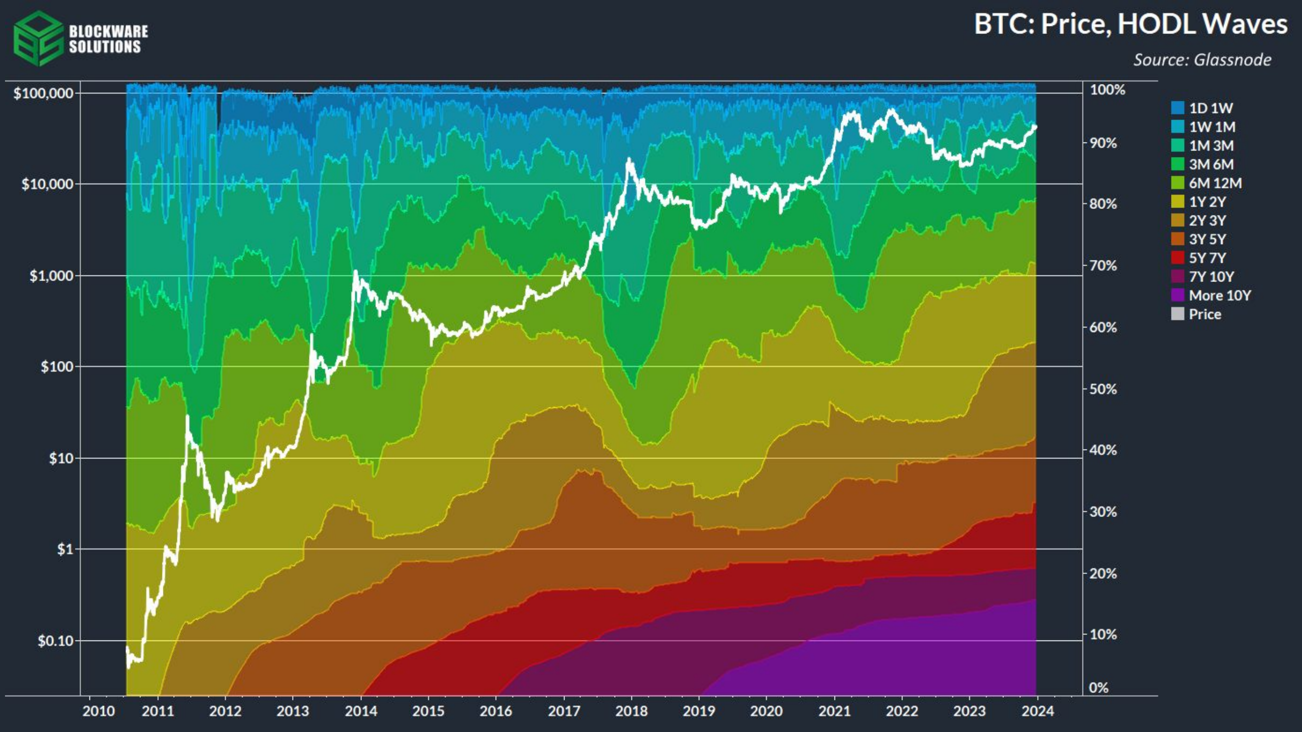
Long Term Holders Begin Distributing Supply

When BTC reaches new all-time highs, some HODL'd coins will move

71% of Bitcoin's circulating supply has not moved in 1 year or longer. This much illiquidity on the supply side has never before been the case in Bitcoin's history, and has been a primary catalyst for this years price action. These coins are held by users with high degrees of conviction; they've HODL'd through the lows of the bear market as well as through 160% gains in 2023.

So far we've seen no signs of movement from these coins, in fact, these users have continued to accumulate coins throughout the year. Historically, it has taken an exponential rise in price before these users begin distributing some coins back into the market; "taking profits" in other words.

We expect that these long-time held coins will not begin moving until BTC surpasses it's previous all-time high of $69,000.



