

Q3 2023

# Signals Report

A quarterly breakdown of key market metrics that could be impacting price and investor sentiment.

Fidelity Digital Assets<sup>SM</sup> Research

## Quarterly Observation of Current Market Conditions

Click the boxes to see how we measured the conditions.

### Bitcoin

Short-Term Outlook  
(<1 year)

Neutral

Mid-Term Outlook  
(1-5 years)

Neutral

Long-Term Outlook  
(>5 years)

Positive

### Ethereum

Short-Term Outlook  
(<1 year)

Negative

Mid-Term Outlook  
(1-5 years)

Neutral

Long-Term Outlook  
(>5 years)

Positive



# What This Report Is and How to Use It

Digital assets are unique in that they not only generate traditional market signals according to price action but also generate an entirely new set of signals according to public on-chain data. These signals can be valuable for all types of investors, but the challenge lies in determining which signals to use, how to match the signal to the correct investment time horizon, and how to interpret the data correctly.

In this report, we have collected what we think are the most reliable signal indicators, grouped them by time horizon, and provided an overall assessment of the conditions for each time horizon. We then provide a breakdown of the signals included in each time horizon, their charts, and a short explanation.

## Executive Summary: Q3 2023

As of the end of Q3, the data suggest some worry in the near term but an overall positive outlook for both bitcoin and ether in the longer term.

Bitcoin is up roughly 63% year to date but has broken below important short-term support levels. Regulatory conditions remain unchanged as the industry continues to wait for news on multiple fronts. Long-term holders' net positions continue to rise, as the drop below \$30,000 may be enticing this group to buy. We also continue to see bitcoin leaving exchanges as the market approaches a 30% reduction from the exchange supply peak in 2020. The reduction in supply on exchanges will be a key metric to watch as year-end approaches, and highlights the importance of other custody options, such as self-custody or the use of a regulated third-party custodian, such as [Fidelity Digital Assets<sup>SM</sup>](#).

Ether, up roughly 39% year to date, has been seeing short-term negative price signals but growing on-chain metrics. The network continues to maintain a higher rate of burn than issuance, resulting in nearly 300,000 ether being removed from the network since The Merge's implementation in September 2022. The number of validators staking on the network has seen a strong increase, up 29%. This has caused some concern within the developer community because if the validator count continues to grow, that means there are more nodes that need to download, verify, and seed new transactions to other nodes through the gossip protocol. This could end up increasing centralization if only the best connected (bandwidth) nodes can maintain the chain.

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# Measurement Breakdown—Bitcoin

Short-Term (<1 year)		Overall Condition: <b>NEUTRAL</b>
NAME	COMMENTARY	CONDITION
<a href="#">Is Price Trading Above the 200-Day Moving Average (SMA)?</a>	No, the price moved below the 200-day on August 17	
<a href="#">Golden Cross or Death Cross?</a>	Death cross formed on September 12	
<a href="#">Price &gt; Realized Price</a>	Yes, 33% higher than realized price	

Mid-Term (1–5 years)		Overall Condition: <b>NEUTRAL</b>
NAME	COMMENTARY	CONDITION
<a href="#">NUPL Ratio</a>	Has moved into the “Optimism” zone	
<a href="#">MVRV Z-Score</a>	Remains closely above “Undervalued” zone	
<a href="#">Reserve Risk</a>	Moved into “Low Risk” zone August 18	
<a href="#">Stock-to-Flow</a>	Bitcoin’s price is heavily discounted, according to this model	
<a href="#">Puell Multiple</a>	Miners remain in a healthy position, according to this model	
<a href="#">Hodler Net Position Change</a>	Long-term holders are net buying and have increased holdings since April	
<a href="#">Addresses in Profit</a>	66% of addresses are in profit	
<a href="#">Bitcoin Yardstick</a>	Bitcoin is considered trading at “fair” value	

Long-Term (>5 years)		Overall Condition: <b>POSITIVE</b>
NAME	COMMENTARY	CONDITION
<a href="#">Price &gt; 200-Week</a>	No, traded below in August and remains below at the end of Q3	
<a href="#">Monthly Address Metrics</a>	Growth seen this past quarter	
<a href="#">New Address Momentum</a>	Growing on-chain activity and usage	
<a href="#">Liquid vs. Illiquid Supply</a>	Growing illiquidity	
<a href="#">Balance ≥0.1 BTC</a>	Positive trend of growth, new all-time high in September 2023	



# Measurement Breakdown—Ethereum

Short-Term (<1 year)		Overall Condition: <b>NEGATIVE</b>
NAME	COMMENTARY	CONDITION
<a href="#">Is Price Trading Above the 200-Day Moving Average (SMA)?</a>	No, fell below September 1	
<a href="#">Golden Cross or Death Cross?</a>	Death Cross formed September 1	
<a href="#">Price &gt; Realized Price</a>	Yes, remains 14% above	

Mid-Term (1–5 years)		Overall Condition: <b>NEUTRAL</b>
NAME	COMMENTARY	CONDITION
<a href="#">NUPL Ratio</a>	Remains in “Fear–Hope” zone	
<a href="#">MVRV Z-Score</a>	Trading above the “Market Bottom” zone since January 9	
<a href="#">Percent in Profit</a>	Fell 19%, but small majority (58%) of addresses still in profit	
<a href="#">Pi Cycle Top Indicator</a>	Not yet “Heating Up”	

Long-Term (>5 years)		Overall Condition: <b>POSITIVE</b>
NAME	COMMENTARY	CONDITION
<a href="#">Monthly Address Metrics</a>	Layer 1 metrics have declined, but likely driven by rise in Layer 2 activity	
<a href="#">New Address Momentum</a>	Lower Layer 1 demand, but growing Layer 2 adoption	
<a href="#">Addresses with over \$1K</a>	Relatively unchanged through Q3	
<a href="#">Staking by the Numbers</a>	Up 29% in Q3	
<a href="#">Net Issuance and Burn Rate</a>	Net-negative issuance since The Merge, even with current inflationary days	



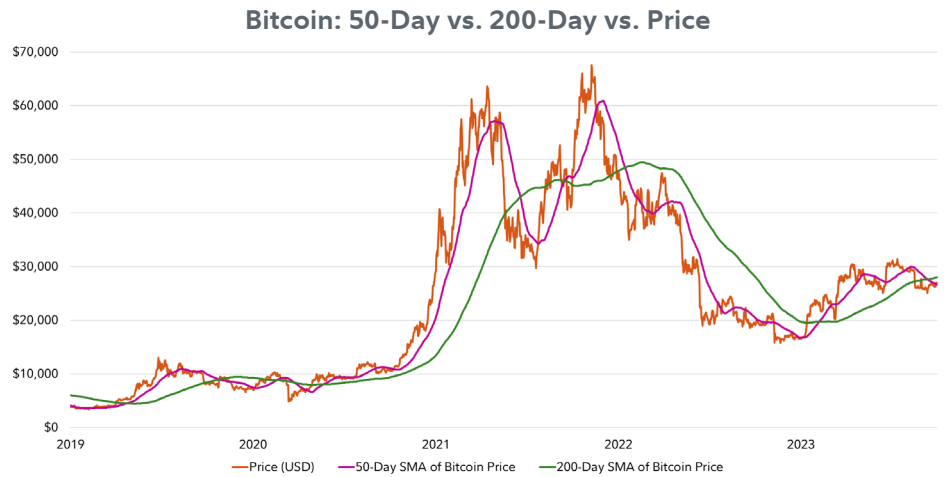
# Bitcoin Data to Watch

## Bitcoin Fights to Maintain Short-Term SMA

Bitcoin’s price has broken the once-healthy relationship with the 200-day moving average after falling below it on August 17. At the start of Q3, bitcoin’s price dropped below the psychological \$30,000 support level. This short-term downtrend continued throughout the quarter with bitcoin trading in the \$25,000-to-\$27,000

range, culminating in a drop below both the 50- and 200-day moving averages. Additionally, a death cross pattern, an instance when the 50-day moving average (DMA) drops below the 200 DMA, later formed on September 12.

**The 200 DMA is viewed as support when the price is above it and as resistance when the price is below it.** As of the end of Q3 2023, bitcoin’s price has reclaimed the short-term support level but still trades below the longer-term support level.

