



# The Role of Cryptocurrencies

## Cryptocurrencies from a total portfolio perspective

Some assets are like sports cars; they may help you reach your return target faster but with some risk along the way, usually offering a chance for some excitement. Others are like minivans; dependable but sometimes forgettable, yet ready to help out in a pinch. So which of these is bitcoin?

As the cryptocurrency market has grown, so has the significance of this question. Once mostly a speculative play for retail investors and some hedge funds, cryptocurrencies have started capturing the attention of large, institutional investors. We explore the potential role of bitcoin in multi-asset portfolios by evaluating its relationship with US stocks, Treasuries, and gold over the last nine years. In doing so, we address several nuances of diversification and provide a template for determining an appropriate allocation to cryptocurrencies.

First, we evaluate bitcoin's diversification track record with respect to US stocks. On the surface this sounds simple—estimate their full sample correlation—but this can miss important features of diversification. Sometimes it exists over monthly horizons but not multi-year horizons (or vice versa). It might exist when stocks are up but not down (or vice versa). Or it may exist on average over the full sample, but not for a single period of interest.

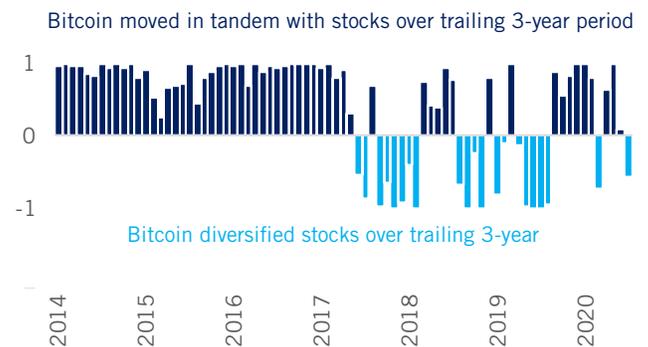
We account for these nuances and find that over daily and monthly horizons, bitcoin tends to move in tandem with US stocks. It unifies on the up- and downside, enhancing equity's gains and losses. More like a sports car than a minivan. Until 2017, bitcoin and US stocks also moved together over longer horizons. Since then, however, there's some evidence of hedge-like behavior. The occasional glimpse of bitcoin as a minivan for the long-haul. For example, the bars in Exhibit 1 show single period correlations between bitcoin and US stocks for every three-year period since 2011. These capture the degree to which bitcoin and US stocks drifted together or apart, cumulatively, over a single period. Notice their three-year returns were almost perfectly unified in the first half of the sample but have fluctuated between drifting together and apart since 2017. It's these instances of divergence (colored in light blue) that may signal a trend towards diversification. So where does this leave investors?

The case has yet to be made for bitcoin as an equity hedge, though it may be heading in that direction. Of course, bitcoin may have the potential for massive gains, but also substantial losses. The key is for investors to combine their preferences for risk mitigation and upside potential, with bitcoin's expected diversification and return properties, to determine their optimal allocation.

For more on this topic, see our 2022 journal article: **"The Role of Cryptocurrencies in Investor Portfolios"** by Megan Czasonis, Mark Kritzman, Baykan Pamir, and David Turkington, *The Journal of Alternative Investments*, Vol. 24, No. 4, Spring 2022.

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Exhibit 1: Single three-year period correlations between bitcoin and US stocks



Monthly observations of single period correlations for trailing three-year returns of bitcoin and US stocks. Chart covers period July 2011 through December 2020 (first observation corresponds to June 2014 given the three-year lookback window). For more details on the methodology, please refer to the paper cited below.  
Source: State Street Global Markets

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