The "HODL Waves", a metric created by Unchained, show the distribution of BTC based on the last time each coin was moved on-chain. Over time a greater % of the supply has not moved, indicating an unrelenting conviction from Bitcoin holders. Each time supply consolidates with long-term holders has led to an exponential increase in the USD price of BTC.

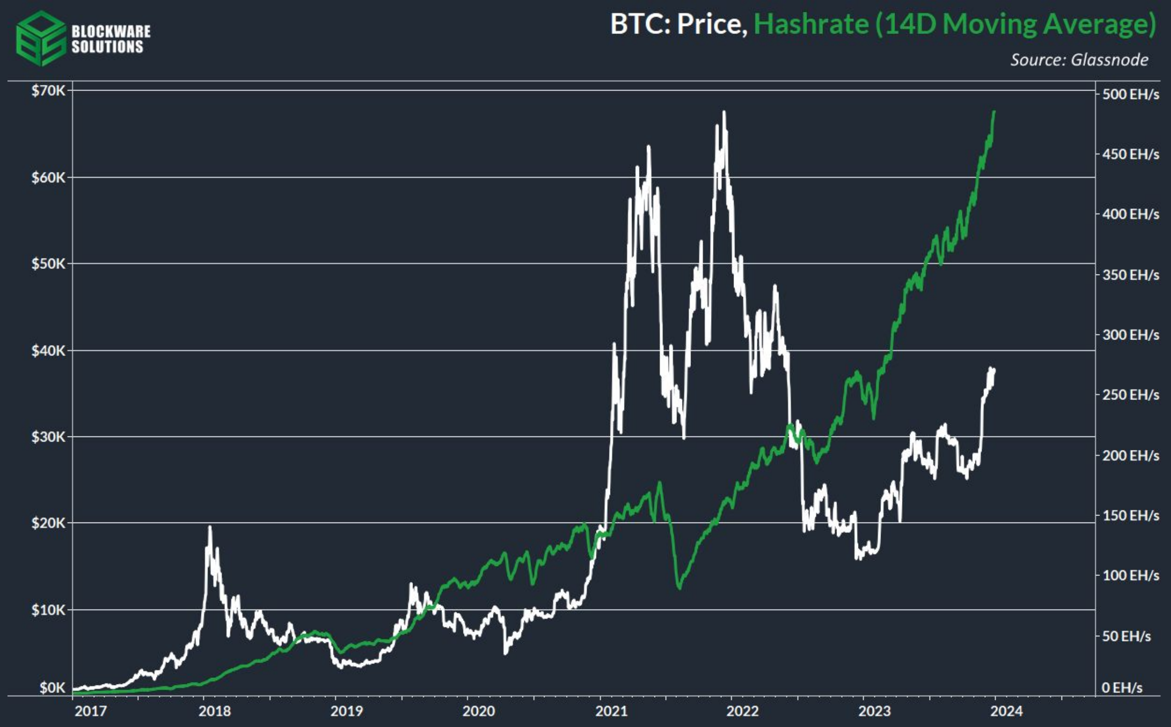
Sources: Glassnode

Continued Growth in Hashrate & Difficulty

Expansion from public miners will send hashrate > 650 EH/s

With the exception of the Chinese ban on Bitcoin mining in 2021, which caused hashrate to drop ~30% over the course of a month, from which it quickly recovered, the Bitcoin network hashrate (and mining difficulty) has essentially been up-only.

Previous halvings have had negligent effects on hashrate, with nothing more than a few small negative difficulty adjustments. This will likely be the case again as the majority of Bitcoin's hashrate, especially the new hash added in 2023, comes from public mining companies using highly efficient machines with low electricity costs. These miners have positioned themselves to endure the halving without having to unplug machines. These miners will continue to expand operations in 2024, on top of new-generation ASICs hitting the market in Q1 & Q2.



