STATE STREET INVESTMENT MANAGEMENT

September 2025

# Can Bitcoin and gold co-exist in a portfolio?

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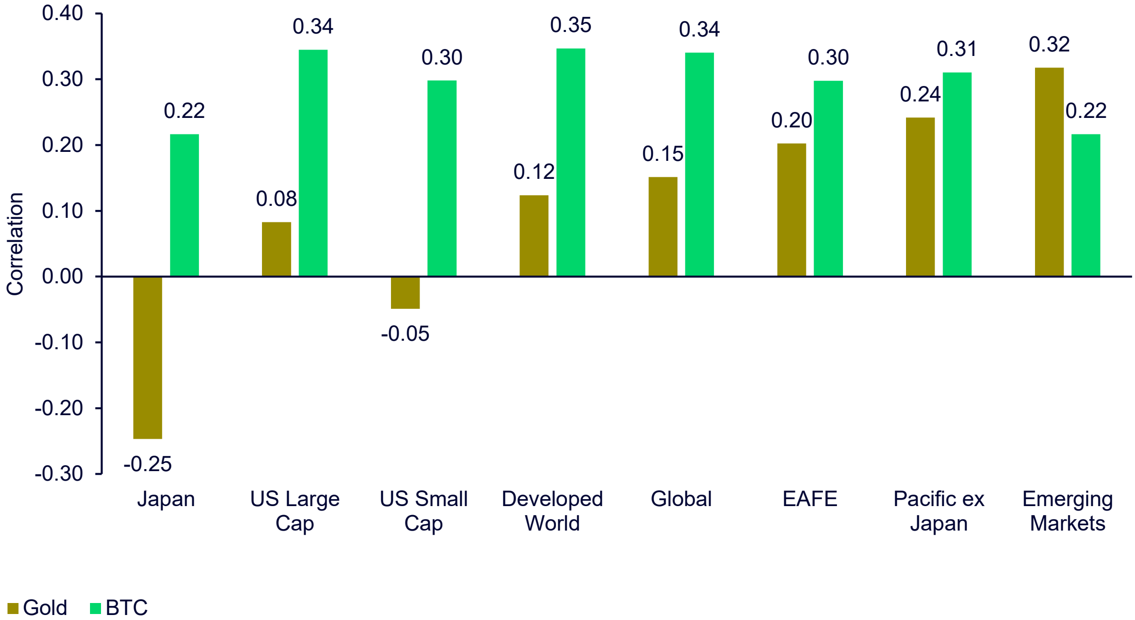
**Gold and Bitcoin can co-exist within a diversified portfolio because they perform different functions. Gold has historically demonstrated certain defensive attributes, offering a hedge against adverse market conditions and serving as a store of value. Bitcoin, by contrast, represents a newer source of return potential, but at the expense of increased risk to an overall portfolio. Both underliers may benefit from "alt-fiat" demand. Together they have the potential to serve as left tail (gold) and right tail (Bitcoin) diversification hedges.**

## Contrasting correlations

Since President Nixon closed the gold window in 1971,[1] effectively establishing a free market in gold and the US$, the metal has exhibited almost no structural long-term correlation to equities or bonds. Static correlations have been ~0.01 versus the S&P 500 and ~0.10 against the Bloomberg US Aggregate Bond Index.[2] The random walk for gold holds when comparing correlations over the past decade. Gold's correlations range from -0.25 with MSCI Japan to 0.32 with Emerging Markets and generally is low across various other equity indexes.[3] Bitcoin, by contrast, exhibits consistently higher correlations across the board, from 0.22 with MSCI Japan to 0.35 with developed world equities and similarly elevated levels with U.S. Large Caps and global equities.[4]

