AMSA

Bitcoin: A Safe Haven?

Cryptocurrencies

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Introduction

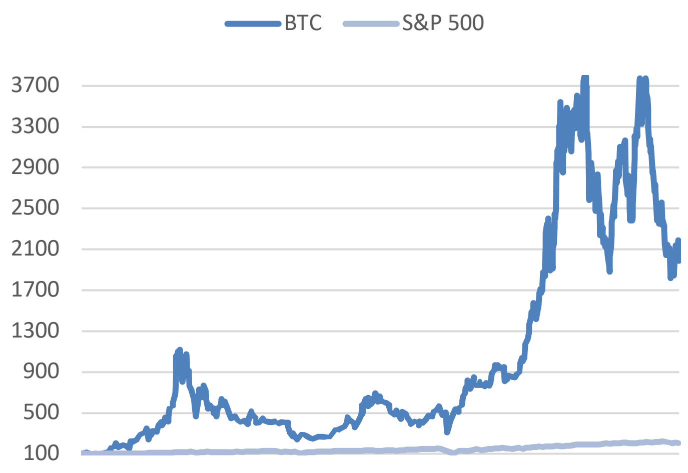
During the pandemic, cryptocurrencies (crypto) have received explosive attention amidst investor speculation and legal adoption (Haar, 2022). By spring 2021, the peer-to-peer trading volume increased by 881% relative to the prior year, with emerging economies driving the crypto-adoption (Sigalos, 2021). At its core, Bitcoin (BTC) represents the first and largest decentralized digital currency, leading the industry as a whole (Thaker and Mand, 2021). At Bitcoin's peak, cryptocurrencies reached a total market capitalization of $3 trillion, following institutional interest and El Salvador's adoption of BTC as a legal tender (Lau, 2021). The bullish sentiment driving BTC's valuation primarily reflects speculation of future adoption and integration in the financial system.

Furthermore, investors advocate Bitcoin's 'safe haven' properties, representing the digital counterpart of gold as an asset, hence legitimizing investments (Guillaume, 2021). However, numerous studies shed doubt on the proclaimed safe haven properties due to high correlations with global equity markets, hence adoption can pose risks to financial systems and potentially impede the crypto movement (Adrian et al., 2022). As late as January 2022, the International Money Fund (IMF) urged El Salvador to strip Bitcoin as a legal tender, amidst concerns of financial stability (Pérez, 2022).

Development

Cryptocurrencies are becoming increasingly popular from an investor perspective, as a result of outperforming any other asset class over the past few years. Bitcoin in particular, has outpaced the S&P 500 by ca. 1,700% since 2017 (Figure 1). Consequently, Bitcoin has received attention not only from retail investors, but also growing acceptance from institutions, as fund managers allocated a total of $6.3 billion to BTC during 2021 (Bourgi, 2022). Thus, institutional attention legitimizes investments in digital assets as "smart money pours into the market" (Wintermeyer, 2021).

Figure 1: Logarithmic Five-year Bitcoin performance



Source: Yahoo Finance (2022).

As a result of the market mania, academic literature related to Bitcoin has evolved quickly, whereby ambiguity prevails regarding Bitcoin's fundamental value. A primary argument by advocates renders Bitcoin as a store of value due to its' safe haven properties. The concept of a safe haven investment concerns assets that are uncorrelated or negatively correlated with traditional assets during periods of market turmoil. Thus, various safe haven assets include traditional gold, currencies, Treasury bonds, and arguably, Bitcoin (Conlon et al., 2020).

Bitcoin is often referred to as digital gold, as the two arguably possess similar properties. Both assets can be used as stores of value existing outside the traditional monetary system, both exhibit a theoretical inflationary hedge as supply is limited[1], and both have a relatively low correlation with mainstream assets (Arnott, 2021). Therefore, Bitcoin seemingly displays safe haven properties necessary to gain systemic trust, paving way for wide-spread adoption. However, the argument of Bitcoin as a safe haven is "falling apart" during the pandemic due to its increased correlation with the equity indices, which likely entail negative implications for the cryptocurrency community (Gardner, 2022).

Is Bitcoin a safe haven?

