

# The Adverse Impacts of Market Timing

"TIME IN THE MARKET" OVER "TIMING THE MARKET"

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# Executive Summary

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“Time in the market is more important than timing the market” has been an enduring mantra for investors who espouse the long-term benefits of stock market exposure. The statistics support the claim that, despite the ups and downs in the markets, investors would be better suited to stay the course with buy-and-hold strategies versus trying to pick market tops and bottoms. We observe a similar dynamic with bitcoin where we find that the evidence for staying in the market is stronger than it is for the stock market. Across every time horizon in our study, 3-, 5-, and 10-year trailing periods, investors who missed out on one of the best months, but avoided one of the worst underperformed relative to a simple buy-and-hold strategy. At its most extreme, over the trailing 10 years, investors who missed out on both the 10 best and 10 worst months exhibited **annualized returns** that were **51.9% worse** compared to a buy-and-hold strategy.

## Overview

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The philosophy of staying invested in the market rather than trying to time its ups and downs is a familiar concept for market practitioners and academics alike. There is good support for this theory as analysis shows that investors that miss out on some of the stock market’s best return periods, which can be difficult to predict, exhibit returns that are significantly below the market’s long-term return. In this report, we quantify the impact of mistiming bitcoin markets and find that it bears a heavy toll on returns compared to a buy-and-hold strategy. We also compare this to missing months in the S&P 500 and find that those are not nearly as impactful.

Our conclusion is based first on the analysis of the impact of missing the best 1, 5, and 10 months of holding bitcoin over trailing 3-, 5-, and 10-year hold periods. Our analysis relies on monthly returns starting in August 2021 going back 10 years. Given bitcoin’s explosive returns, which have been over 100% in some months, it should not come as a surprise that missing out on these periods would have had a significantly negative impact on long-term returns. As a more rigorous inspection of the market timing effect, we performed a second analysis of returns that assumes investors missed both the best and worst months of price performance. We feel as though this is a more even-handed analysis and here the evidence is clear: trying to time the bitcoin market resulted in inferior returns compared to a buy-and-hold strategy.

# Results – Missing the Best Month Has Cost Bitcoin Investors Dearly

Given bitcoin's proclivity of having explosive returns in short periods, it shouldn't surprise investors that missing some of the best months has been destructive to long-term returns. Our analysis shows that missing some of the most crucial months in bitcoin markets, whether it be 3-, 5-, or 10-year trailing period through the end of August 2021, has impacted investor returns materially compared to a buy-and-hold strategy. The annualized underperformance by missing the best month has been a whopping 37.3% over 10-years, 24.4% over 5 years, and 27.8% over the past 3 years.

The methodology for our missing the best (and worst months) analysis excludes the stated number of best (and worst) monthly returns over the measured time frame but is annualized over the same number of months. For example, missing the best 1 month over the past 10 years removes the single best monthly return over the past 10 years, effectively substituting the monthly return for 0%, and computes the annualized return over 10 years (120 months).

## Bitcoin | Compound Annualized Return

	Trailing		
	10 Years	5 Years	3 Years
Buy and Hold	137.7%	141.9%	88.9%
Miss Best Month	100.5%	117.5%	61.1%
Miss 5 Best Months	54.8%	51.0%	1.9%
Miss 10 Best Months	23.8%	7.5%	-34.3%

## Bitcoin | Annualized Underperformance Relative to Buy and Hold

	Trailing		
	10 Years	5 Years	3 Years
Miss Best Month	-37.3%	-24.4%	-27.8%
Miss 5 Best Months	-82.9%	-90.9%	-87.0%
Miss 10 Best Months	-113.9%	-134.4%	-123.1%

The impact of missing the best months in the S&P 500 compared to a buy-and-hold strategy hasn't been nearly as severe as it has been for bitcoin. The impact of missing the best month over the past 3, 5, or 10 years only impacted annualized returns by single-digit percentages. The adverse impacts of errors in market timing have been much more forgiving for the S&P 500 than they have been for bitcoin.

