The Seasonality of Cryptocurrencies: Analysis of Recurring Price Trends in Bitcoin

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Seasonality and Crypto

Over the past 57 years, the *Stock Trader's Almanac* has guided traders and investors on using the powerful tools of seasonality, cycles, trends, and recurring patterns to enhance returns with better-timed entries and exits. Never before has there existed an efficient source of extensive seasonal studies for cryptocurrencies. Over the years, however, the popularity of cryptos has translated into rising demand for a reliable framework for discovering the subtle patterns and sophisticated seasonal nature of this industry.

We have decided to answer the community's call and construct a comprehensive body of knowledge for the first time. While in some respects, Bitcoin resembles the TradFi market patterns, it exhibits some rather distinct characteristic behaviors of its own worth illuminating. In the new era of the institutionalization of the crypto markets, it is the perfect timing for such a release. Even the date of the release is anchored at the worst day of the year in terms of cumulative average performance. We took it as a sign.

Cryptocurrencies experienced a series of spectacular booms from 2010 to 2021, more lately fueled by newly minted work-from-home traders during the pandemic. In 2022 the crypto market went from boom to bust, for the fourth time. Bitcoin crashed, plunging 77% from a high in November 2021 around $69,000 to under $16,000 in November 2022.

Traders and analysts have been tracking technical and other trading patterns of cryptocurrencies all along. It was this parabolic rise and fall of the crypto market and the relentless ubiquity of cryptocurrencies that brought us together to fill the need for deeper trader education.

We have long desired to present crypto traders and the market at large with a compendium of educational trading tools and analysis combining fundamental and macro trends with technical analysis and reliable recurring seasonal patterns and cycles. This paper is intended to show readers, crypto traders, and investors how to utilize Bitcoin's most consistent seasonal trading patterns.

For this study, we present an overview of Bitcoin's trading and adoption history from a fringe dark web anarchist tool to institutional and sovereign acceptance. As proponents of the 4-Year U.S. Presidential Election Stock Market Cycle, we cannot ignore Bitcoin's built-in, coded "halving" cycle (mining rewards are cut in half after every 210,000 blocks of transactions in the blockchain), which occurs approximately every four years. Bitcoin has rallied hard after the previous three halvings and never returned to the prior halving prices.

With the vast and varying array of exchanges and markets that trade crypto and the 24/7/365 trading, there is no one definitive data source or closing price that is universally accepted as there is for most other securities, commodities, currencies, and indexes, but that is the nature and arguably the beauty of Bitcoin and DeFi. We have relied upon a few different data sources here to corroborate our observations.

