



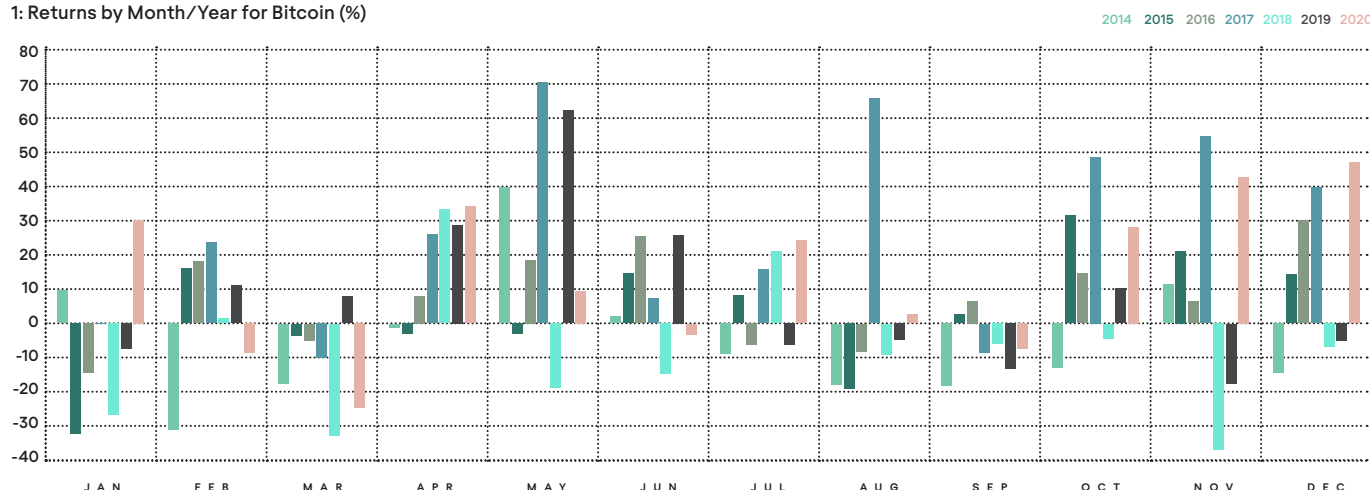
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# Scenarios: Is there a best time to add Bitcoin in a portfolio?



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1: Returns by Month/Year for Bitcoin (%)



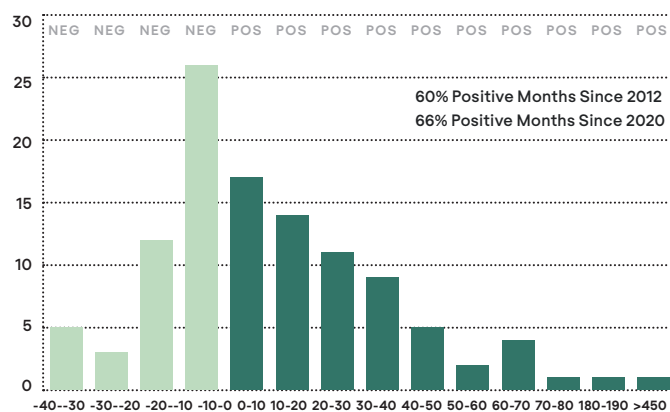
Bitcoin's current price and importantly, its price movements, can leave many hesitant on when the best time to buy is. The question about timing the market is not one that is specific to Bitcoin but all assets. The problem for investors is seeing their investment drop by double digits very quickly, a tradition that the cryptocurrency community welcomes as an opportunity to buy the dip. Ultimately, the data shows that these swings are no more than a double-edged sword that sway back and forth with the same momentum in the medium-to-long term horizon.

In this report, Copper examines Bitcoin's performance during various periods of the year to evaluate whether historical data can help determine when the best time to rebalance a portfolio might be.

Regardless of the long-term outlook looking exceedingly bright for Bitcoin and the cryptocurrency industry as a whole, investors will be apt to take caution when pulling the trigger. Bitcoin lends itself to an even more guarded tale with rapid swings seen in both directions as commonplace. And this can leave investors and treasurers much more on edge when comparing the cryptocurrency to low risk assets.