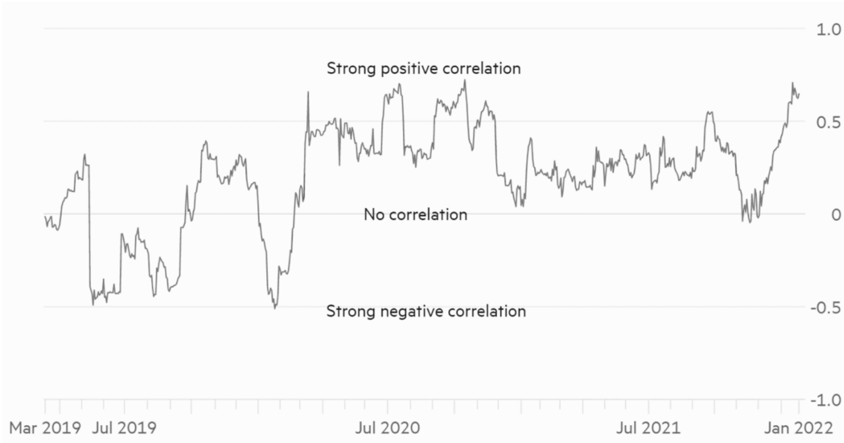
Prior to the covid-crisis, evidence suggested Bitcoin was a safe haven, as the inclusion of Bitcoin considerably reduced portfolio risk (Guesmi et al., 2019). However, due to the absence of a bear market in the historical sample pre-covid, the hypothesis was arguably tested under inappropriate market conditions. In a study including the downturn of markets, results challenged previous findings. As stocks fell by nearly 35% in early 2020, Bitcoin fell almost 50%, whilst gold traded flat. Furthermore, research rendering Bitcoin relative to international equity indices demonstrated that BTC is not a safe haven due to positive correlations across the board[2] and increased portfolio risk (Conlon et al., 2020). Similarly, in a more recent study, Nguyen (2021) conclude that Bitcoin and the stock market are more correlated during periods of high uncertainty, hence providing direct evidence against the notion of a safe haven.

Furthermore, Figure 2 depicts a visual of the increasing correlation between Bitcoin and the Nasdaq 100 index using daily returns, whereby the world's largest cryptocurrency is increasingly mirroring sharp fluctuations in traditional markets. Thus, BTC is behaving more like a "risk-on" asset (Szalay, 2022).

[1] Bitcoin has a supply cap of 21 million coins (Arnott, 2021).
[2] Bitcoin was measured relative to MSCI World, S&P 500 (US), FTSE 100 (UK), FTSE MIB (Italy), IBEX (Spain), and CSI 300 (China).

While Bitcoin is often described as an alternative to physical gold, its recent historical price action suggests it's more closely related to equities. Figure 3 extends the analysis from the merely Nasdaq 100 to several U.S. stock indices over the past two years (February 2020-22), demonstrating a strict positive correlation coefficient ranging from 0.3 to 0.4.

Figure 2: Correlation Bitcoin and Nasdaq 100



Source: Szalay, 2022.

Hence, there exists little empirical evidence that BTC can act as a diversifier of inflation or equity risk (Szalay, 2022). Notably, Bitcoin is almost twice as correlated to the respective indices relative to gold, challenging the "relatively low correlation with mainstream assets" characteristic the two assets supposedly share (Arnott, 2021).

Figure 3: Correlation Bitcoin and equity indices

	BTC	*Nasdaq Comp.*	*Nasdaq 100*	*S&P 500*	*DJIA*	*Gold*
BTC	1.000					
Nasdaq Comp.	0.406	1.000				
Nasdaq 100	0.386	0.990	1.000			
S&P 500	0.365	0.940	0.919	1.000		
DJIA	0.332	0.849	0.815	0.968	1.000	
Gold	0.166	0.204	0.213	0.164	0.133	1.000

Source: Yahoo Finance (2022).

Furthermore, price action in early 2022 indicates Bitcoin move further in tandem with equity markets, as the 40-day correlation coefficient with the Nasdaq 100 and S&P 500 indices reached an unprecedented 0.66 and 0.58, respectively, suggesting Bitcoin's movements almost "mirror those of U.S. tech stocks" (Jagtiani, 2022). Baur and Dimpfl (2021) render Bitcoin's substantial volatility and interconnectedness with equities to impede its' function as a medium of exchange. From an investor perspective, a rebound in stocks after recent declines may present an attractive investment opportunity for short-term Bitcoin returns as markets recover. However, the bigger picture remains uncertain. The IMF renders the increased crypto-equity market correlation as "worrisome" due to possible spill-over effects following wider mainstream adoption of Bitcoin (Adrian et al., 2022). Thus, the increased co-movements are considered to pose risks, particularly in countries with widespread adoption and hence require global regulation.

