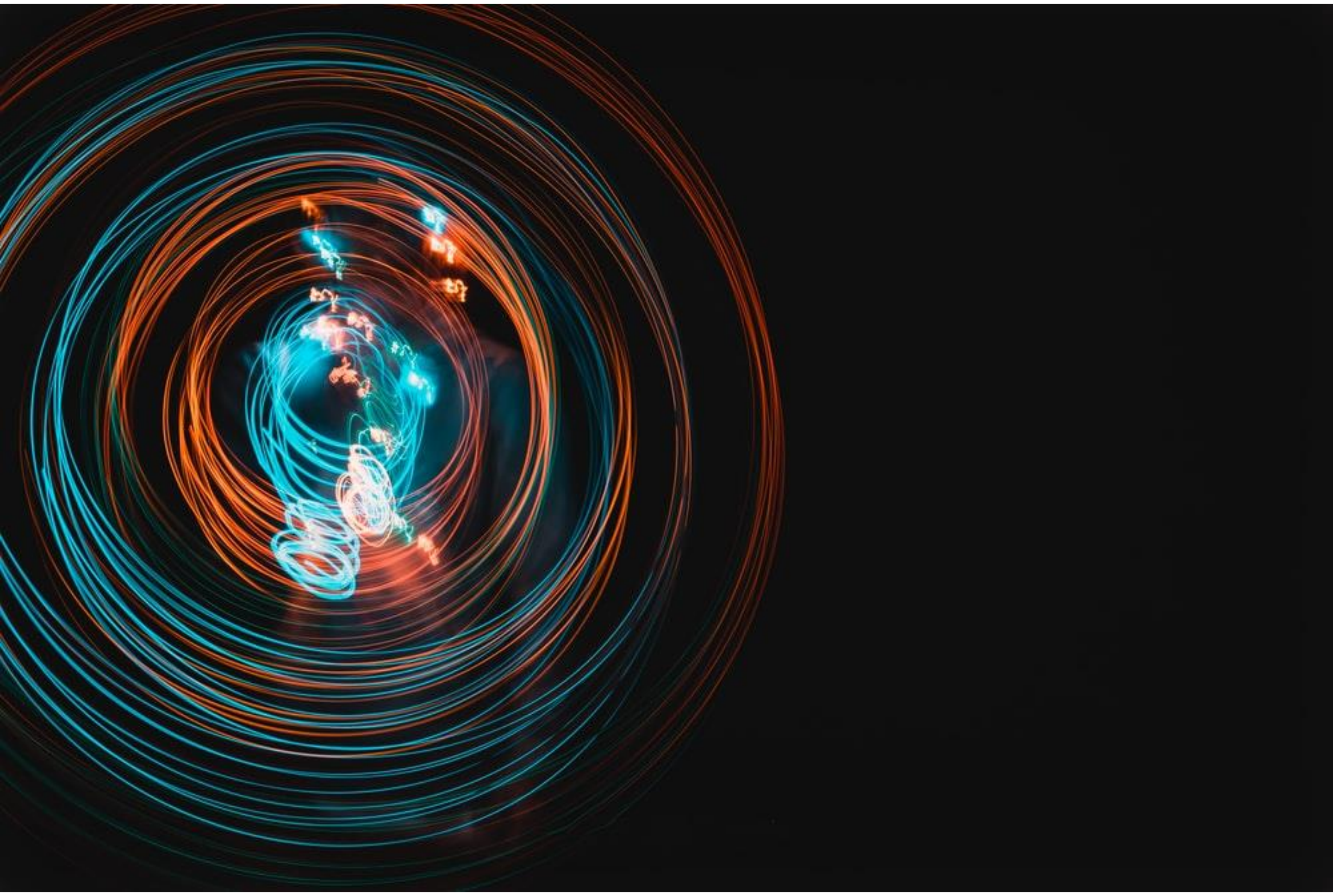
Q4 2021



THE BITCOIN MARKET CYCLE

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Halvings

Perhaps the most noteworthy quality of bitcoin is its hard-coded, scarce supply structure in which there will only ever be 21 million bitcoins in existence. In order for this to occur, Satoshi set forth a fixed supply schedule that over time, reduces the number of bitcoin miners receive for confirming blockchain transactions.