The question around Bitcoin, whether or not it is a risk, has shifted dramatically after Tesla's purchase this year. Might the risk now be in not taking a position? It's a conundrum however less so than it was a year ago. This is evidenced by the fact that flows into the cryptocurrency have now exceeded that of gold ETFs, according

2: Bitcoin Returns vs. Number of Negative and Positive Months Since 2012



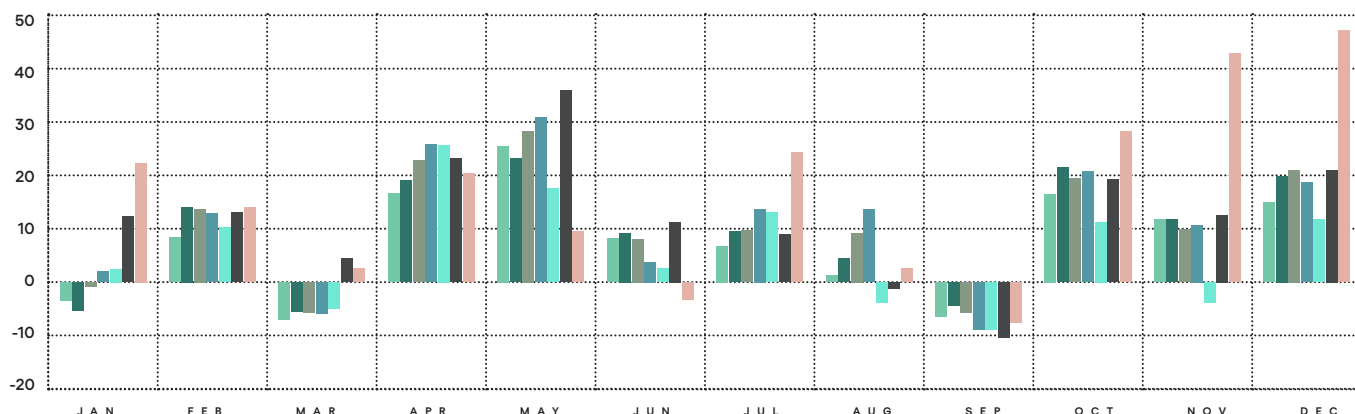
to a report by JP Morgan. The diversion of flows into Bitcoin predominantly by institutions indicates a real shift of faith.

It's only natural for anyone buying a large position of Bitcoin to question timing. Unfortunately, there isn't one, the data shows. Media headlines are quick to highlight the plummets of an asset that has had its validity questioned for over a good decade. And a look at monthly returns (chart 1) can make the safe investor queasy at the thought. However, zooming out, since 2012 when exchanges started to ramp up, the cryptocurrency has had a much higher chance of returning a positive result than negative (chart 2). But that's certainly not the full story and more information is certainly needed when entering this new market.



### 3: Average Returns by Month Over Investment Period (%)

From 2014 - 2020 From 2015 - 2020 From 2016 - 2020 From 2017 - 2020 From 2018 - 2020 From 2019-2020 For 2020



## Fooled by Randomness?

The data on monthly returns can be considered to be extremely volatile and random. And this is a fair observation for everyone looking at the monthly returns.

But the outlook dramatically shifts when looking past the 1-year mark. With Bitcoin being a new asset with spectacular returns, it's difficult to not look at the numbers without it sounding like a sales pitch. The reality is, though, that the returns are much more linear than one would expect when looking at investments for different periods (chart 3). The data highlights that investments made from any period to be positive within 2 years with returns well into the double-digits.

With price swings quite large, risk-averse investors might be weary in taking the plunge. But a look at the data shows that even investing at the worst time possible will make remarkable returns in the long-run (table 1).

Again, its understandable to look at the numbers with much apprehension. As an argument for the cryptocurrency, an investor who began trading CME Bitcoin Futures when the product launched at the end of 2017 - also marking the start of a bear market - would still have seen an average return of 20% per year by the end of 2020 by making lump sum purchases at the worst possible time.

## Slow and Steady

The reality is that the data for time picking are extreme hypotheticals with near zero chance of happening for any investor. As such, investments made monthly into Bitcoin will likely bode well within 2 years should there be any large price correction (table 2). And while timing the market is a fruitless exercise, historical data might help enter the market at more opportune times.

## Scenario: \$100k Annual Investment

### 1: Bitcoin Returns for the World's **Worst** Investor Buying in at Annual High

| Year                   | Price     | Bitcoin Purchase |
|------------------------|-----------|------------------|
| 2014                   | \$ 995    | 101              |
| 2015                   | \$ 502    | 199              |
| 2016                   | \$ 981    | 102              |
| 2017                   | \$ 19,666 | 5                |
| 2018                   | \$ 17,235 | 6                |
| 2019                   | \$ 13,880 | 7                |
| 2020                   | \$ 29,300 | 3                |
| Total Bitcoin Holdings |           | 423              |
| USD Value End of 2020  |           | \$12,271,894     |
| Total ROI              |           | 1653%            |
| Annualized ROI         |           | 51%              |