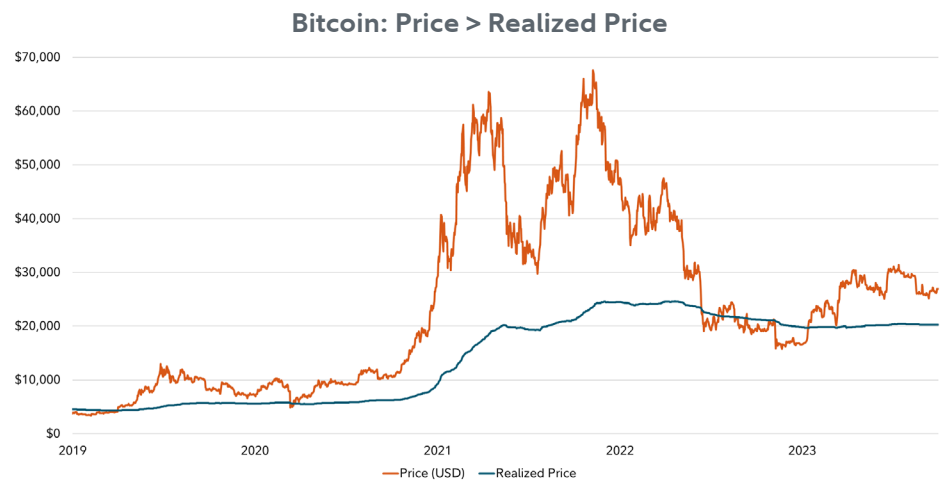


Data Source: Glassnode, 9/30/2023.

## Realized Price (Bitcoin)

**The realized price is a metric that aims to capture the average cost basis of all current token holders.** By capturing a token’s last trade price, tokens that are presumed to be lost can be discounted. In theory, this metric acts as a last line of defense for traders. When the market price is below the realized price, that means that most of the supply held is being

held at a loss and thus, if sold, will be sold at a loss. In turn, this incentivizes new and older buyers to enter the market. The realized price has maintained a position of support since January 13, 2023. The current price is approximately 33% above the realized price, which is around \$20,288 at the time of writing.

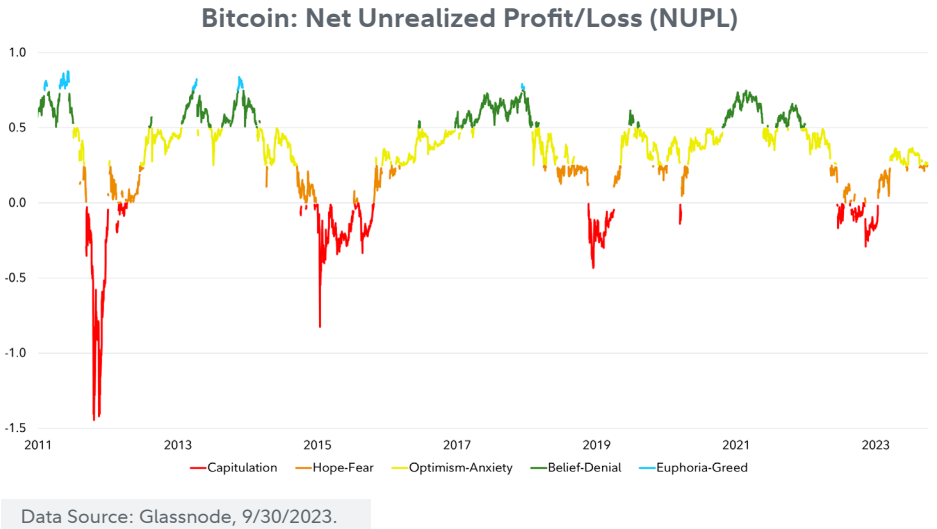


Data Source: Glassnode, 9/30/2023.



## Net Unrealized Profit/Loss (NUPL) Score (Bitcoin)

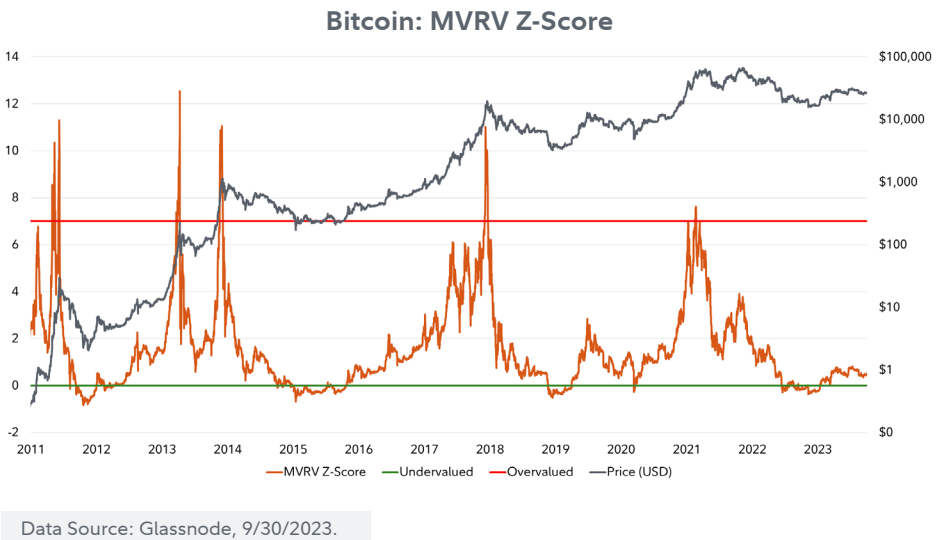
Historically, this metric does a good job of assessing overall market sentiment. Bitcoin’s NUPL score offers insight into the relative level of unrealized profits or losses, visible on-chain at any given time. A NUPL score below zero, witnessed in Q4 of 2022, implies net unrealized losses and has historically signaled periods of capitulation. A NUPL score over 0.50 indicates large unrealized profits held on-chain, which may suggest that some profit-taking could be imminent. This ratio stood firmly in the “Optimism” zone for the first half of Q3 but fluctuated between the “Optimism” and “Fear” zones during the second half of Q3, with a noticeable drop on August 17. On September 28, this metric moved back into the “Optimism” zone. Compared with the deep “Capitulation” zone the NUPL score entered at the beginning of 2023, it has since continued an upward trajectory.



Read more [here](#).

## MVRV Z-Score (Bitcoin)

The Market Value to Realized Value Z-Score is used to assess when bitcoin is over- or undervalued relative to its “fair value.” When the market value is significantly higher than the realized value, that has historically indicated a market top (red zone), while the opposite has indicated a market bottom (green zone). There have been no significant changes in this metric since March 2023, when it almost entered the “Undervalued” zone. The MVRV Z-Score remains neutral for Q3.





## Reserve Risk (Bitcoin)

**Reserve risk is used to assess the confidence of long-term holders relative to the native coin's (bitcoin's) price at a given point.**

When confidence is high and the price is low, there is an attractive risk-reward profile (the reserve risk is low). When confidence is low and the price is high, the risk-reward profile is unattractive (the reserve risk is high).

Reserve risk had been slowly climbing since the beginning of 2023, but moved into the "Low Risk" zone as of August 18. Bitcoin remains in the Low Risk zone, according to this metric. Historically, investors have called this zone the "accumulation phase."

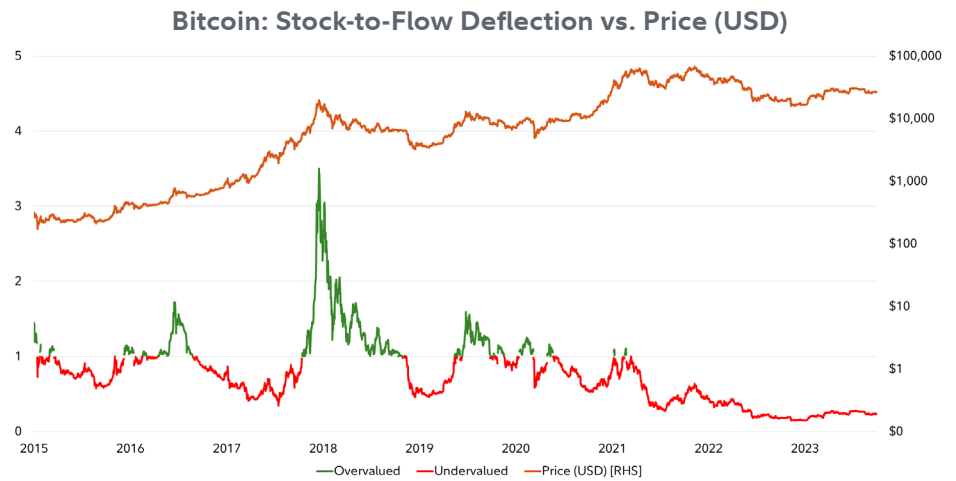


Data Source: Glassnode, 9/30/2023.