**Figure 1: Correlation of Bitcoin and gold across global equities**



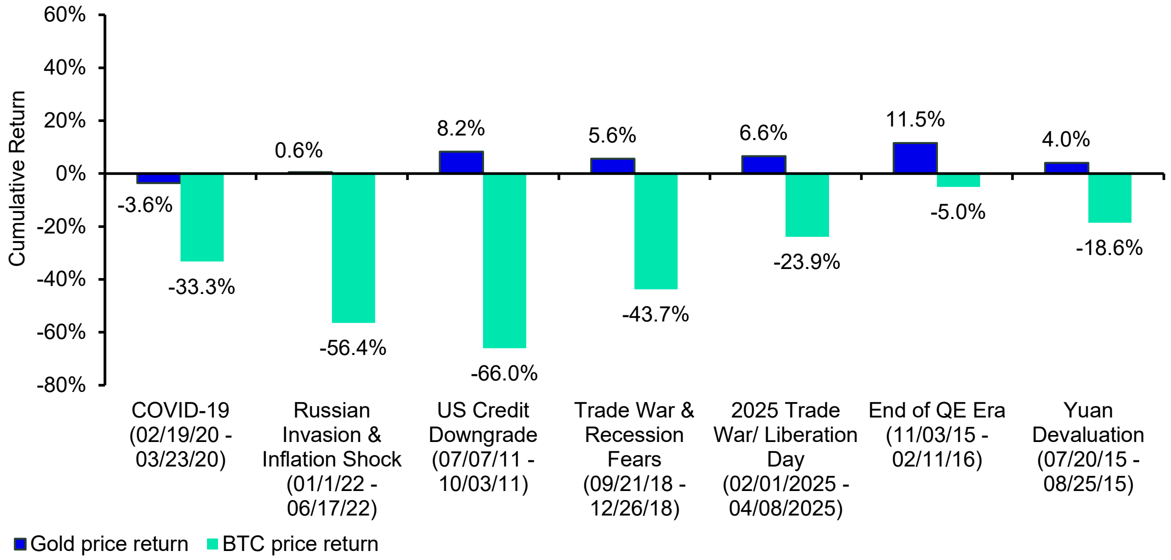

Source: State Street Investment Management, Bloomberg Finance L.P. As of August 31, 2025. The correlation coefficient measures the strength and direction of a linear relationship between two variables. It measures the degree to which the deviations of one variable from its mean are related to those of a different variable from its respective mean with 0 being uncorrelated and 1 being perfectly correlated. Indices used: Japan: MSCI Japan Index. US Large Cap: S&P 500 Index. US Small Cap: Russell 2000 Index. Developed World: MSCI World Index. Global: MSCI ACWI Index. EAFE: MSCI EAFE Index. Pacific ex Japan: MSCI Pacific Excluding Japan Index. Emerging Markets: MSCI Emerging Markets CAD Index**. Past performance is not a reliable indicator of future performance.**

## Crisis performance: gold's resilience vs. Bitcoin's volatility

Beyond its low correlation to financial assets, gold has also historically provided more reliable protection against sudden equity market downturns. As detailed in figure 2, during peak-to-trough drawdowns greater than 12% on the S&P 500 after Bitcoin's inception, gold returned an average of +4.7%, compared with a steep ~35.3% loss for Bitcoin.[5] Gold also posted positive returns in six of seven episodes, with its worst outcome a relatively modest ~3.6% drop during the peak Covid-19 sell-off.[6] Meanwhile, Bitcoin failed to register a single positive return during these seven events, with its deepest drawdown occurring during the US credit downgrade of 2011, where the cryptocurrency fell ~66%.[7]

When looking at sharp corrections that happened before Bitcoin's inception, gold's strong record tells a similar story of protecting portfolios against systematic market shocks. Currently both equity (VIX) and bond (MOVE) volatility indices are sitting near trailing-twelve-month lows,[8] and we believe these levels are unlikely to sustain in the current macro regime. As we flagged in our 2025 Midyear Outlook, gold can serve as a timely volatility and overlay hedge when vol markets are compressed.