Institutional ₿ias

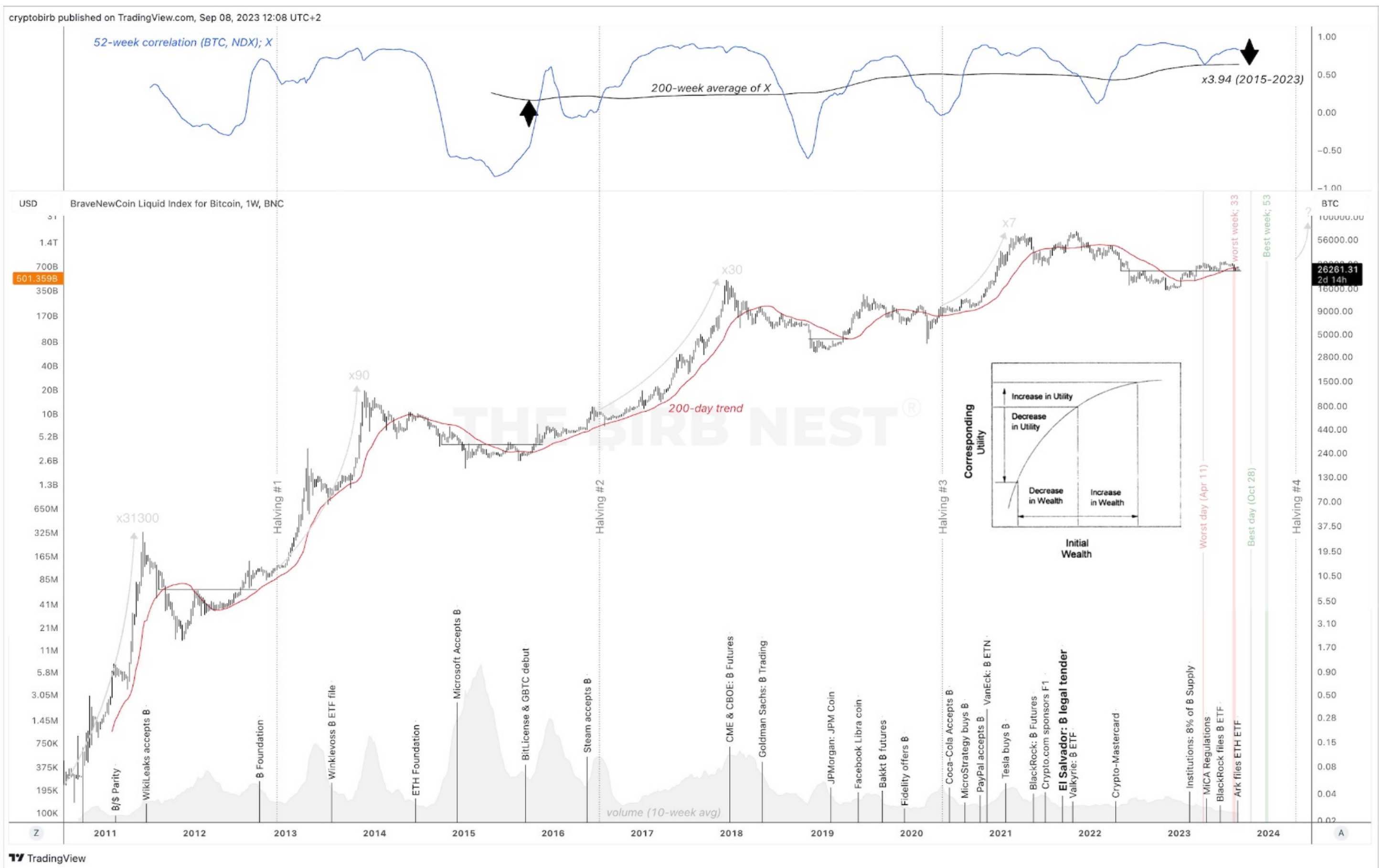
There is some elegance in how Bitcoin has often proved doomsayers, mainstream pundits, and financial market experts wrong in its short history. Perhaps a great case study for the modern free market. Despite the 70-90% drawdowns during the last four crypto bear markets, BTC never returned to the previous halving prices. Instead, it rallied 9000%, 3000%, and 700% to the subsequent bull market peaks, leaving disbelievers behind.

Surprisingly, TradFi whales are often averse to Bitcoin. Mainstream media and traditional pundits claim Bitcoin has no intrinsic value. Ironically, the biggest hedge funds fall for the same basic biases as an 18-year-old kid flipping a coin. On one hand, rationally, it might have to do with their risk aversion profile and the Law of Diminishing Marginal Utility (marginal utility of money decreases with capital size). On the other hand, with little logic, trying to force the utilitarian value of Bitcoin into the traditional stock market model is a cognitive error laden with denial, conservatism, and representativeness bias.

Yes, many coins and tokens are scams. Nonetheless, isn't it unwise to ignore the momentum of a $1 trillion industry? Bitcoin's high volatility and its "tech stock" correlation of up to ~4x since 2015 make it an attractive alternative for more risk-seeking traders (and they get more freedom). In the end, who likes missing spectacular pumps?

Built into Bitcoin's protocol is a planned halving of mining rewards that occurs after every 210,000 blocks of transactions in the blockchain – approximately every four years. The next and fourth halving is projected to occur in April 2024. Arguably, the halving events can be considered a boost of "intrinsic" value along with the digital scarcity as it becomes more and more expensive to mine new blocks. If there is less of it or it is harder to get, we want it more, right?

Regulators are stepping in. The European Securities and Markets Authority (ESMA) put the Markets in Crypto-Assets Regulation (MiCA) into force in June 2023, instituting uniform EU market rules for crypto-assets. So. it's a matter of time before giants like Apple or Amazon fully unlock crypto transactions. Bitcoin CME futures began trading in 2017 followed by a host of institutional usage and acceptance, as seen in the chart below.



Interesting how that aligned with the exact peak of the 2015-2017 bull. After the first legal tender regulations in El Salvador in September 2021, arguably, one of the most important events for Bitcoin adoption, Bitcoin ETFs are in rising demand. Lately, the airwaves and internet are filled with Bitcoin and Ethereum ETF ads, and more crypto ETFs are being increasingly issued.