With new issuance solely due to these “block rewards,” a reduction called “halving” reduces the number of bitcoin miners receive by 50% every 210,000 blocks that occur.

As a result, bitcoin’s supply becomes disinflationary. The level of new issuance decreases every four years, and each new “halving” event creates further scarcity.

These halvings are critical to bitcoin’s use-case as sound money, as supply remains inelastic to demand.

Halving Dates and Data

There have been three halvings since bitcoin’s creation on January 3rd, 2009:

Date	Block	Block Reward	Avg. Ann. Inflation
1/3/2009	0	50 BTC	61.11%
11/28/2012	210,000	25 BTC	10.7%
7/9/2016	420,000	12.5 BTC	3.9%
5/11/2020	630,000	6.25 BTC	1.7%
Exp May 2024	*840,000*	*3.125 BTC*	*0.7%*

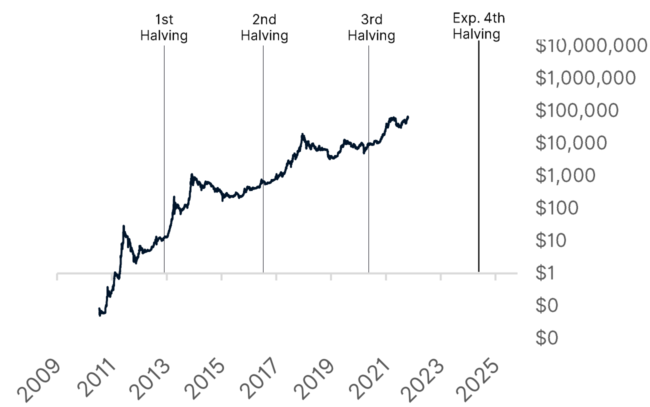
Source: Glassnode, Eaglebrook Advisors

Following bitcoin’s launch in January of 2009, miners received 50 bitcoin per block as an incentive to join and support the network in its early stages.

The first halving then occurred on November 28, 2012, and block rewards were reduced to 25 bitcoin. The second halving occurred on July 9th, 2016, and block rewards were reduced to 12.5 bitcoin. Most recently, the third halving occurred on May 11, 2020, and block rewards were reduced to 6.25 bitcoin per block.

This process will ultimately lead to ~21 million bitcoins by 2140.

Bitcoin: Price and Halvings
Source: Glassnode, Eaglebrook Advisors



Historically, Halvings Have Created Cycles

Following each of bitcoin’s three halvings, price has moved almost immediately higher.

Essentially, the concept of scarcity drives halving cycle theory: the less bitcoin that miners receive, the less supply that enters the market. Stable or increasing demand should thus, move prices higher.

This belief became consistent across much of the community, and in doing so, became self-reinforcing throughout the periods that followed both the first (11/28/2012) and second (7/9/2016) halvings.

With increased scarcity, bitcoin’s price rallied, and given bitcoin’s ability to provide traders with FOMO, ultimately led to parabolic returns. Naturally, these returns ended with elongated bear markets that drove price back towards equilibrium.