## Stock-to-Flow (Bitcoin)

**The stock-to-flow (S/F) deflection is the ratio between the current bitcoin price and the S/F model.** If deflection is  $\geq 1$ , it means that bitcoin is overvalued according to the S/F model; otherwise, it is undervalued. The stock-to-flow model may be less relevant **today** because bitcoin's inflation rate is already in the low single digits. However, this model may still be interesting when also taking other metrics into account.

By this metric, bitcoin has been considered undervalued throughout 2022 and 2023.



Data Source: Glassnode, 9/30/2023.

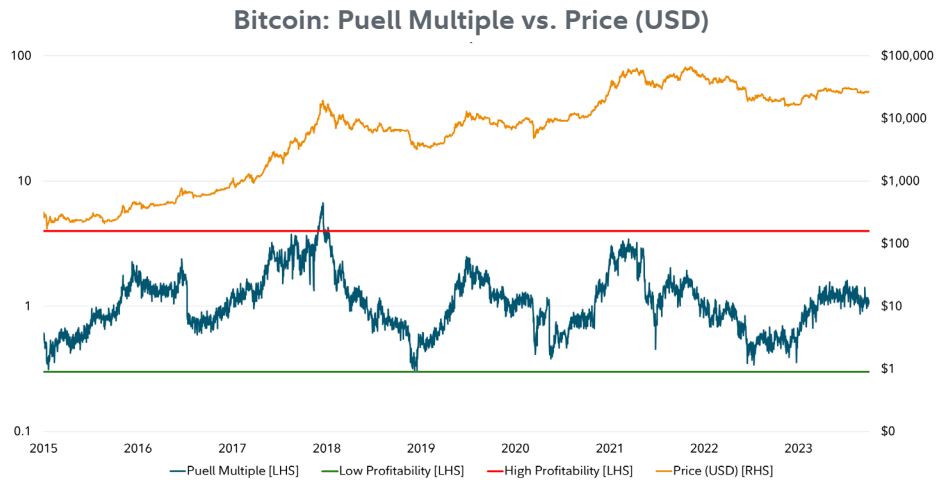


## Puell Multiple (Bitcoin)

**Created by David Puell, the Puell Multiple shows when miner profitability is low compared with the previous year. When the Puell Multiple is high, it means that mining revenue is higher than last year's average. Historically, when this metric is in the high red zone, it has generally corresponded to cycle tops.**

This metric currently suggests that miner profitability sits on par with that of last year. This means that miners are in a familiar profit margin zone. We do not expect this metric to change significantly until the next **Halving** event, which is currently expected in April 2024 and will programmatically reduce miners' revenue. In addition to this, there may be a more significant relationship forming between hash rate and spot bitcoin price because of the maturation of spot bitcoin and mining derivatives. Put simply, producing bitcoin can become more profitable than buying spot bitcoin, and there are a growing number of ways to gain exposure to the bitcoin mining industry. This means that as miner profitability increases, capital is incentivized to flow into the mining industry rather than spot BTC markets.

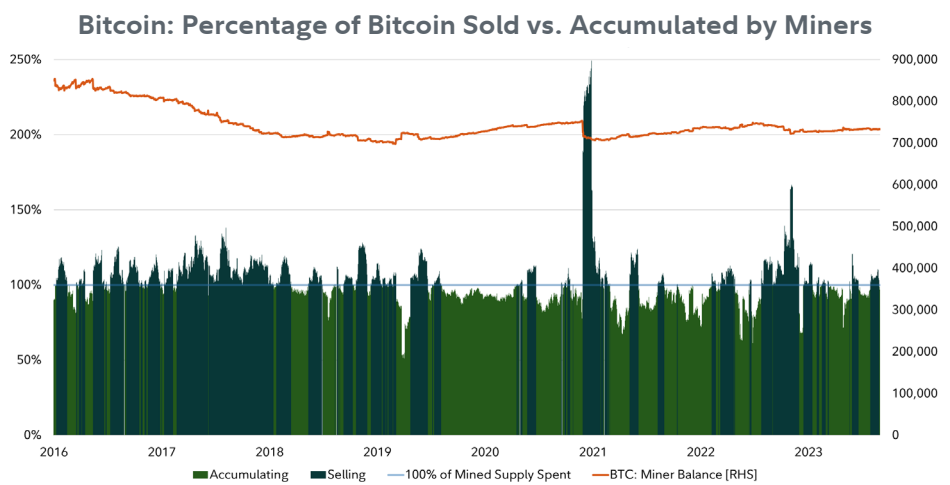
Explore more about the Halving [here](#).



Data Source: Glassnode, 9/30/2023.

## Percentage of Bitcoin Sold vs. Accumulated by Miners (Bitcoin)

To the right is the pattern in which miners are flipping between needing to sell all newly mined bitcoin and reserves to pay for energy, new hardware, maintenance, or accumulating more bitcoin. The horizontal light-blue line shows miners selling 100% of the block reward. If the dark-blue columns are above 100%, that indicates that miners, on average, sold the full block reward and had to sell some of their reserves. Bitcoin's price ended Q3 down roughly 12% from where it had begun. Bitcoin accumulation by miners was up slightly over the same period, roughly 0.19%. Miner balances are barely up year to date, just 0.74%. This signifies that miners' profit margins continue to be tight. It is important to remember that profitable mining incentivizes new and old participants to (re)join, which inevitably lowers the average profit margin as block rewards are distributed among a bigger pool of participants.



Data Source: Glassnode, 9/30/2023.

**Note:** This historical data included are subject to change as Glassnode uncovers new wallet labels for each mining entity. As Glassnode labels new wallets, the statistic can be updated to present the most recent and accurate data. The specific pool that was updated was the Lubian.com pool.

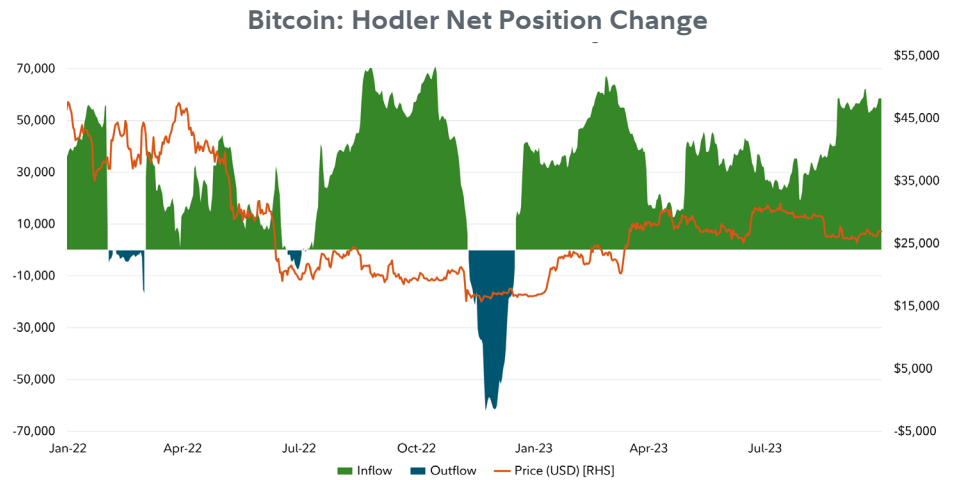




## Hodler Net Position Change (Bitcoin)

Hodler net position change shows the monthly position change of long-term investors, known in Bitcoin culture as “Hodlers” or “HODLers.” It indicates when long-term investors sell (negative) and when they accumulate (positive) net-new positions. The average net position change for Q2 was 31,071 BTC.

This trend continued upward in Q3 with the average net position change in September showing a 220% increase to 56,412 BTC compared with April’s total of 17,606 BTC. The September uptick is noteworthy, but we would be remiss not to point out that the quarter-over-quarter average is up a less staggering 30%. We continue to see long-term holders buying at levels last reached earlier this year, when the bitcoin price dropped below \$17,000. This adds to our thesis from [July’s Signals Report](#) that a new bottom could be forming, in which short-term investors have exhausted their holdings and long-term investors are fighting to take back control.