The bigger picture

Cryptocurrencies rapid growth in an unregulated space has called for regulatory attention, particularly following the growing interconnectedness with financial markets. Bitcoin and other cryptocurrencies (Ether and Tether) have experienced a significantly increased correlation with equity markets during the pandemic, raising concerns as "close monitoring of the crypto asset markets and adoption of regulatory policies" are necessary due to enhanced risk of spill-over effects (Iyer, 2022).

The major concern from a financial stability perspective, are the implications of a major price correction. In the dot-com crash of the early 2000s, the Nasdaq index dropped by more than 75%. At the time, the index had a market capitalization of ca. $3.6 trillion, relatively similar to the value of the current crypto market. Although the losses for investors were substantial, there was no loss of financial stability. By contrast, a similar index correction today would impose significant stress on the system, given the rapid adoption of BTC and other cryptocurrencies (Cunliffe, 2021). Exposures through institutional ownership and banks provide a direct channel to which losses could be transmitted to the financial sector, damaging the public's confidence in the system. As payment systems fundamentally undermine the core infrastructure of the financial system, any disruption or loss of confidence can cause major economic damage. Moreover, the problem becomes more prominent in emerging markets and developing economies, following the replacement of domestic currencies with crypto, as the severity of spill-over effects increase (Iyer, 2022).

Following the increased interconnectedness between crypto and financial markets at large, a specific risk management framework would be required. The ECB deem crypto assets to be ineligible for money settlements, infeasible as collateral, and more; essentially limiting the functions as a currency. Moreover, it is warned that if the size of exposures increases to the extent that a serious threat to financial stability is perceived, policies will be implemented to segregate the influence of crypto (Manaa et al., 2019). Regulation is considered to be "one of the biggest overhangs in the crypto industry", although is welcomed by investors as clear policies would remove a significant roadblock for crypto as a whole (Haar, 2022). However, difficulties remain when predicting the severity of future regulatory measures as effects are ambiguous. It is recognized that data gaps must be addressed prior to any regulatory implementation, due to the limited lifespan of Bitcoin and other cryptocurrencies (Manaa et al., 2019). Furthermore, investors advocate that Bitcoin's increased correlation to equity markets is temporary and in the longer perspective, Bitcoin has been largely uncorrelated to other assets classes, with a close to zero correlation to the S&P 500. Therefore, unexpected downturns can "suddenly affect assets that were previously uncorrelated" due to liquidity shocks, and that Bitcoin's correlation will decline (INVAO, 2020). As a result, the post-crisis behavior will determine the future of Bitcoin, and largely influence the crypto movement as a whole.

Conclusion

Bitcoin is the pioneer of the cryptocurrency movement and undermines the market as a whole to a great extent. Bitcoin's historical investment performance has increased attention from both retail and institutional investors, as cryptocurrencies reached a market capitalization of $3 trillion at Bitcoin's peak during 2021. Advocates render BTC as a 'safe haven', the equivalent of digital gold. Hence, the coin possesses characteristics deemed to be important for wide-spread adoption, specifically displaying low correlations to mainstream assets. However, Bitcoin has experienced an increasing correlation to equity indices during the pandemic, and the interconnectedness is deemed "worrisome" with regards to financial instability and spill-over effects on the system as a whole (Adrian et al., 2022). More specifically, El Salvador currently possess a legal tender which acts "more like a tech stock" (Jagtiani, 2022). Therefore, concerns rendering financial stability requires regulatory actions, as a substantial downturn in the crypto or equity markets poses severe risks.

Consequently, regulations would affect the crypto industry as a whole and may impede future adoption if the usefulness is limited. However, Bitcoin and other cryptocurrencies are a relatively new innovation and future regulatory actions require more data. Moreover, the increased correlation of Bitcoin to other assets is argued to be temporary, hence the post-crisis development will largely influence the direction of the crypto adoption. From an investor perspective, the recent downturn of equity markets offer an attractive opportunity for short-term returns. However, if Bitcoin's value is driven by future adoption, the long-term outlook is highly uncertain. Furthermore, the myth of Bitcoin as a safe haven has been debunked, at least temporarily.

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