BITCOIN, GOLD, AND STOCK MARKETS: A LITERATURE REVIEW ON SPILLOVER EFFECTS AND POLICY IMPLICATIONS FOR VIETNAM

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ABSTRACT:

This study provides a comprehensive review of the literature on Bitcoin, gold, and stock markets, with a particular focus on spillover effects, safe-haven properties, and policy implications in the Vietnamese context. Although Bitcoin is frequently characterized as "digital gold," empirical evidence remains inconclusive, with many studies reporting weak, unstable, or regime-dependent correlations with traditional assets. Recent findings in Vietnam further indicate that the previously observed positive correlations between Bitcoin, gold, and equities lose statistical significance once endogeneity and autocorrelation are properly addressed. Overall, the evidence suggests that Bitcoin functions primarily as a speculative asset rather than a reliable hedge, whereas gold continues to exhibit more consistent safe-haven characteristics. The study also synthesizes key implications for investor awareness, financial oversight, and the governance of digital assets in Vietnam.

Keywords: Bitcoin, gold, stock market, volatility spillovers, safe haven.

1. Introduction

Bitcoin has evolved from an experimental digital currency into one of the most widely discussed financial assets in the world (Guidara, 2022; Kyriazis, 2021). Its rise has been accompanied by extreme volatility, rapid trading growth, and persistent debate over whether it should be treated as a currency, a speculative instrument, or an emerging asset class with distinct portfolio properties (Malladi & Dheeriya, 2020; Smales, 2019). These developments have led researchers to ask whether Bitcoin influences traditional markets such as gold and equities, or whether its movements remain largely independent.

The question matters because Bitcoin is frequently marketed as "digital gold," implying that it may provide diversification, hedging, or safe-haven benefits in periods of uncertainty (Choudhury et al., 2022; Selmi et al., 2021). Yet the empirical evidence is far from settled. Some studies find low correlation and limited integration with stock and commodity markets, while others show volatility spillovers, cross-market connectedness, or regime-dependent behavior during crises (Bouri et al., 2017; Corbet et al., 2018; Klein et al., 2018; Kurka, 2019). In other words, Bitcoin may behave like a diversifier in one market state and like a risk asset in another.

Vietnam is an especially useful setting for examining these questions. The country has relatively high retail participation in digital assets, a strong tradition of holding gold as a store of value, and stock markets that remain sensitive to liquidity, sentiment, and macro-financial shocks (Mills, 2023; Nguyen & Bhatti, 2015; Tran et al., 2020). This combination creates a local environment in which spillovers from Bitcoin could matter, but where traditional safe-haven behavior may also be more visible than in developed economies. Recent Vietnamese evidence makes the topic even more relevant: Do et al. (2026) show that Bitcoin's apparent positive movement with gold and stock returns becomes weak once autocorrelation and endogeneity are properly addressed.

The aim of this review is to synthesize the main literature on Bitcoin, gold, and stock markets, with special attention to volatility spillovers and safe-haven properties. The paper also highlights what the evidence means for Vietnam, where digital asset adoption is rising faster than regulatory clarity. By focusing on both international studies and the recent Vietnamese case, the review offers a concise but policy-relevant interpretation of an increasingly important financial relationship.

2. Conceptual background

Bitcoin is the first and most prominent cryptocurrency. It operates on a decentralized blockchain network and allows peer-to-peer transactions without a central intermediary (Liao et al., 2021; Zhang & He, 2021). Its fixed supply, high accessibility, and speculative appeal have made it attractive to global investors, but these same features also contribute to its instability. Compared with conventional financial assets, Bitcoin exhibits much larger price swings, heavier tails, and stronger sensitivity to sentiment and news shocks (Kyriazis, 2021; Smales, 2019).

Gold plays a different role in financial markets. It has long been viewed as a hedge against inflation, currency depreciation, and systemic uncertainty, and it remains one of the most established safe-haven assets in the world (Baur & Lucey, 2007; Beckmann et al., 2015). Gold's appeal rests on its historical credibility, relatively stable demand, and established position as a store of value. Unlike Bitcoin, it is not driven primarily by speculative narratives.