### S&P 500 Total Return Index | Compound Annualized Return

	Trailing		
	10 Years	5 Years	3 Years
Buy and Hold	16.4%	18.0%	18.2%
Miss Best Month	15.1%	15.3%	13.7%
Miss 5 Best Months	10.8%	8.3%	2.3%
Miss 10 Best Months	7.2%	2.9%	-5.2%

### S&P 500 Total Return Index | Annualized Underperformance Relative to Buy and Hold

	Trailing		
	10 Years	5 Years	3 Years
Miss Best Month	-1.3%	-2.7%	-4.5%
Miss 5 Best Months	-5.6%	-9.8%	-15.9%
Miss 10 Best Months	-9.3%	-15.1%	-23.4%

# Results – Even Missing the Best and Worst Months Have Detracted from Bitcoin Returns

A more stringent analysis of the deleterious impacts of market timing asks the question “what if investors had the misfortune of missing the top months, but somehow were able to avoid bitcoin’s worst months? Would that make up for the difference in returns?” Unfortunately, the answer to this question is an unequivocal “no.” Our analysis shows that even if one avoided bitcoin’s worst months, it did not make up for missing a similar number of its best months. This had to do with the positive skew to the distribution of monthly returns, in which bitcoin’s strongest monthly returns are far off on the right tail of the distribution curve.

## Bitcoin | Compound Annualized Return

	Trailing		
	10 Years	5 Years	3 Years
Buy and Hold	137.7%	141.9%	88.9%
Miss Best and Worst Month	111.4%	138.0%	87.2%
Miss 5 Best and Worst Months	93.7%	120.3%	69.7%
Miss 10 Best and Worst Months	85.8%	85.5%	26.8%

## Bitcoin | Annualized Underperformance Relative to Buy and Hold

	Trailing		
	10 Years	5 Years	3 Years
Miss Best and Worst Month	-26.3%	-3.9%	-1.7%
Miss 5 Best and Worst Months	-44.0%	-21.6%	-19.2%
Miss 10 Best and Worst Months	-51.9%	-56.4%	-62.1%

The same cannot be said for the S&P 500, however. It is not clear from our analysis that the tradeoff of missing the best and worst months in the market negatively affected returns compared to a buy-and-hold strategy. Over the observed time horizons, missing the best and worst 5 and 10 months improved returns, albeit slightly. It is not until investors missed the 10 best and worst months that the negative impacts of market timing were felt.

#### S&P 500 Total Return Index | Compound Annualized Return

	Trailing		
	10 Years	5 Years	3 Years
Buy and Hold	16.4%	18.0%	18.2%
Miss Best and Worst Month	16.4%	18.0%	18.2%
Miss 5 Best and Worst Months	16.1%	18.3%	18.6%
Miss 10 Best and Worst Months	15.7%	16.2%	12.6%

#### S&P 500 Total Return Index | Annualized Underperformance Relative to Buy and Hold

	Trailing		
	10 Years	5 Years	3 Years
Miss Best and Worst Month	0.0%	0.0%	0.0%
Miss 5 Best and Worst Months	-0.3%	0.2%	0.4%
Miss 10 Best and Worst Months	-0.7%	-1.9%	-5.6%

## Concluding Remarks

Staying invested in the market is an important concept for long-term return compounding. The cost of mistiming bitcoin markets has been costly even to investors who made up for missing some of the best months by avoiding some of bitcoin's worst months. While volatility and the ability to trade 24/7 can make short-term trading an attractive proposition, we continue to encourage investors to consider the long-term benefits that a strategic allocation to bitcoin can make on their financial future. Our research shows that trading bitcoin comes with little margin for error as compared to a buy-and-hold strategy.

## SOURCES

Bitcoin: Mt Gox, 2011-2013; Bitstamp, 2013-2015; and NYDIG, 2015-2021

S&P 500 Total Return: Bloomberg

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