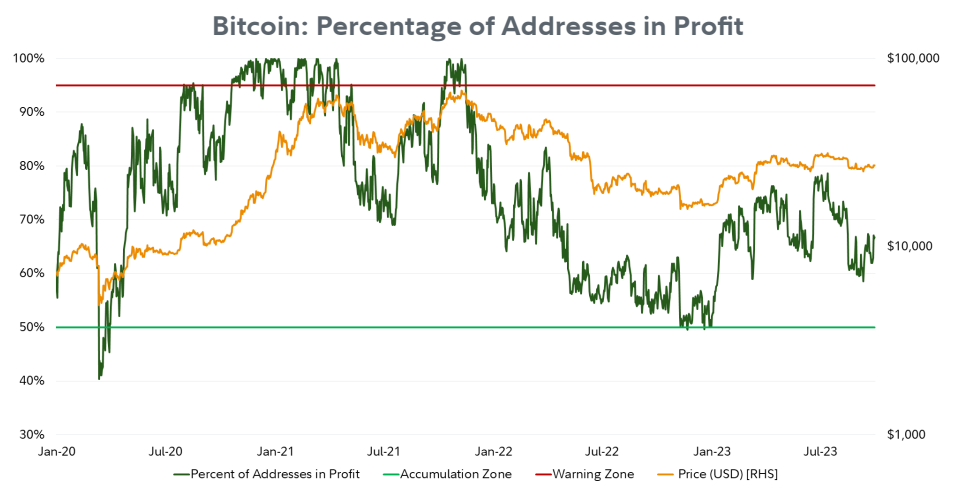


Data Source: Glassnode, 9/30/2023.

## Percent of Addresses in Profit (Bitcoin)

The percentage of addresses in profit indicates unique addresses whose funds have an average buy price that is lower than the current price. “Buy price” is defined as the price at the time coins were transferred to an address. The percentage of addresses in profit has grown from roughly 52% at the beginning of 2023 to just over 66% at the end of Q3.

As the number of addresses in profit grows, a sell-off may become more likely, as traders and newer investors look to take profits. This played out to some extent quarter over quarter as addresses in profit dropped from 75%.

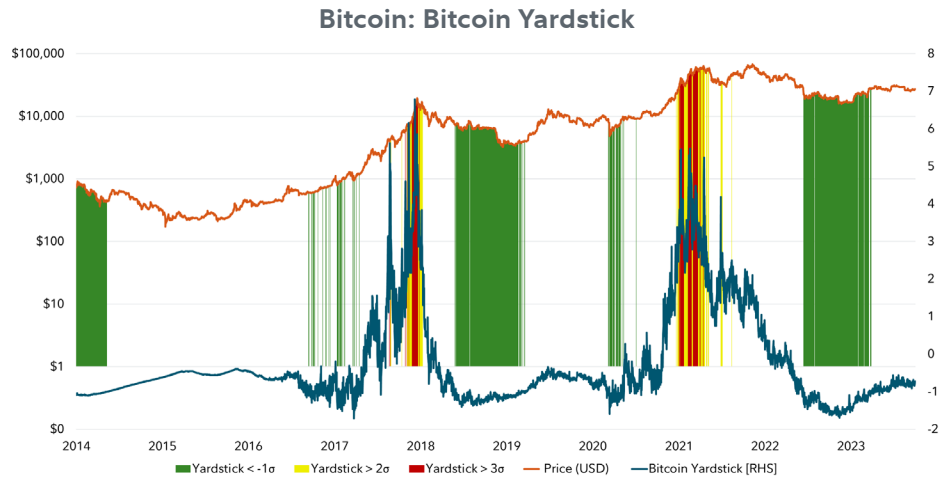


Data Source: Glassnode, 9/30/2023.



## Bitcoin Yardstick

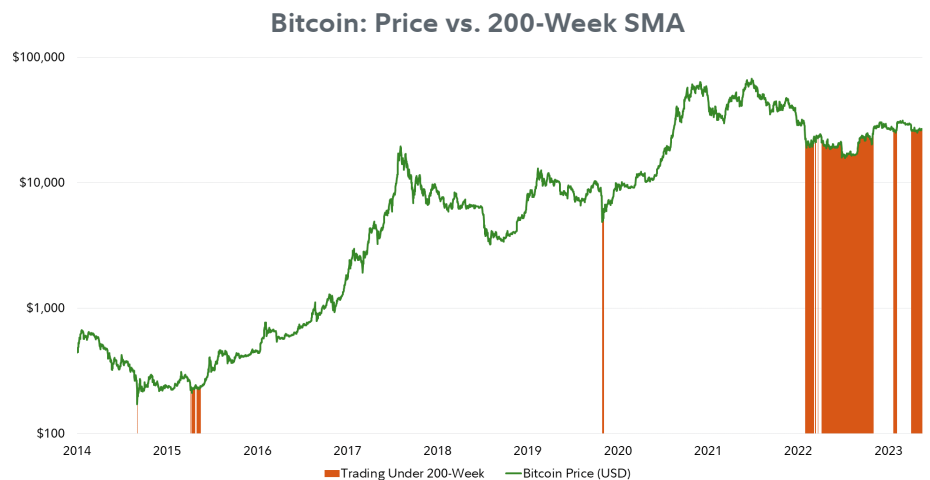
**The Bitcoin Yardstick, or Hashrate Yardstick, is a similar concept to the price-to-earnings (P/E) ratio.** However, instead of stock price divided by company earnings, it calculates bitcoin’s total market cap divided by its hash rate (a measure of energy being expended to secure the network). The idea is that the lower the ratio, the “cheaper” bitcoin looks, just as a lower P/E ratio can be interpreted as a “cheap” or undervalued stock. Currently, the Yardstick is telling us that bitcoin is between -1 and -2 deviations from the mean. According to this metric, there have been zero days this quarter during which bitcoin was considered cheap, and only 93 days since the beginning of the year during which bitcoin has been considered cheap. Currently, bitcoin is trading in a neutral zone.



Data Source: Glassnode, 9/30/2023.

## 200-Week Moving Average (Bitcoin)

The 200-week moving average is a long-term indicator, and until this bear market, bitcoin had rarely traded below it. In June 2023, the 200-week simple moving average (SMA) briefly failed as a support level before recovering on June 18. However, on August 17, the same day that the NUPL flipped to “Fear,” bitcoin’s price fell below the 200-week SMA once again. Bitcoin’s price has remained below the long-term weekly SMA every day since, except for August 29. The 200-week SMA closed Q3, at roughly \$27,928, which means that bitcoin’s price traded roughly 3% lower, at \$26,969.



Data Source: Glassnode, 9/30/2023.

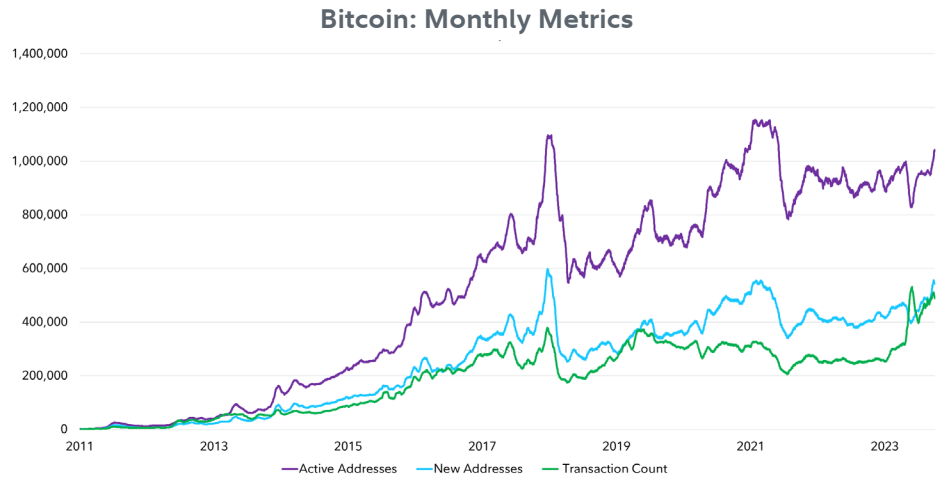


## Monthly Address Metrics (Bitcoin)

Charted to the right are the monthly metrics for active addresses, new addresses, and transaction counts. At the end of the third quarter, active addresses retook the millionth address mark for the first time since June 2021. Similarly, new addresses surpassed the half-million mark for the first time since April 2021.