Cycle 1 and Cycle 2 Peaks: Parabolic Returns

Peak Date	20 Day Return
12/4/2013	173%
12/16/2017	110%

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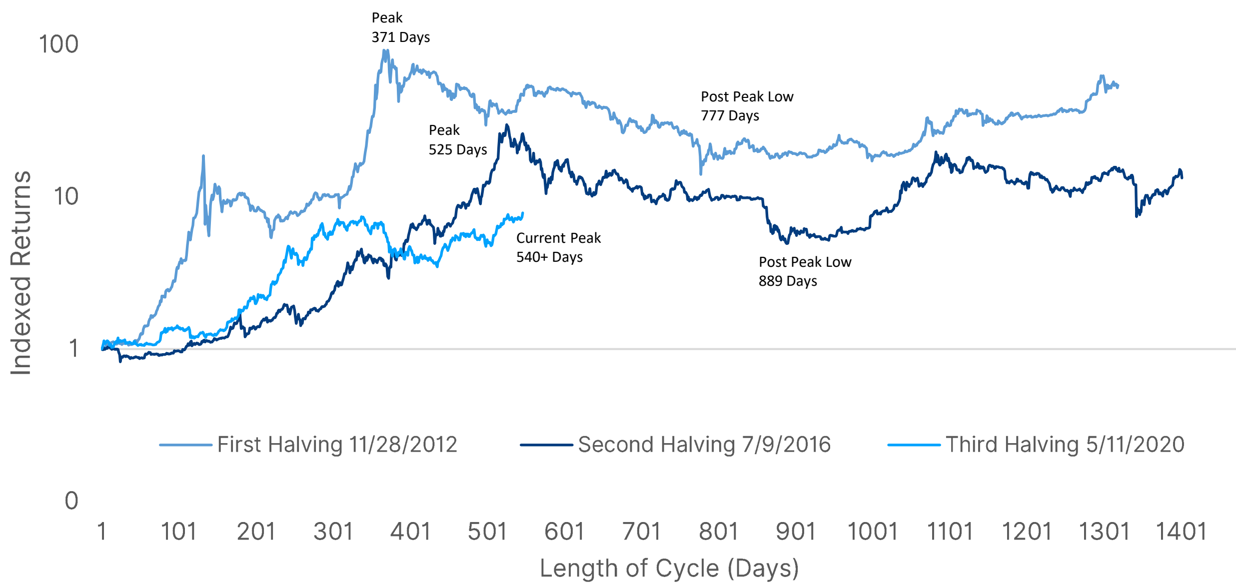
Bitcoin Market Cycle Analysis: Halving Cycles

Source: Glassnode, Eaglebrook Advisors



Commonalities of Halving Cycles

For most of our analysis, we define cycles from the start of the halving date. In doing so, we find the following commonalities:

1) Bitcoin rallies following the halving dates;
2) A parabolic advance often leads to bear markets in the middle of the cycle;
3) Post peak lows are seen approximately halfway into the cycle;
4) And bitcoin then rallies in anticipation of the next halving date

This timeline of events occurred throughout both the first and second cycles. Now, 540+ days after the most recent halving cycle, bitcoin has reached a new high. This is similar to the 525 days it took bitcoin to peak in the second halving cycle.

Halving Cycle Performances, A Summary:

	Start Date	Period High	Period High Date	Days from Halving to High	Gain Halving to High	Low Following Halving High	Date of Low	Days in Bear Market	Max DD	Days From Low to Next Halving	Anticipation Rally	End Date
Launch	1/3/2009	$29.64	6/8/2011	326	59,768%	$2.05	11/18/2011	163	-93.1%	376	500%	11/28/2012
First Halving	11/28/2012	$1,134	12/4/2013	371	9,126%	$172	1/14/2015	406	-84.8%	542	282%	7/9/2016
Second Halving	7/9/2016	$19,587	12/16/2017	525	2,880%	$3,237	12/15/2018	364	-83.5%	513	166%	5/11/2020
Third Halving*	5/11/2020	$67,589	11/8/2021	546	686%	?	?	?	?	?	?	May 2024