Stock markets represent claims on productive assets and reflect investor expectations, risk appetite, and economic conditions. In Vietnam, the two major exchanges, VN-Index and HNX, have developed rapidly but still remain relatively shallow and retail-driven (Nguyen & Bhatti, 2015; Vuong, 2010). This matters because thin markets and strong sentiment effects can make domestic stocks more vulnerable to spillovers from external shocks, including shocks from crypto markets.

Together, Bitcoin, gold, and stocks provide a useful three-asset framework. Bitcoin captures the behavior of a high-volatility digital asset, gold represents a traditional defensive asset, and stocks reflect broader market confidence and economic prospects. The key issue is whether Bitcoin acts as a complement, substitute, or independent asset relative to the other two.

3. Global evidence

3.1. Bitcoin and stock markets

The literature on Bitcoin and stock markets is large but inconsistent. Early work often found weak correlation between Bitcoin and major equity indices, suggesting that Bitcoin could provide diversification benefits in a portfolio context (Kurka, 2019; Klein et al., 2018). Other studies later showed that this relationship is not fixed. In periods of stress, Bitcoin and stocks may move together, and spillovers may become stronger when investor sentiment is unstable or when markets are exposed to common macro-financial shocks (Corbet et al., 2018; Ji et al., 2018).

A large share of the literature uses VAR models, Granger causality, spillover indices, and GARCH-type approaches to analyze these dynamics (Diebold & Yilmaz, 2012; Sensoy et al., 2020). The main conclusion is that Bitcoin is neither fully isolated nor fully integrated into traditional markets. Instead, its relationship with equities appears to be state-dependent. In tranquil periods, Bitcoin may contribute to portfolio diversification. During speculative bubbles or market panic, however, it can move more closely with risk assets, which weakens the diversification argument (Bouri et al., 2017; Mensi et al., 2023).

Some researchers also argue that Bitcoin may transmit volatility to equities, especially in emerging markets where financial systems are less deep and investors react more strongly to news (Umoru et al., 2025). Others find little evidence of stable transmission and suggest that any apparent link reflects broader global conditions rather than a direct causal effect of Bitcoin itself. This divergence is important because it shows that the Bitcoin–stock relationship is not universal. It depends on the country, sample period, market microstructure, and econometric method.

3.2. Bitcoin and gold

The literature on Bitcoin and gold is closely tied to the popular "digital gold" narrative. Some authors argue that Bitcoin shares with gold certain desirable properties, such as scarcity and independence from central bank control, which could make it a hedge against inflation or currency risk (Choudhury et al., 2022; Selmi et al., 2021). However, many empirical studies conclude that Bitcoin is too volatile to serve as a full substitute for gold. Gold's long historical record and lower volatility make it a much more reliable safe haven (Baur & Lucey, 2007; Klein et al., 2018).

Empirical findings on Bitcoin–gold correlations are mixed. Some studies document periods of positive co-movement, while others find weak, unstable, or even negative correlations depending on the sample and method used (Jareño et al., 2020; Shahzad et al., 2019). In many cases, Bitcoin behaves more like a speculative asset than a defensive one. Gold, by contrast, tends to preserve value during market stress and remains more consistent as a portfolio stabilizer (Beckmann et al., 2015; McCown & Zimmerman, 2006).

Portfolio studies also show that including Bitcoin can increase expected returns, but usually at the cost of much higher risk. As a result, Bitcoin may improve a portfolio only for investors with high risk tolerance and a long enough horizon to absorb sharp drawdowns. For most investors, gold remains the more reliable hedge and store of value.

3.3. Macro-financial conditions

A major theme in the literature is that Bitcoin, gold, and stocks are often affected by the same macro-financial drivers. Exchange rates, interest rates, and volatility indices can produce common movements across markets, even when there is no direct causal spillover (Das & Kannadhasan, 2018; Mgadmi et al., 2022; Wang et al., 2022). The VIX is often used as a measure of global fear, while exchange-rate pressure matters especially in emerging markets with exposure to foreign capital flows.

This is important because it means that simple correlation can be misleading. If Bitcoin, gold, and stocks all react to the same external shock, they may appear connected even when no direct transmission exists. That is why studies increasingly use instrumental variables, spillover indices, and robustness checks to separate direct effects from common-factor effects (Sensoy et al., 2020). The Vietnamese evidence by Do et al. (2026) fits this approach well, since it shows that apparent baseline co-movement does not survive endogeneity tests.