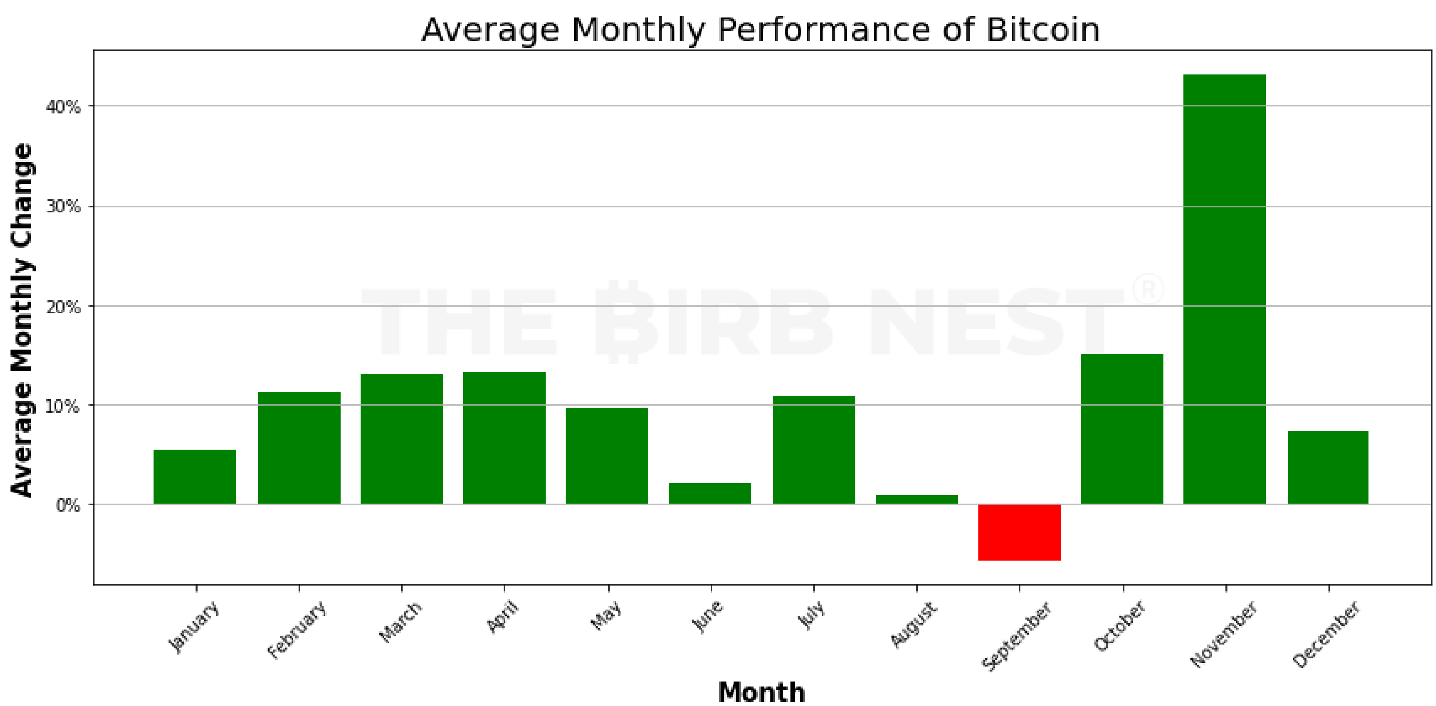
Back in 1966 when the late Yale Hirsch had his epiphany and set out on his endeavor to create the iconic *Stock Trader's Almanac*, he discovered that while stocks do indeed fluctuate, they do so in well-defined, often predictable patterns. These patterns recur too frequently to be the result of chance or coincidence. Over the ensuing 57 years the *Almanac* has shown the existence and presence of many well-known patterns. We have also found this to be the case for most, if not all, financial markets, instruments, and securities. We believe this to be true for cryptocurrencies as well and applies quite well to Bitcoin. Clearly, it makes sense to keep track of Bitcoin's seasonal patterns.

September Is The Season of Bitcoin

In a way, BTC shows a similar seasonal performance to S&P 500 or NASDAQ. For example, September is the only negative month (-6.45% average loss) over the last 13 years. As you can see in the monthly performance chart, not only is September the worst month of the year for BTC, but there is also a clear bullish seasonal bias, with the Best Six or Eight Months running from October through May, much like the seasonal pattern of U.S. equities. You have heard of "Sell in May and Go Away," but Jeff likes to say, "Buy in October and Get Your Portfolio Sober!" The seasonal trading patterns we have observed of Bitcoin suggest we should, "Remember to ₿uy in September."