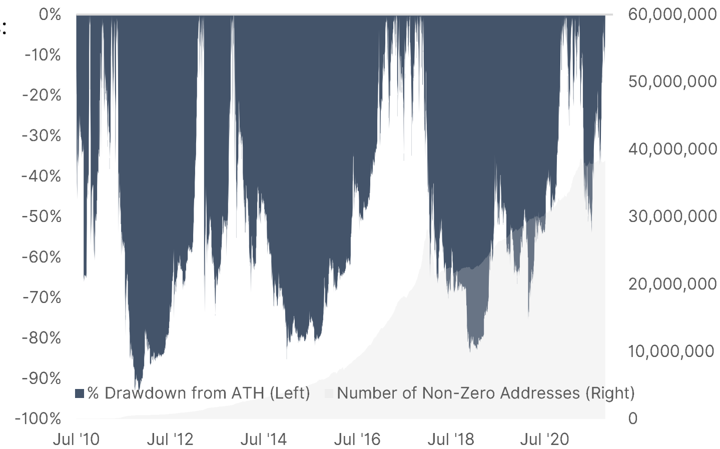
Source: Glassnode, Eaglebrook Advisors
Closing Prices as of 11/8/2021, *High is TBD

But What About the Drawdown?

Bitcoin has had three major 80% or more drawdown events:

- October 19, 2011, of -92.9%
- January 14th, 2015, of -85.2%
- Most recently, December 15th, 2018, -83.7%

Bitcoin: Percent Drawdown from Intraday ATH
Source: Glassnode, Eaglebrook Advisors



These events are either remembered or known by most bitcoin investors today, but let's put these in perspective.

The first drawdown was in 2011, when only the initial early adopters were exposed to bitcoin. At the low on October 19, 2011, there were just 541,000 non-zero bitcoin addresses. With little awareness, prices fluctuated wildly as the future viability of bitcoin was still unknown. There were only 5,000 on-chain transactions at the lows on October 19. Exchange liquidity was scarce and naturally, price declined as weak hands saw bitcoin move from a high of $29.64 to a low of $2.05.

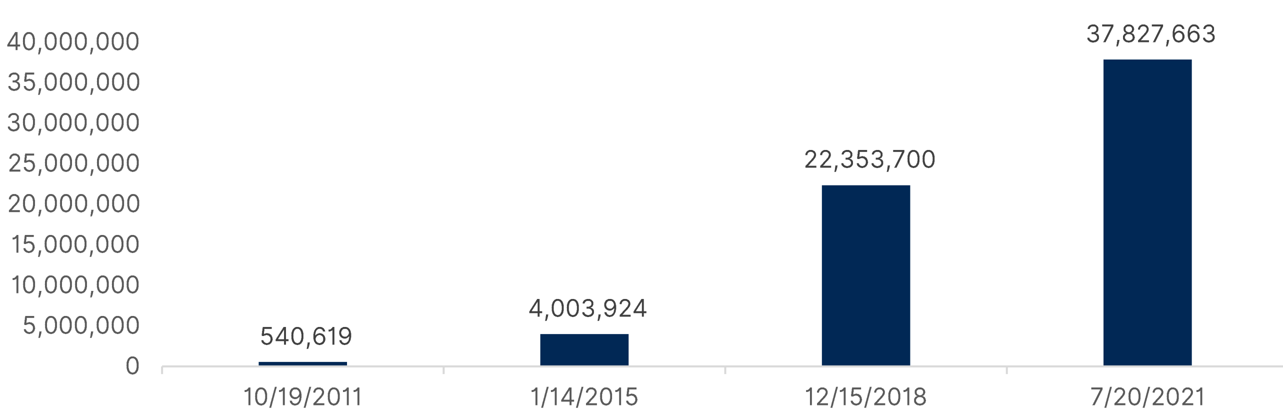
The second drawdown in 2015 had greater awareness, but the broader public was still unaware of bitcoin. This drawdown included a highly controversial period with the Mt. Gox scandal, the largest bitcoin exchange at the time. At the low on January 14, 2015, there were still just ~4 million non-zero addresses, quite far away from the network effects we see today.