Since the beginning of September, there has been a 13% rise in new addresses and a 9% increase in active addresses. Bitcoin's transaction count closed the second quarter up 200%, after retracing 24% from its May peak. Transaction count has remained in an upward trend since the end of the Q2 reversal, gaining 21% over the third quarter and finishing just 7% lower than the peak of the May bitcoin ordinals craze.

Read more about ordinals [here](#).

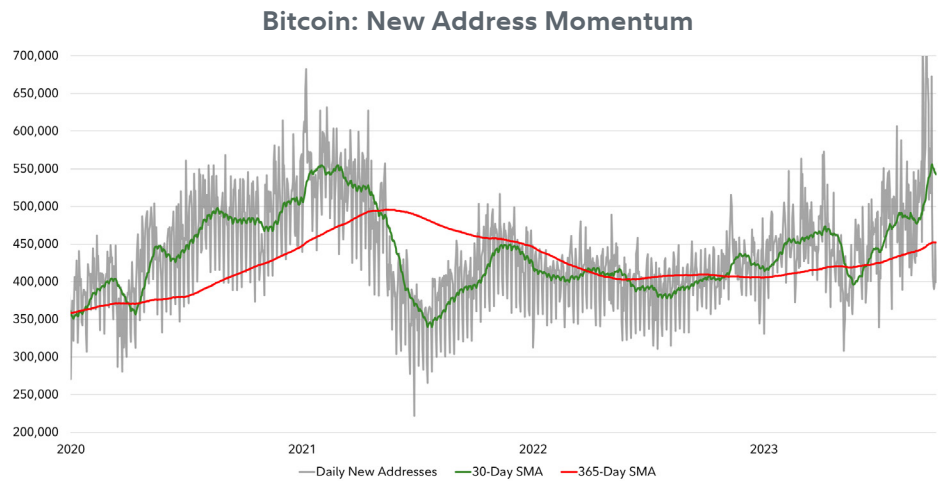


Data Source: Glassnode, 9/30/2023.

## New Address Momentum (Bitcoin)

Taking a closer look at new addresses, we can also measure relative momentum. In this chart, we compare the short-term momentum (30-Day SMA) with the longer-term average (365-Day SMA). When the monthly average is greater than the yearly average, it indicates higher on-chain activity and a positive short-term trend in network usage.

When the opposite occurs, it indicates a decline. Here, we see the monthly average (green line) continuing to widen the gap between itself and the yearly average (red line). This may be indicative of a return of users during this accumulation phase, and an overall expansion of on-chain activity and network use.



Data Source: Glassnode, 9/30/2023.

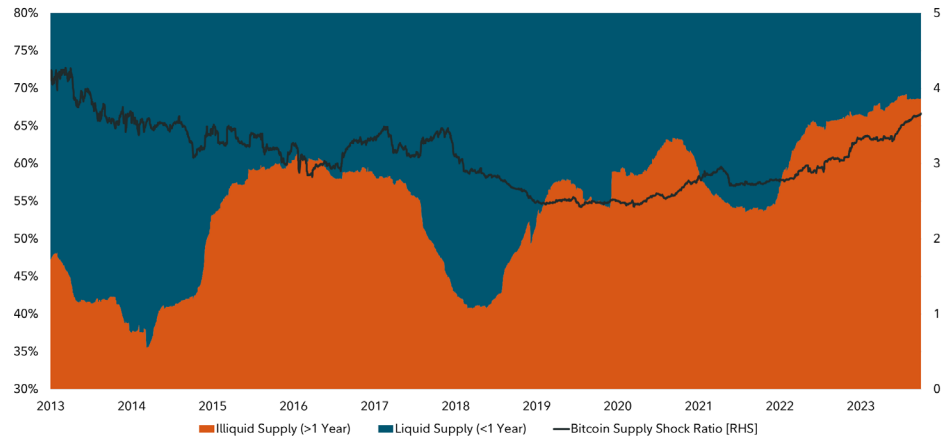


## Liquid vs. Illiquid Supply (Bitcoin)

Bitcoin’s illiquid supply is slightly off its high at roughly 68.6%. The last illiquid supply all-time high was on July 26, at roughly 69.2%. Another way of looking at this is through the “Illiquid Supply Shock Ratio,” which attempts to model the probability of a supply shock. When the supply shock ratio trends higher, it indicates

that the current sold supply is primarily flowing from the liquid token supply. However, when the opposite occurs, the illiquid supply falls as long-term holders exit the market, usually in profit. Here, the illiquid supply shock ratio appears to be steadily rising and ended the third quarter with a ratio of 3.67 versus 3.49 at the end of the second quarter. It remains unclear whether illiquid supply holders will start to take profit at this level or if prices will climb to incentivize selling. Either way, if demand holds, then the likely outcome would be that either the liquid supply or the price would increase.

Bitcoin: Liquid vs. Illiquid Supply



Data Source: Coin Metrics and Glassnode, 9/30/2023.

## Balances $\geq 0.1$ (Bitcoin)

**This metric shows how many addresses hold greater than or equal to 0.1 or more bitcoin.** Here, we see small addresses continuing a trend of accumulation. Since the beginning of 2023, the number of addresses holding 0.1 or more bitcoin has grown by 7%. This figure is 2% higher than it was at the end of Q2.

This metric hit a new all-time high on September 23, at 4,499,551 addresses holding 0.1 or more bitcoin. This shows a continued growth of small addresses accumulating and saving bitcoin, even at discounted prices.

Bitcoin: Number of Addresses with Balance  $\geq 0.1$  BTC



Data Source: Glassnode, 9/30/2023.

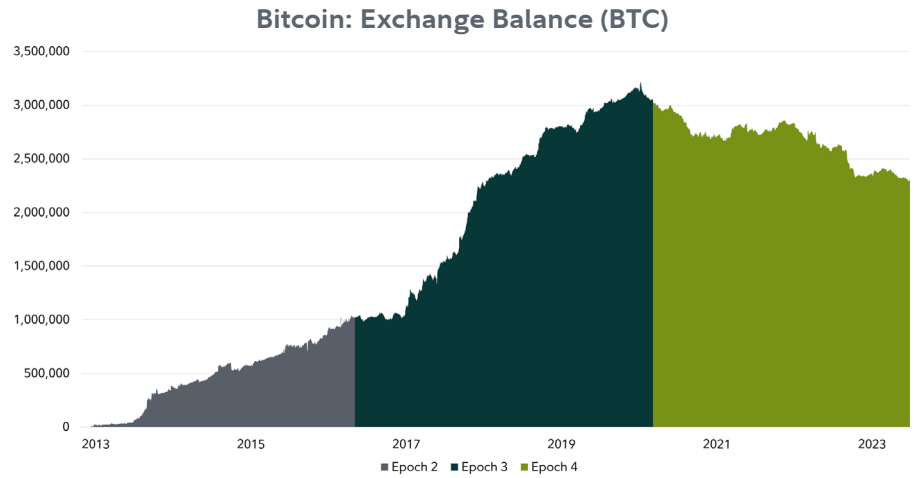


## Exchange Balance (Bitcoin)

**This metric shows how much bitcoin is held on exchanges.**

This number has continued to trend down from its peak in 2020. Fueled by multiple major exchange collapses in 2022 and other troubled exchange practices, self-custody has become a major part of the bitcoin journey in 2023.

The third quarter was no different, as balances on exchanges continued to dwindle, inching closer to 2.2 million BTC held at exchanges, a drop of nearly 30% from all-time highs. While exchange balances have continued to fall, this does not necessarily equal an increase in self-custody. For example, some custodians, such as Fidelity Digital Assets, are working toward allowing clients to custody their bitcoin and trade through an exchange venue.