### 2: Returns with Monthly Investment Since 2014

|                       |              |
|-----------------------|--------------|
| Bitcoin Holdings      | 872          |
| Average Price         | \$4,298      |
| USD Value End of 2020 | \$25,286,927 |
| Total ROI             | 3512%        |
| Annualized ROI        | 67%          |

### 3: Bitcoin Returns for the World's **Luckiest** Investor Buying in at Annual Low

| Year                   | Price   | Bitcoin Purchase |
|------------------------|---------|------------------|
| 2014                   | \$275   | 364              |
| 2015                   | \$152   | 656              |
| 2016                   | \$379   | 264              |
| 2017                   | \$751   | 133              |
| 2018                   | \$3,122 | 32               |
| 2019                   | \$3,322 | 30               |
| 2020                   | \$3,850 | 26               |
| Total Bitcoin Holdings |         | 1,505            |
| USD Value End of 2020  |         | \$43,640,228     |
| Total ROI              |         | 6,134%           |
| Annualized ROI         |         | 80%              |



## Sell in May, Come Back Long After Labor Day. Better Yet, Don't Sell.

The Wall Street axiom that posits returns during summer to be muted is only a half-truth with Bitcoin looking at historical data. May has indeed made the best returns for Bitcoin. However, September seems to be the worst month possible to buy Bitcoin aside from March (see chart 4).

This insight can be helpful for investors, although, the usual disclaimer must be said that historical returns don't mean future potential.

Numbers show that a quarterly investment made at the start of April each year will result in the best time to purchase Bitcoin 80% of the time (see table 4). Of course, 2021 did throw a spanner in the data offsetting March returns on the back of Tesla's \$1.5bn purchase that was announced in February (see chart 5).

The differences in Bitcoin holdings can be large and enough to make investors pay attention. Bulk investments made at the start of the second quarter resulted in an average of 66% more Bitcoin than entering in October since 2014.

But the spectrum has forever changed with major companies such as Paypal, Square, Tesla, and many other marquee corporations now supporting Bitcoin. Should further announcements be made, this will also result in price's being pushed further up. And the allusive American ETF is yet to be approved but eagerly awaited.

## Time is Bitcoin

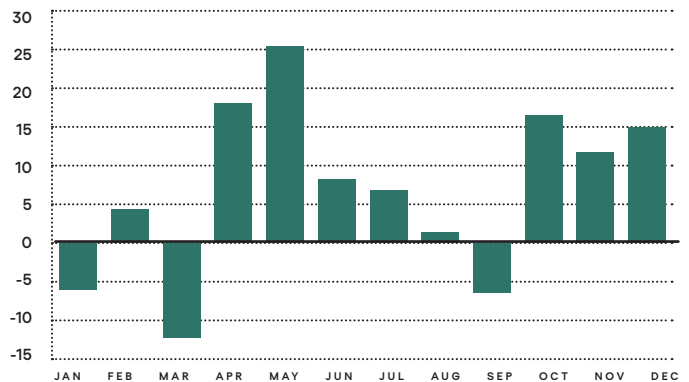
Ultimately, there is historical evidence to suggest April as the best time to make an investment, without the consideration of 2021 which saw March returns near the 30% mark for Bitcoin.

The numbers for the best lump sum investment by quarter is still not very far off the diligent monthly purchase of Bitcoin taking advantage of both sides of price swings.

What is fairly proven at this point is Bitcoin's limited supply matched with global recognition and easy access has made the cryptocurrency a very valuable risk.

And although the price movement of Bitcoin can be randomly haphazard, the data points to a much more linear return on the medium-to-long term horizon. The returns in fact remain so high that even the smallest of allocations is likely to make a significant difference in any portfolio.

4: Average Returns by Month from 2014-2020



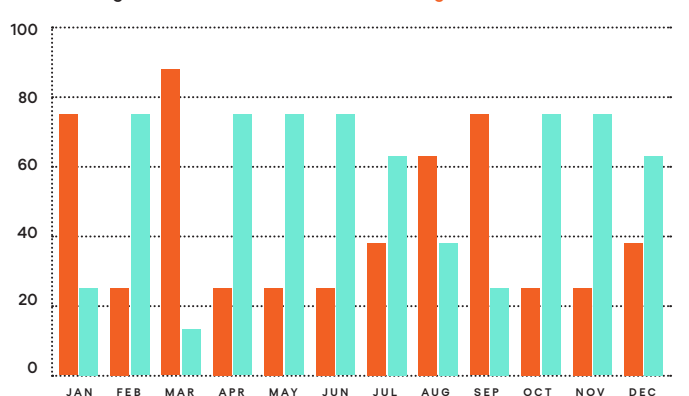
5: Average Returns by Month from 2014-2020 and 2014-2021