Bitcoin hashrate and mining difficulty has always increased historically as entrepreneurs capitalize on the opportunity to arbitrage energy and produce BTC for less than the market price. 2024 will be no exception. The halving highlights the importance of mining with the most efficient machines and lowest power cost possible.

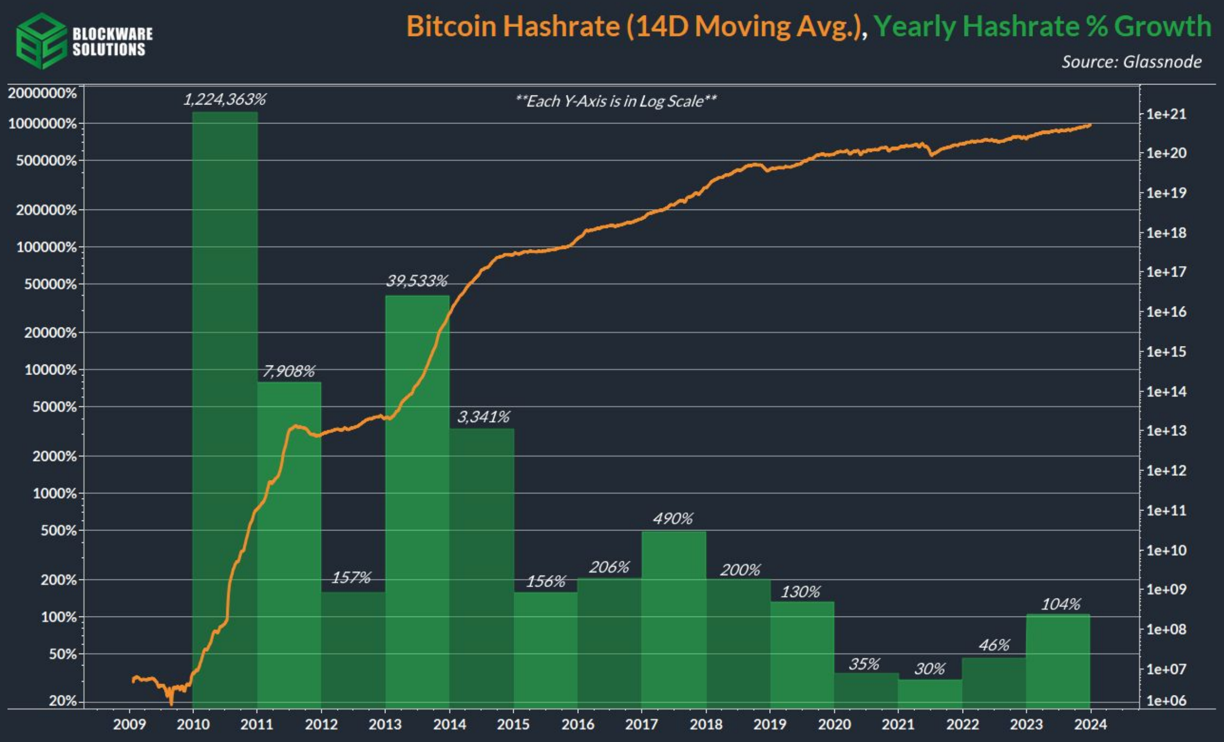
Sources: Glassnode

Continued Growth in Hashrate & Difficulty

Hashrate will grow, but a slower pace than it did in 2024

With hashrate growth all but certain, the question to ask is 'how fast will it grow?' Hashrate growth has slowed down historically due to a few factors:

- ASIC commoditization
  - The marginal increase in energy efficiency of new-generation ASICs decreases with each new model.
- Hashrate "Stock-to-Flow"
  - As the existing stock of hashrate grows, new hashrate getting plugged in has a diminishing impact on the total network hashrate in % terms.
- Mining Infrastructure Scarcity
  - The primary bottleneck of Bitcoin mining is physical infrastructure and energy sources. As such, mid-generation machines will likely get unplugged to make room for the new-generation ones. Resulting in a marginal increase in hashrate rather than a cumulative sum.