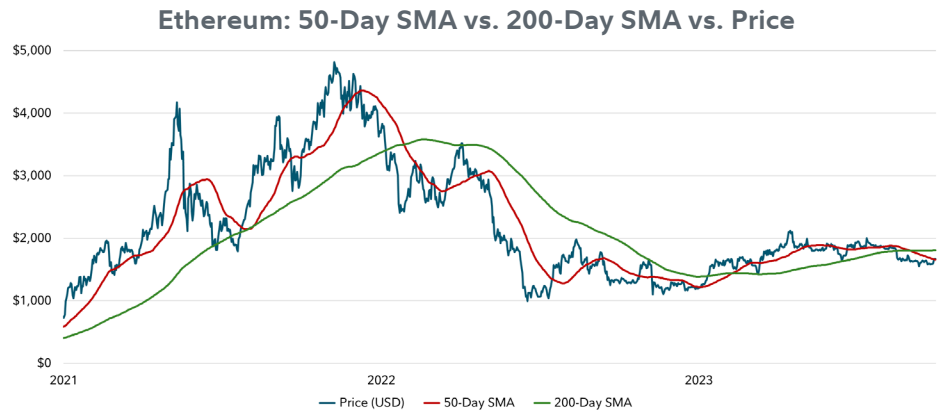
Data Source: Glassnode, 9/30/2023.



# Ethereum Data to Watch

## Ethereum Falls below Key Support Levels

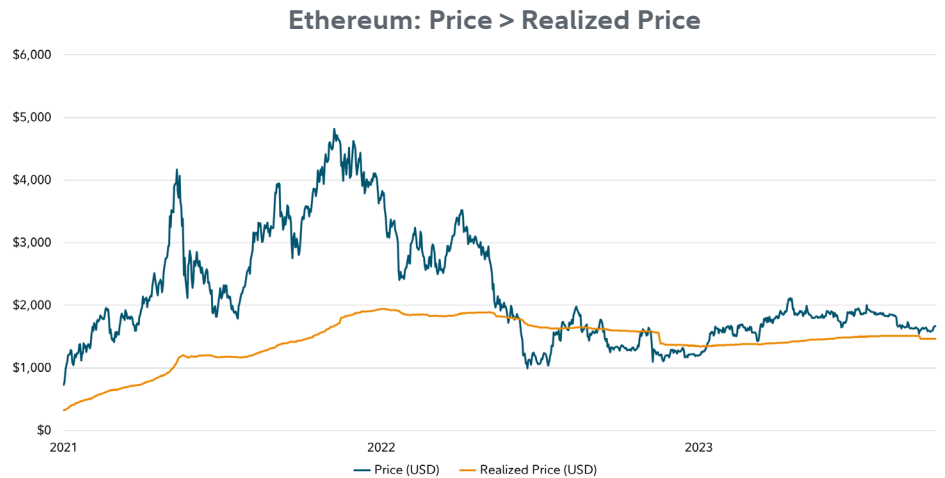
We can identify key support levels by charting the 50-day and 200-day moving averages. A “death cross” formed in September as ether’s price fell. The price, however, has risen roughly 3% since the pattern was formed. This is a short-term negative indicator for ether, given that many analysts could be watching for these crosses. Ether’s price fell roughly 13% throughout Q3, from \$1,934 to \$1,671.



Data Source: Glassnode, 9/30/2023.

## Realized Price (Ethereum)

**Realized price is a metric that aims to capture the average cost basis of all current token holders.** By capturing a token’s last traded price, tokens that are presumed to be lost can be discounted. Using ether’s realized price as another support or resistance level, the realized price has maintained its support level since January 2023. Ether is trading roughly 14% above its realized price, which currently sits around \$1,470 at the time of writing.

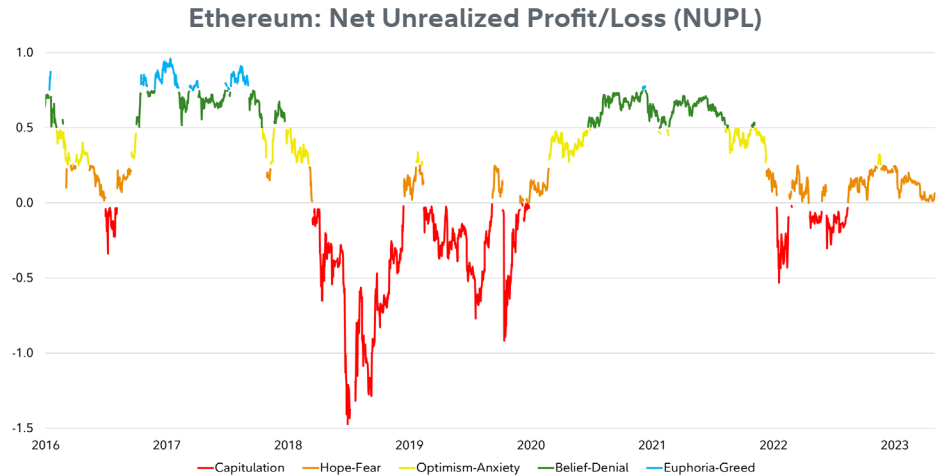


Data Source: Glassnode, 9/30/2023.



## Net Unrealized Profit/Loss (NUPL) Score (Ethereum)

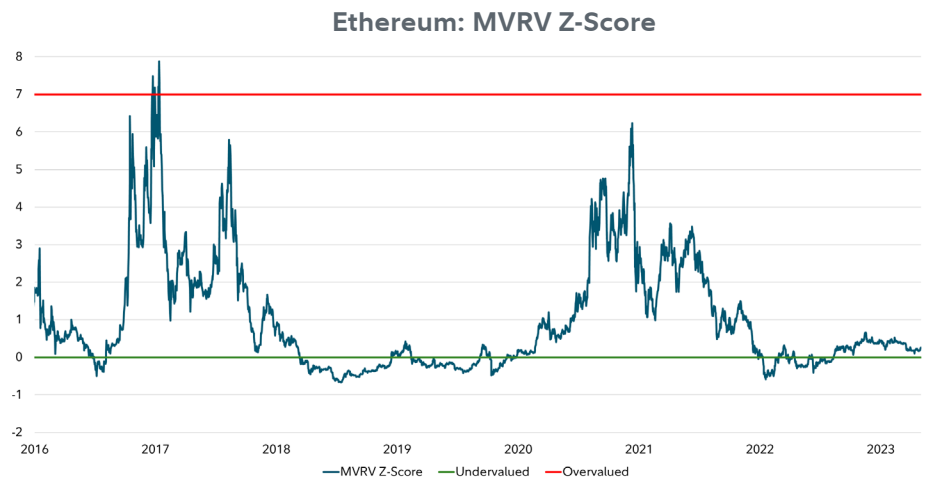
Historically, this metric has been useful for assessing overall market sentiment. The chart to the right shows that ether has remained in the “Hope-Fear” zone after briefly touching the “Optimism” zone in early May. This metric remains in a neutral zone as it maintains its position. However, if the metric falls below 0, into the “Capitulation” zone, ether could continue to fall in price.



Data Source: Glassnode, 9/30/2023.

## MVRV Z-Score (Ethereum)

Market value to realized value (MVRV) is the ratio between market cap and realized cap. It gives an indication of when the trade price is above or below the “fair” value. The current score indicates that ether’s market value is estimated to be just over the “Undervalued” zone. At the time of writing, ether’s realized price sits at \$1,470. Historically, this zone has preceded a bull run or at least sideways price action. In the short term, this appears to be a neutral indicator, as ether seems to be in an accumulation phase and may continue trading between \$1,200 and \$2,200, a very wide range, for some time.



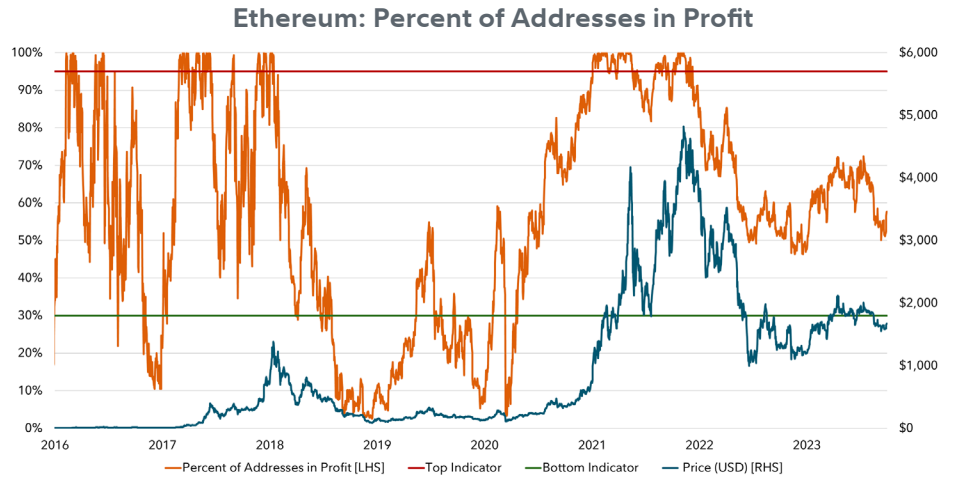
Data Source: Glassnode, 9/30/2023.