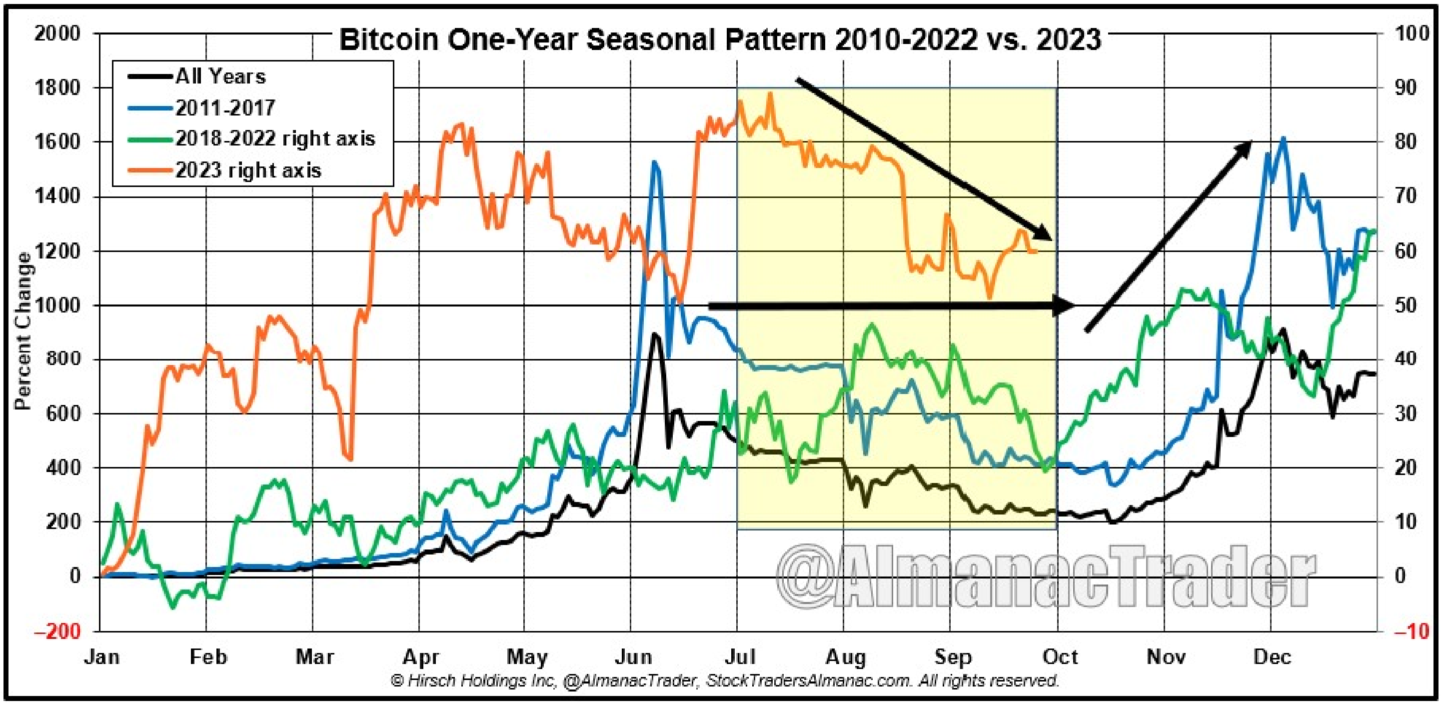
Bitcoin Monthly Performance

This chart represents a monthly breakdown of the average BTC performance throughout the year. It averages the available Bitstamp data from 2011 through 2023, revealing a strong seasonal skew and that reversals can often be anticipated in negative September into positive October and November.



Bitcoin One-Year Seasonal Pattern

Due to the massive price moves of BTC, especially in the early years, we have broken out the one-year seasonal pattern charts into a few different time frames. All years using data from July 2010-December 2022 (black line) and 2011-2017 (blue line) plotted on the left axis are compared to 2018-2022 (green line) and 2023 year-to-date (orange line) plotted on the right axis.