### Figure 2: Bitcoin and gold returns during major market sell-offs

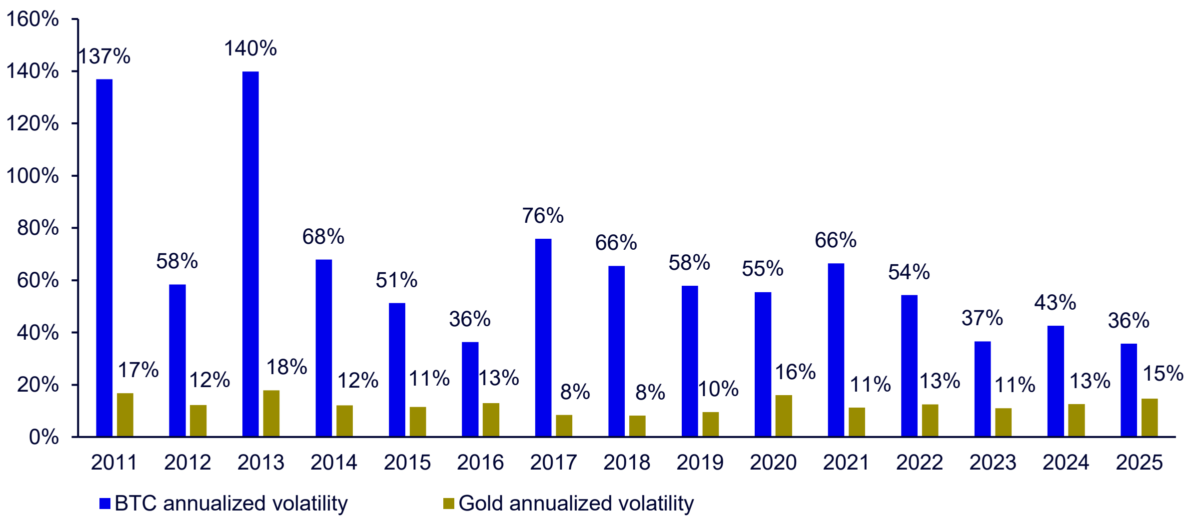



Source: State Street Investment Management, Bloomberg Finance L.P. As of August 31, 2025. **Past performance is not a reliable indicator of future performance.**

## Volatility: The cost of Bitcoin's return potential

The greatest contribution an exposure to Bitcoin makes to an investment portfolio is its returns, even though these have been inconsistent over the life of the cryptocurrency. The chart below highlights why: Bitcoin's volatility has consistently been several multiples of equities and gold, even as it has started to normalize in recent years. This elevated volatility creates the potential for outsized gains but also makes Bitcoin a challenging allocation for many investors. Gold has provided far greater stability and even a modest allocation can help offset portfolio risk while still leaving room for the return potential of Bitcoin.

### Figure 3: Annualized volatility of Bitcoin and gold




Source: State Street Investment Management, Bloomberg Finance L.P. As of September 22, 2025. **Past performance is not a reliable indicator of future performance.**

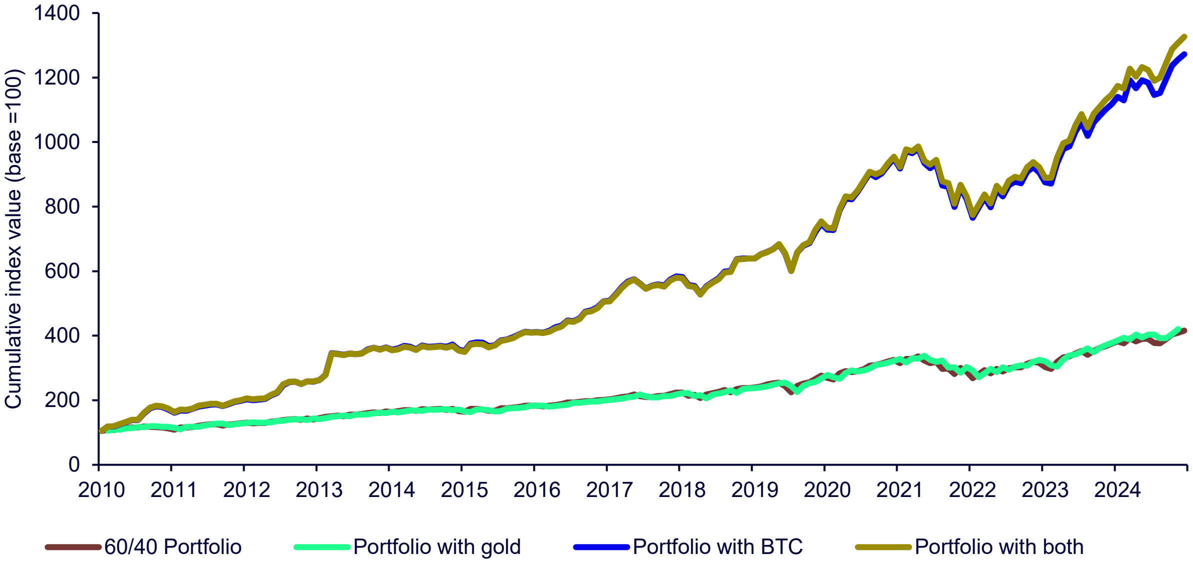
## Conclusion

In Figure 4 we start with a traditional 60/40 portfolio, represented by the S&P 500 and the Bloomberg U.S. Aggregate Bond Index. We then evaluated the impact of three alternative allocations: A 5% allocation to Bitcoin (funded from equities), a 5% allocation of gold (funded from fixed income), and a portfolio that includes both. It is no secret that Bitcoin's introduction significantly lifts overall performance, with a CAGR of 18.8% versus 10% for the traditional 60/40 portfolio.[9] What's more interesting, however, is that the portfolio that combines both Bitcoin and gold not only outperforms the other three portfolios but does so with a lower maximum drawdown than the Bitcoin only version.