4: Bitcoin Holdings with Lumpsum \$100k Investment Once a Year by Quarter

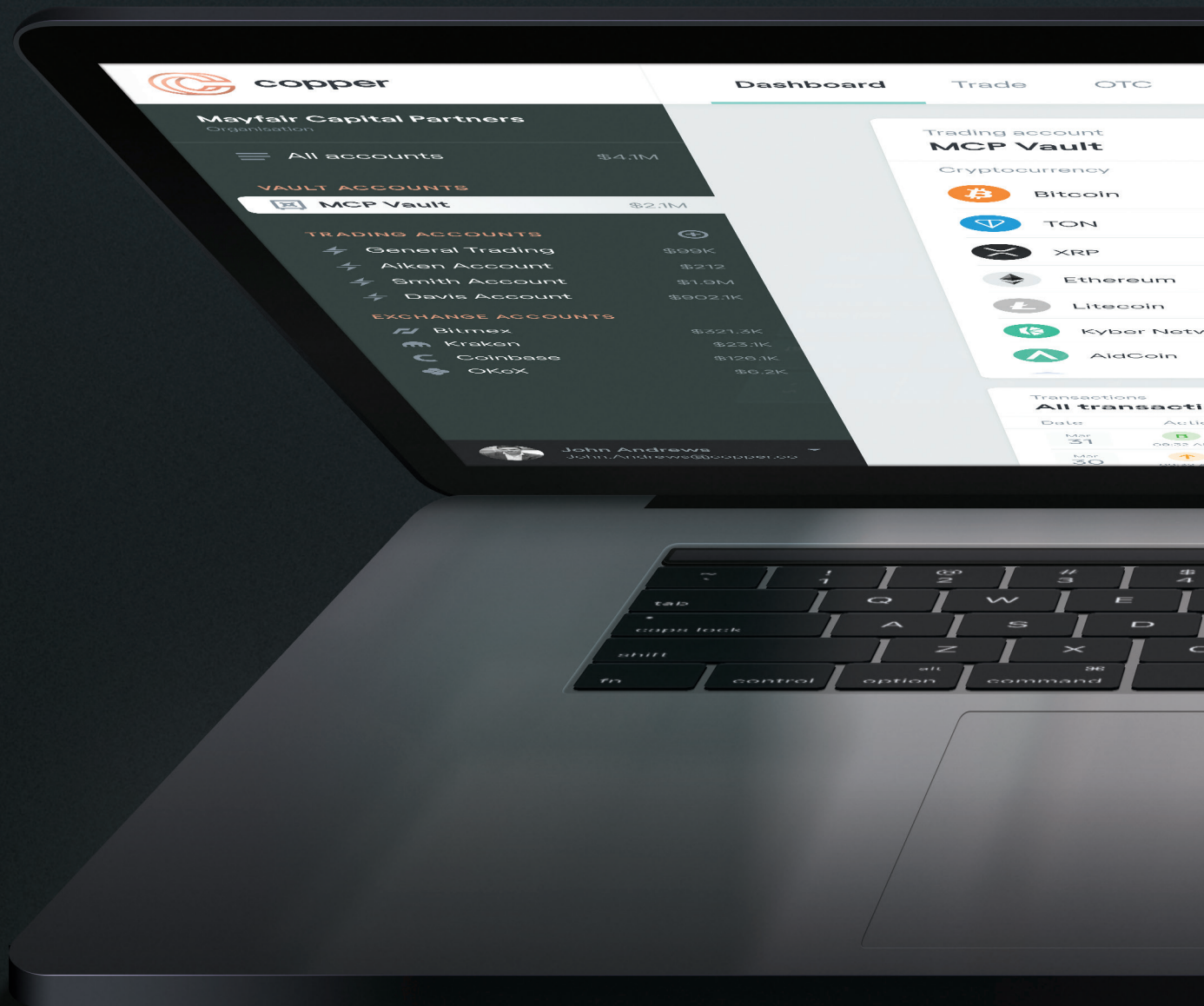
| Period    | Jan | Apr  | Jul | Oct |
|-----------|-----|------|-----|-----|
| From 2014 | 832 | 1019 | 764 | 905 |
| From 2015 | 695 | 799  | 607 | 648 |
| From 2016 | 384 | 389  | 227 | 224 |
| From 2017 | 152 | 148  | 76  | 60  |
| From 2018 | 48  | 54   | 36  | 36  |
| From 2019 | 41  | 40   | 20  | 21  |
| From 2020 | 14  | 16   | 11  | 9   |

6: Percentage of Months that are Positive or Negative Since 2014-2020





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