The third and most recent 80%+ drawdown began with bitcoin's largest public awareness event: the parabolic rally to $20,000 that occurred in December of 2017. Most investors around the world know bitcoin because of this period, as financial news outlets rushed to broadcast bitcoin's momentum. Despite the broader awareness that was created from this event, polarization between bulls and bears grew significantly. This led to doubt from even the largest of bitcoin bulls, as price declined from a closing high of $19,587 to $3,237 in just over one year.

Since the drawdown that occurred in 2018, bitcoin's price has rallied over 200% from its previous 2017 peak, with a 54% drawdown from the high in April 2021 to the relative low in July. With adoption now growing at a rapid pace and almost 38 million non-zero bitcoin addresses, the 50% drawdown could be the new 80%.

Addresses with > 0 BTC

Source: Glassnode, Eaglebrook Advisors. 7/20/21 is -54% DD after April 2021's high.



Is 50% the New 80%? Why Reduced Drawdowns are Likely:

Public Awareness is Significant. In the nearly four years since bitcoin's true public awareness arose in December of 2017, polarization of bulls and bears has been reduced significantly. Many naysayers from that period have since changed their stance, and banks, regulators, investors, and institutions are now warming up to the idea of bitcoin as a macro asset in today's portfolios. Old claims of "bubble" have turned to echoes of "HODL", and today's bulls significantly outnumber bears. This underlying trend is significant, as there are now an estimated 200 million users of bitcoin and digital assets across both exchanges and self-custody. Investors now seek attractive opportunities to "buy the dip", a trend that should continue to mitigate drawdowns particularly as the size of the market increases. Ease of access is greater than ever, with many easy-to-use applications making bitcoin purchases readily available for retail investors.

Bitcoin is Here To Stay. Much of the reason for increased interest in bitcoin and digital assets is the confirmation that bitcoin is here to stay. Most recently, it's been confirmed by both the Chair of the Securities & Exchange Commission (Gary Gensler), the Chair of the Federal Reserve (Jerome Powell), that bitcoin will not be banned in the United States. US regulatory authorities have been conducive towards the growth of bitcoin and digital asset investing, with many organizations providing guidance on investment standards, reporting, and tax requirements. The US Treasury is even writing reports on stablecoin markets and how to facilitate growth and stability in the space. It's no longer a question if bitcoin is here to stay, which is a drastic improvement from previous drawdowns from all-time highs.

As a result, many institutions have approved or announced investments in bitcoin:

	Approved Offering	Announced Plans to Offer Crypto Product
Wirehouses / Independent Broker Dealers	Morgan Stanley, LPL Financial, Wells Fargo	Goldman Sachs, UBS, citibank, JPMorgan Chase & Co.
RIAs	Mariner Wealth Advisors, BCJ Financial Group, dynasty financial partners	Fidelity Investments, SIMON, charles SCHWAB
Financial Institutions	MassMutual, Fidelity Digital Assets, PayPal	BNY MELLON, State Street, FIS

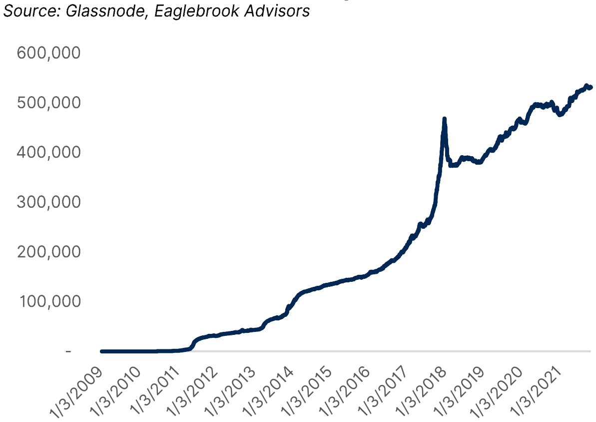
Source: NYDIG, CNBC, RIABiz

Holding Trends are Stronger Than Ever. Over time, bitcoin has moved from weak hands into those holding for the long-term, as evidenced by many on-chain metrics. Approximately 35% of bitcoin's supply has now been held for over 3 years, up from 27.6% in the 2018 drawdown and 21.8% in the 2015 drawdown. Over 500,000 on-chain addresses have accumulated bitcoin and never sold, a prime example of bitcoin's rapidly improving "HODL" characteristics. A summary of some improvements in holding trends are provided below:

Cycle Low Date	Non-Zero Addresses	% Supply Held 3+ Years	Number of Accumulation Addresses (Buy and Never Sell)
10/19/2011	540,619	0.0%	29,109
1/14/2015	4,003,924	21.8%	134,569
12/15/2018	22,353,700	27.6%	380,299
7/20/2021*	37,827,663	35.0%	522,005

Source: Glassnode, Eaglebrook Advisors
*Date of the most recent drawdown (-54%) seen after April 2021's ATH

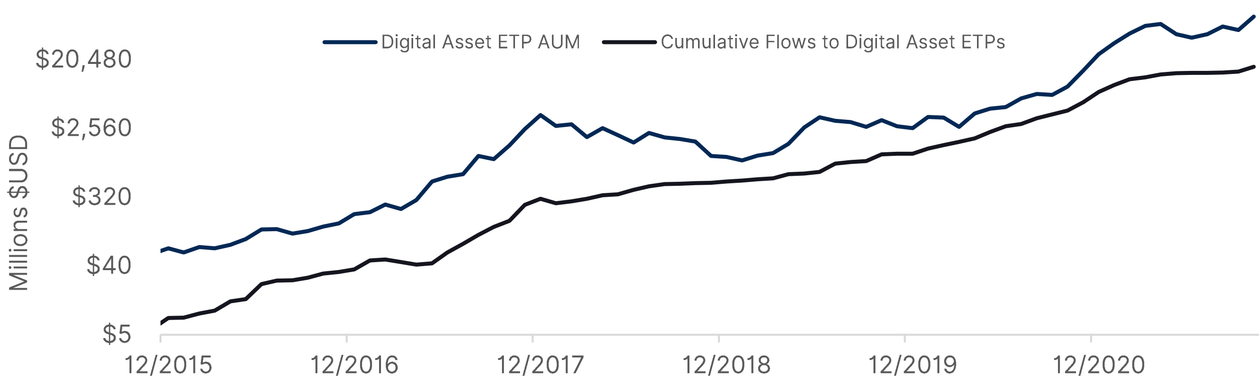
Bitcoin: Accumulation Addresses (Buy and Never Sell)
Source: Glassnode, Eaglebrook Advisors



Flows are Rising and are More Consistent. As bitcoin has now become mainstream and accepted, financial institutions, hedge funds, and registered investment advisors have begun to add exposure for their clients. In doing so, a significant amount of flows that were not present in earlier drawdowns are now present. Today, we see cumulative flows to digital asset ETPs continuing to rise, even in bear markets. As the number of institutional investors continues to grow, portfolios that include bitcoin as a strategic asset allocation should provide rebalance flows on market declines, thus providing support to the downside.