It's also worth noting that when we reduce the equity and bond sleeves, hold bitcoin constant at 5%, and increase the allocation to gold, the portfolio still delivers strong performance while exhibiting a lower annualized standard deviation of returns.[10]

Bitcoin, and the broader cryptocurrency market appear here to stay. Supportive regulatory legislation such as the GENIUS Act further cements the legitimacy of the crypto market and may curve the volatile swings in price action that the space has been criticized for. Gold, a proven store of value for thousands of years, has outperformed Bitcoin year-to-date by roughly 24%[11] and is still supported by the tailwinds that include hidden market risks and an ongoing aggregate demand shock for gold backed ETFs. Together, Bitcoin and gold can complement each other by improving portfolio performance while tempering extreme swings.

### Figure 4: Impact of adding both Bitcoin and gold to a 60/40 portfolio




Source: State Street Investment Management, Bloomberg Finance L.P. As of August 31, 2025. Portfolio returns are hypothetical and based on monthly rebalanced allocations using S&P 500 for equities, Bloomberg U.S. Aggregate Bond Index for fixed income, XAUUSD Spot Exchange Rate for gold spot price, and XBTUSD Spot Exchange Rate for Bitcoin. Index returns reflect all items of income, gain and loss and the reinvestment of dividends. Performance of an index is not indicative of the performance of any product managed by SSGA. Returns do not represent those of a specific product but were achieved by mathematically combining the actual performance data of the constituents as listed in Figure 4 according to their weightings detailed in Figure 4. Performance of the hypothetical blended portfolio assumes no transaction and rebalancing costs, so actual results will differ. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. The information contained above is for illustrative purposes only. **Past performance is not a reliable indicator of future performance.**

## Footnotes

1 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025. Note: "President Nixon closed the gold window in 1971" refers to the suspension of US dollar convertibility into gold for foreign governments and central banks on August 15, 1971, which effectively ended the Bretton Woods system of fixed exchange rates and marked the beginning of the modern fiat currency era.

2 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

3 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

4 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

5 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

6 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

7 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

8 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

9 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025. Note: Please see glossary below for methodology used.

10 Bloomberg Financial L.P. and State Street Investment Management, as of 8/31/2025.

11 Bloomberg Financial L.P. and State Street Investment Management, as of 9/23/2025.

## Glossary

**Gold Spot Price**
The price in spot markets for gold. In US dollar terms, spot gold is referred to with the symbol "XAU," which refers to the price of one troy ounce of gold in USD terms.

**Figure 1 Indices Used**
Japan: MSCI Japan Index. US Large Cap: S&P 500 Index. US Small Cap: Russell 2000 Index. Developed World: MSCI World Index. Global: MSCI ACWI Index. EAFE: MSCI EAFE Index. Pacific ex Japan: MSCI Pacific Excluding Japan Index. Emerging Markets: MSCI Emerging Markets CAD Index.

**Figure 4 Methodology**
Portfolio performance based on hypothetical, backtested index returns sourced from Bloomberg, using monthly data for the S&P 500 to represent equities, the Bloomberg U.S. Aggregate Bond Index for fixed income, XAUUSD Spot exchange rate for gold spot price, and the XBTUSD Spot Exchange Rate for Bitcoin cryptocurrency. A baseline 60/40 portfolio was constructed and compared with variations that introduced a 5% allocation to Bitcoin funded from equities, a 5% allocation to gold funded from bonds, and a portfolio with 5% in both gold and Bitcoin funded proportionately from equities and bonds. Portfolios were maintained at fixed weights and effectively rebalanced monthly. Past performance is not a guarantee of future results. Hypothetical backtested performance is for illustrative purposes only and does not represent the performance of any product.

**Volatility**
Referring to the degree of variation in the price of an asset over time. It measures how much and how quickly the price moves, typically expressed as the standard deviation or variance of returns. Higher volatility means larger and more frequent price swings (greater uncertainty and risk), while lower volatility indicates more stable price behavior.

**GENIUS Act**
Short for *Guiding and Establishing National Innovation for U.S. Stablecoins Act.* Signed into law on July 18, 2025, establishing the first comprehensive regulatory framework for stablecoins—a type of cryptocurrency designed to maintain a stable value. The act requires stablecoin issuers to hold 100% reserve backing in liquid assets, provide monthly public reserve disclosures, and adhere to anti-money laundering (AML) and consumer protection rules. It also gives regulatory oversight to agencies like the Federal Reserve and Comptroller of the Currency, prioritizing stablecoin holders for repayment in case of issuer bankruptcy.

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Exp. Date: 6/30/2026