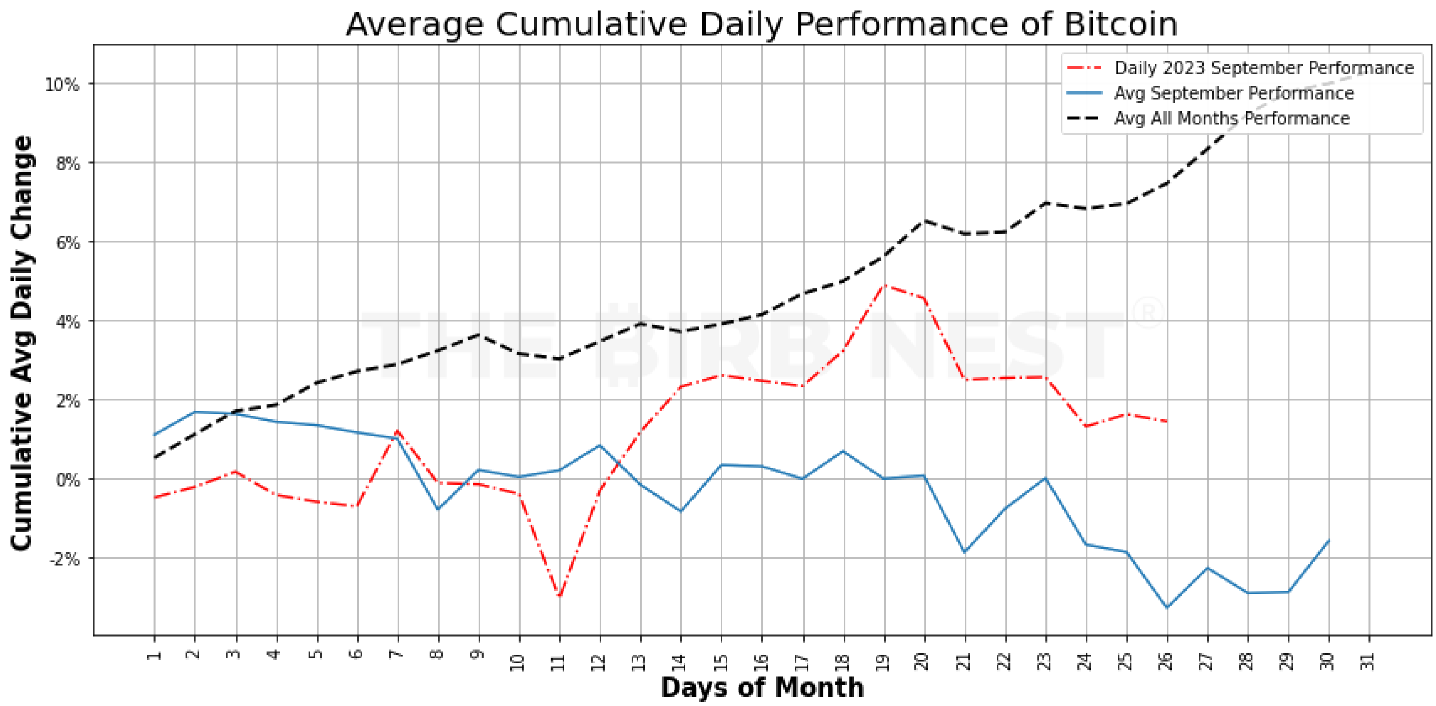


The different one-year seasonal patterns illustrate the massive amount of volatility in BTC price action, but a clear trend and trading strategy emerges. The Best Eight Months from October through May and Worst Four Months from June through September stand out on all the historical pattern lines. This suggests that the best seasonal trading strategy may be to buy in September/October and sell May/June, or just buy in mid-late September.

The spring banking crisis that hit two banks with significant exposure to cryptocurrency coincided with Bitcoin's move lower in March this year. Pending implementation of the new MICA regulations in June and several U.S. Congressional hearings might have weighed on Bitcoin from April to June. And then weak seasonality kicked in from July to the present here in late September.

September Monthly Pattern Analysis

Drilling down a little deeper into September shows a mix of positive and negative returns, with a strong lean towards losses. The first half of September outperforms the second half, which is the opposite of the average for all months. September 1st through 7th is flat and weak. September 8th through 30th is negative. September is the worst performer of all months (with the biggest spread between the average September performance versus the average of all months). September's historical average high point is the 2nd; with the low point falling on September 26th.



2023 Trade Set Up

Bitcoin is tracking the seasonal patterns in 2023 exhibiting typical late-September weakness. So, it looks like Bitcoin is headed for a quintessential seasonal low and a solid late-September annual buy setup. Within the bullish pre-election year context, it also makes sense to be ready for the usual Q4 rally, historically being up +50% on average. October alone brings positive expectations and favorable recovery conditions for bulls, averaging an over 10% return with the month up 67% of the time since 2011. The future is uncertain, so there is no way to predict it with 100% conviction. Still, those who have prayed for Bitcoin's death have often been the ones who have missed Bitcoin's biggest opportunities.

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