## Percent in Profit (Ethereum)

**Percent in profit is the percentage of unique addresses whose funds have an average buy price lower than the current price.** The “buy price” is defined as the price at the time coins were transferred to an address. Only externally owned addresses (EOAs) are counted. This metric has not touched the bottom indicator since January 2020, which

may be because ether is not necessarily considered a buy-and-hold asset. Ether owners may be using ether for trading, smart contracts in DeFi, staking, or buying other digital assets. The “percentage of addresses in profit” metric fell roughly 19% in Q3, but has risen 21% year to date. Currently, nearly 58% of unique addresses holding ether are in profit.

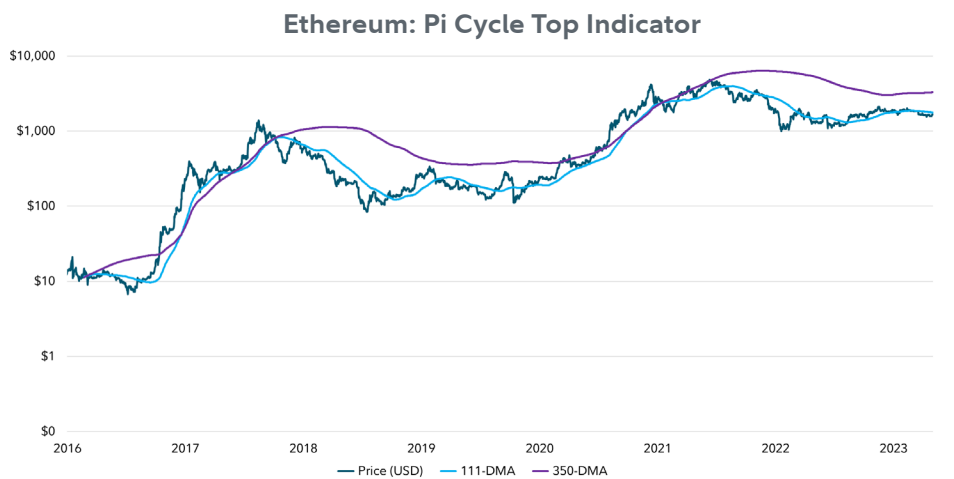


Data Source: Glassnode, 9/30/2023.

## Pi Cycle Top Indicator (Ethereum)

**The Pi Cycle indicators are composed of the 111-day moving average (111 DMA) and a 2x multiple of the 350-day moving average (350 DMA x2) of ether’s price.** This metric shows when ether becomes significantly overheated (the shorter DMA reaches the longer DMA levels). It has historically

been a good cycle-top indicator. When the shorter time frame reaches the longer time frame, markets are considered to be “heating up.” The shorter-term average fell slightly over Q3 but has risen 34% year to date. The long-term moving average has started to expand the gap between itself and the shorter-term metric, signifying ether is not heating up. At the time of writing, this metric remains in a neutral zone.



Data Source: Glassnode, 9/30/2023.





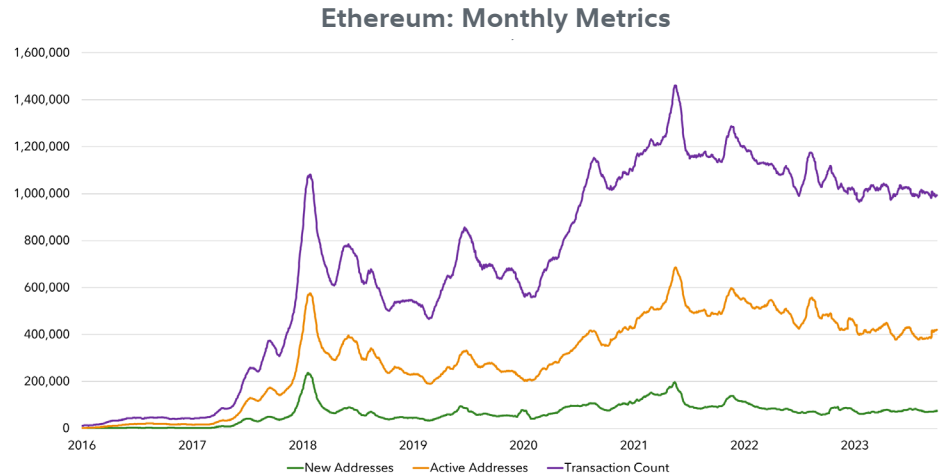
## Monthly Address Metrics (Ethereum)

The number of monthly new Ethereum addresses fell in Q3 2023. Monthly new addresses fell 11% this past quarter, while monthly active addresses and the monthly transaction count fell between 2% and 3%, respectively. Since the beginning of the year, these metrics have not fallen as much. Q3 ended

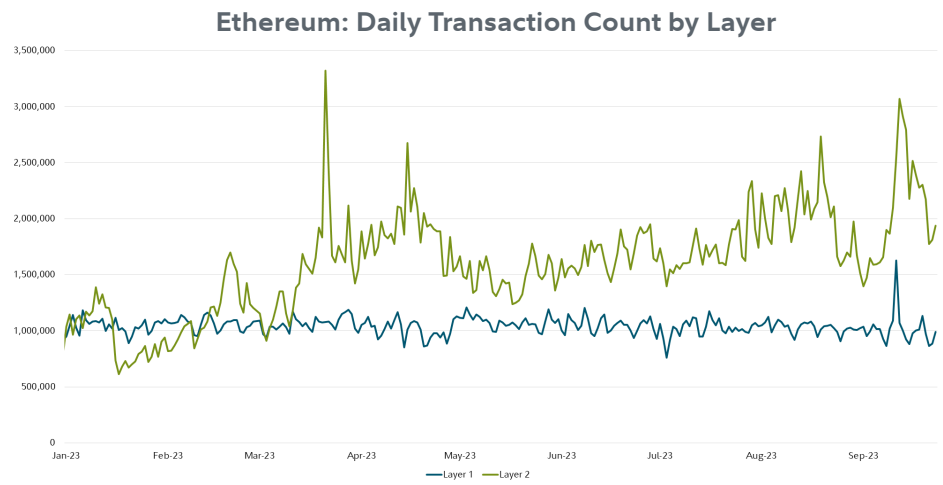
roughly where the year began, with monthly new addresses down just 1%, monthly active addresses down 5%, and base layer transactions down 1%. While this may look neutral or even negative, there is a bit of nuance not shown by these metrics. The Layer 2 transactions have continued to rise and account for a growing percentage of Layer 1 fees. This means that, while the Layer 1 metrics may not be improving, users may be using Layer 2 protocols in search of lower fees.

Taking a closer look at a comparison of the Layer 1 and Layer 2 daily transaction count, one can begin to realize the overall protocol's growth. While Layer 1 transactions grew 33% year to date, Layer 2 transactions, composed of Arbitrum, Optimism, and Base, have grown more than 180% year to date. In addition, after the quick spike in both Layer 1 and Layer 2 transactions seen in mid-September, the final count of Layer 2

transactions ended Q3 at a more sustainable growth rate of 18%. Alternatively, Layer 1 transactions fell 2% over Q3. This is a prime example of the nuance hidden behind the Layer 1 metrics.



Data Source: Glassnode, 9/30/2023.



Data Source: Dune Analytics, 9/27/2023.