Digital Asset ETP Net Assets & Cumulative Flows

Source: Bloomberg, Eaglebrook Advisors

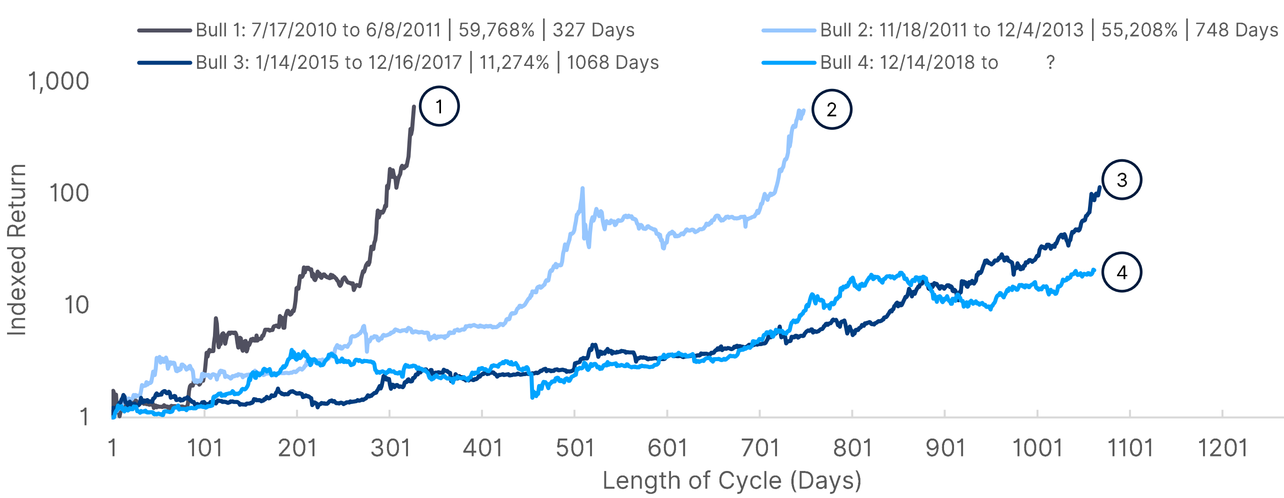


Conclusion: An Alternative View to Halving Cycle Theory

Perhaps a better way to assess bitcoin's cycles as the asset matures is the length of its bull markets. As we know in traditional risk assets, bull markets do not come with an expiration date, but often end with changing macro perspectives. Here, we can see that each bull market (from the low defined by a max drawdown of >80% or more to the next high) has increased in length:

Bitcoin Market Cycle Analysis: Lows to Highs

Source: Glassnode, Eaglebrook Advisors



- The first bull market from our first data point on July 17, 2010, to June 8, 2011, lasted 327 days;
- The second bull market from November 18, 2011, to December 4, 2013, lasted 748 days;
- The third bull market from January 14, 2015, to December 16, 2017, lasted 1068 days;
- And currently, the fourth bull market from the low on December 14, 2018, to the high in November 2021 has lasted 1060+ days

While only time will tell if the four-year performance cycle due to halving is over, markets have a way of maturing. If adoption, holding trends, and flows remain consistent, it's possible the traditional bear markets seen in the middle of halving cycles are behind us.

IMPORTANT DISCLOSURES

Investment advisory and management services are provided by Eaglebrook Advisors, Inc., a registered investment advisor. Information presented is for educational purposes only. Past performance is no indication of future results. Please see our Form ADV Disclosures and Privacy Policy in our website. Investing in digital currency comes with significant risk of loss that a client should be prepared to bear, including, but not limited to, volatile market price swings or flash crashes, market manipulation, economic, regulatory, technical, and cybersecurity risks. In addition, digital currency markets and exchanges are not regulated with the same controls or customer protections available in equity, option, futures, or foreign exchange investing.

Volatility Risk: Digital currency is a speculative and volatile investment asset. Investors should be prepared for volatile market swings and prolonged bear markets. Digital currency can have higher volatility than other traditional investments such as stocks and bonds and market movements can be difficult to predict.

Economic Risk: The economic risk associated with digital currency is in the lack of widespread or continuing digital currency adoption. The market and investors could decide that digital currency should not be valued at the current market capitalization due to a variety of factors.

Regulatory Risk: Digital currency could be banned or highly regulated by governments that would deter investors from buying or holding digital currency.

Technical Risk: Digital currency is a dynamic network with a codebase that is updated to add new security and functionality features. The updated code that is merged by the core developers could potentially have an error that threatens the security or functionality of the digital currency network.

Cybersecurity Risk: Digital currency exchanges and wallets have been hacked and digital currency has been stolen in the past. This is a potential risk that clients must be comfortable with when investing and holding digital currency. Theft is less likely when holding digital currency at a qualified custodian in offline systems (cold storage) with institutional security and controls.