2023 saw the highest growth rate for hashrate since 2019; this comes on the back of a hashprice bull market as well as mining investments made during the bull market finally coming online. Assuming hashrate grows at the pace it did in the last halving year, 35% in 2020, we'll be looking at ~670 EH/s by the end of 2024.

Sources: Glassnode

Potential Paths for The Bitcoin Price

A bear, base, and bull case for BTC price action in 2024

Based on the bullish dynamics at play: supply illiquidity, increasing demand, and loosening monetary policy, we expect 2024 to be a strong year for BTC price action. Here are three potential scenarios for the Bitcoin price:

- Bear Case: ~$65,000
  - BTC faces resistance at previous all-time high
  - Minimal new demand from ETFs
  - Long term holders begin selling coins
- Base Case: ~$100,000
  - On pace for gold parity by EOY 2025
  - Marginal new demand from ETFs
  - LTHs continue accumulating
- Bull Case: ~$160,000+
  - New demand from ETFs + Speculator FOMO
  - LTHs continue accumulating
  - Full Fed Pivot into QE/Stimulus

Bitcoin price predictions are impossible. But given the bullish dynamics, we see price appreciation in 2024 as a sure thing, the degree to which remains in question. This chart illustrates a bear, base, and bull case scenario for the Bitcoin price in 2024.

Sources: Glassnode

Higher BTC Price & TX Fees Send Hashprice Higher

A bull market in hashprice is likely despite rising mining difficulty

Hashprice will soar in 2024 as the combination of a rising Bitcoin price and high transaction fees will offset the counteracting effects of the BTC halving and rising mining difficulty.

Hashprice will rebound relatively quickly after retesting the lows in April when the BTC block subsidy drops to 3.125 BTC. By the end of the year, we expect hashprice will hit $0.20/Th/Day.

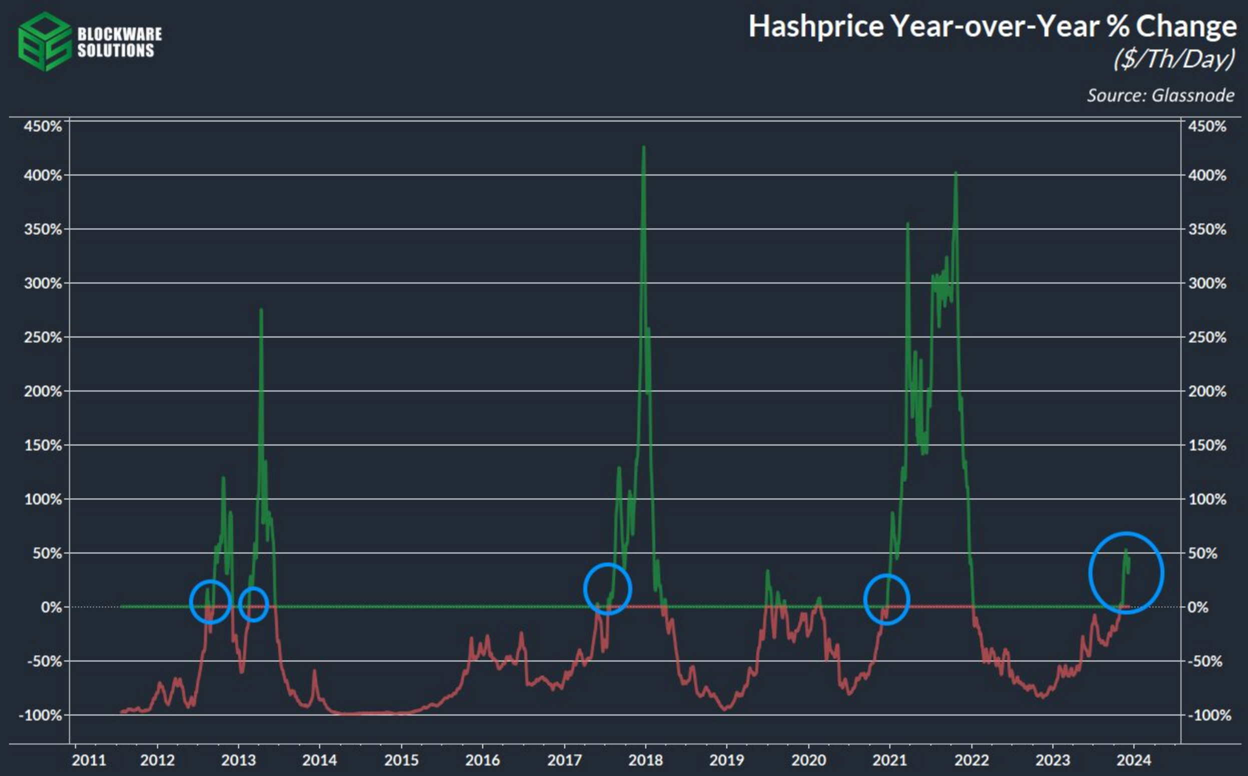
We've outlined a potential trajectory for hashprice hitting ~$0.20 by the end of 2024 based on the following expectations:

- BTC Price: ~$100,000 (base case)
- Hashrate: ~670 EH/s
- TX Fees: ~6.25 BTC per Block

Miner revenue per terahash reached a high of ~$0.42 in 2021. Despite the Bitcoin halving and rising mining difficulty putting downward pressure on hashprice, we expect it to reach ~$0.20 by the end of 2024. The monetization of BTC, as well as the increase in demand for on-chain settlement driving up TX fees, will provide miners will a significant boost in revenue.

Sources: Glassnode

Why Mine Bitcoin in 2024?



When most think of getting exposure to Bitcoin, they rarely think about mining Bitcoin. Mining Bitcoin with a trusted partner like Blockware Solutions enables you to dollar cost average into BTC at a discount.

New Generation Mining Rigs

There are two major trends that have fundamentally altered the market dynamics of the Bitcoin mining industry. First, Bitcoin ASIC efficiency improvements for new generation machines are slowing drastically. This means the next-gen hardware does not immediately make the previous-gen hardware obsolete, allowing today's hardware to retain its value for a longer period of time.

Second, Bitcoin's network hashrate and the number of rigs hashing continue to grow over time which has forced a large secondary rig trading market to emerge. This means there is now more liquidity for used mining rigs, enabling mining rigs to be purchased and sold at a later date.

ASICs are Assets

ASICs are commoditizing, which means today's hardware is likely to retain its value for a longer period of time.

Rig Marketplace

There is now more liquidity for used mining rigs, enabling mining rigs to be purchased and sold at a later date.

The Time to Mine Bitcoin is Now

Start Mining Bitcoin Before the Bull Market

- Publicly traded BTC mining stocks have outperformed BTC in 2023. This points to the fact that mining is the best way to gain BTC exposure as it allows you to produce BTC for less than the market price; an especially attractive proposition during bull markets. Self mining (rather than acquiring mining stocks) give you mining exposure while also allowing you to stack sats directly into cold storage.

- Historically, the most profitable Bitcoin miners are those that have machines plugged in prior to the start of a bull market. These miners are able to benefit immediately from the increase in the BTC price before competing miners get online which increases mining difficulty and raises ASIC prices.

- ASIC prices are highly correlated with the price of BTC. Acquiring hardware during the bull market means you will likely have a much higher capital expenditure. Buying ASICs now, while they are still at relatively low prices, will result in a much shorter payback period. Moreover, you can capitalize on the appreciation of your machine through the liquid secondary market provided by the Blockware Marketplace.

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