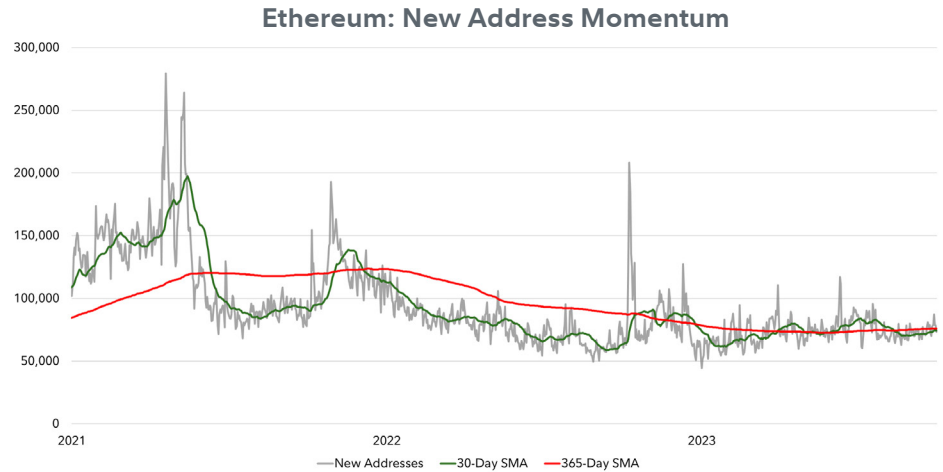


## New Address Momentum (Ethereum)

**New addresses are defined as unique addresses that appeared for the first time in a transaction.**

New addresses appear when users create new wallets and transact with them. This is different from Bitcoin addresses because Ethereum does not create a new address for each transaction. Because of

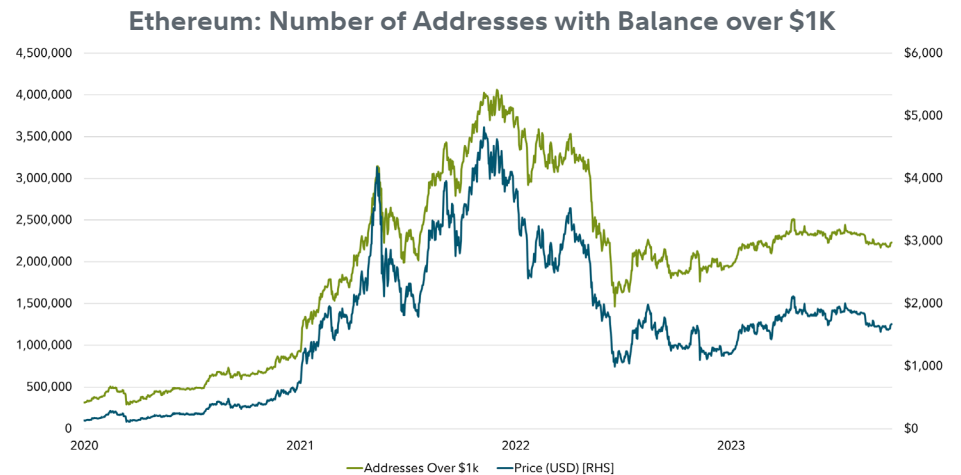
this difference, this metric for momentum may not show direct network usage but instead could indicate a clearer picture of Ethereum’s Layer 1 adoption. The short-term moving average of new addresses has fallen below that of the longer-term moving average. This indicates that the rate at which new users are joining the network has slowed. Like the monthly address metrics, this does not account for Layer 2 activity. Data from Layer 2 protocols suggest that users are continuing to use the protocol.



Data Source: Glassnode, 9/30/2023.

## Addresses with over \$1,000 (Ethereum)

**This is the number of unique, externally owned addresses (EOAs) holding at least \$1,000 in ether.** This metric changes depending on ether’s price but can be useful to show when smaller ether buyers are accumulating. This quarter, the number of addresses with more than \$1,000 fell roughly 6%, while the price fell 13%. Ether investors seem to be in a state of apathy, as the price remains down roughly 65% from the all-time high.



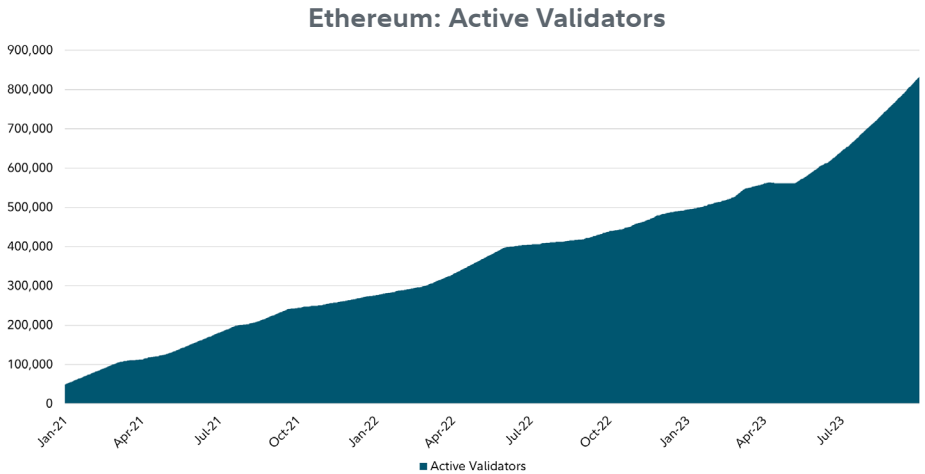
Data Source: Glassnode, 9/30/2023.



## Staking Numbers/Validators (Ethereum)

The active validator count has been climbing since the April 2023 Shapella upgrade, which allowed users to unstake and, ultimately, lowered the uncertainty about when or if users could ever get their staked ether back. The active validator count grew by 29% over Q3, 48% since the staking upgrade was implemented, and 69% year to date. This shows

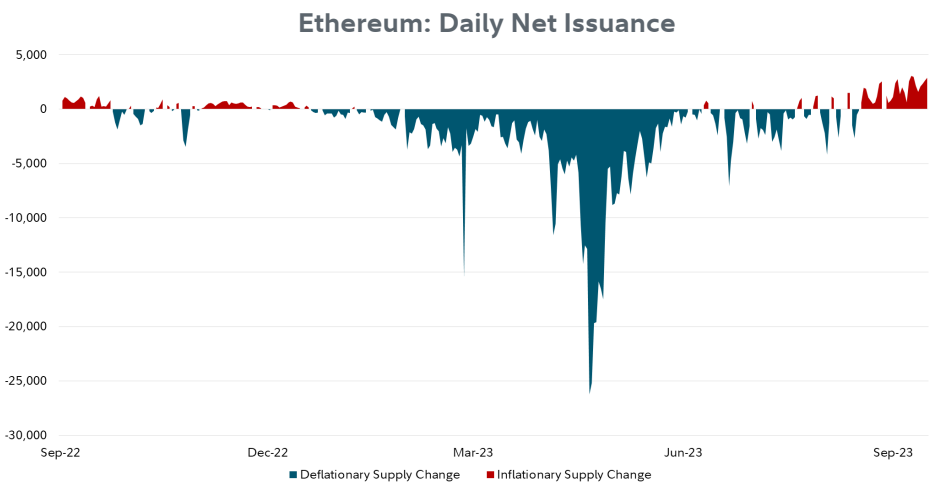
the growing demand for ether but has also raised some concerns about the rate of staking and the technical hurdles that come with high-frequency blocks in a decentralized network. Because of this concern, two Ethereum Improvement Proposals (EIPs) have been submitted. One proposal aims to cap the maximum number of validators per epoch that can join the network. The other suggests raising the maximum effective balance, ultimately lowering the number of nodes required for an individual to stake, which, in turn, lowers the number of node blocks needed to propagate through. Right now, we view this demand as a positive indicator for Ethereum. The research team will be watching the outcome of this demand closely.



Data Source: Glassnode, 9/30/2023.

## Net Issuance and Burn (Ethereum)—One-Year Anniversary

Net issuance (new supply issued by the network minus burned supply from transactions) since The Merge in September 2022 has driven an overall supply decrease for over a year now. This is important because, in theory, if ether’s supply continues to be destroyed gradually, it raises the relative ownership level of all remaining token holders. Instead of new coins’ consistent issuance to stakers without a burn, ultimately driving up the total supply, we see coins being burned by active users at a higher rate than coins being issued in staking rewards by the network. However, this inflationary and deflationary supply change is highly dependent on staking demand that drives issuance higher and transactions that burn ether. As Q2 ended, so did the relatively consistent deflationary supply metrics. During Q3, Ethereum experienced both a higher demand for staking, covered above, and fewer transactions on Layer 1. While this alone does not indicate the future state of Ethereum’s supply, it is an example of how quickly supply dynamics can change.



Data Source: Glassnode, 9/30/2023.

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