4. Vietnamese context and emerging evidence

Vietnam is one of the most interesting frontier markets for crypto research because it combines high crypto adoption with strong gold preferences and a developing stock market (Mills, 2023; Tran et al., 2020). Surveys suggest that a substantial share of Vietnamese investors hold or trade digital assets, often motivated by the search for high returns, inflation protection, or currency-risk hedging. At the same time, gold remains a deeply embedded household asset, used for wealth preservation and as a familiar buffer against uncertainty.

Vietnam's stock market is also distinctive. Although it has grown significantly, it remains more retail-driven and sentiment-sensitive than markets in advanced economies (Nguyen & Bhatti, 2015; Vuong, 2010). This means that shocks from global financial markets, macroeconomic changes, and investor psychology can have outsized effects on domestic stock prices. In such an environment, Bitcoin might plausibly influence stock and gold returns if investors shift capital rapidly between assets.

Domestic research has mostly focused on legal classification, regulatory design, and investor behavior rather than direct spillover measurement (Giang & Thi My Huong, 2023; Prendi et al., 2023). As a result, the recent paper by Do et al. (2026) is especially important because it provides direct evidence on Bitcoin's relationship with Vietnamese gold and stock markets using daily data from 2018 to 2025. The authors examine Bitcoin returns, VN-Index, HNX, VND-denominated gold returns, and several macro-financial controls including USD/VND, U.S. Treasury yields, VIX, and turnover volatility.

Their baseline OLS results show positive Bitcoin coefficients for both stock indices and gold, suggesting some co-movement. However, this pattern becomes less convincing after using Newey-West HAC standard errors and 2SLS estimation with lagged Bitcoin returns and crypto-specific event dummies as instruments. The endogeneity tests do not suggest that Bitcoin returns are endogenous, and the instrumental-variable estimates show no stable causal spillover from Bitcoin to Vietnamese stocks or gold (Do et al., 2026). This is a crucial finding because it implies that the apparent Bitcoin effect may reflect broad market sentiment or global conditions rather than a direct transmission mechanism.

The Vietnamese result also has an important implication for the safe-haven debate. Gold continues to behave like a traditional defensive asset, while Bitcoin does not consistently provide protection against market stress. In other words, Bitcoin may sometimes move in the same direction as domestic assets, but it does not yet demonstrate the stable defensive behavior that would justify treating it as a true hedge in the Vietnamese context.

5. Synthesis and policy implications

The literature leads to three broad conclusions. First, Bitcoin is not a consistently reliable safe haven. Its relationship with stocks and gold changes across time, market conditions, and sample periods, which means that its protective role is unstable (Bouri et al., 2017; Kurka, 2019; Mensi et al., 2023). Second, gold remains the stronger defensive asset because its safe-haven properties are better established and more persistent (Baur & Lucey, 2007; Beckmann et al., 2015). Third, in Vietnam, the most relevant recent evidence suggests that Bitcoin's apparent relationship with gold and equities is not robust once econometric issues are handled carefully (Do et al., 2026).

For investors, the practical implication is straightforward. Bitcoin should be treated primarily as a speculative, high-volatility asset rather than as a stable hedge. It may still offer diversification benefits for some portfolios, but those benefits are conditional, not guaranteed (Smales, 2019; Choudhury et al., 2022). For most households, especially those with limited risk tolerance, gold remains the more suitable store of value.

For policymakers, the results imply that direct systemic spillover risk from Bitcoin to Vietnamese traditional markets is currently limited, but that does not eliminate the need for monitoring. Regulators should continue to improve digital-asset oversight, strengthen investor protection, and clarify the legal status of crypto-related activities (Mills, 2023; Prendi et al., 2023). A measured regulatory strategy is preferable: one that recognizes the speculative nature of crypto assets while still allowing innovation and experimentation.

Policy design should also account for the broader market environment. Since exchange rates, macro-financial conditions, and market liquidity appear more influential than Bitcoin itself, policy tools that stabilize domestic financial conditions may matter more than direct crypto restrictions. Financial literacy is also essential. Retail investors often overestimate the hedging power of Bitcoin, and public education can help reduce the risk of poorly informed portfolio decisions (Ha et al., 2023; Morgan & Trinh, 2019).

6. Conclusion

This review shows that the relationship between Bitcoin, gold, and stock markets is complex and highly context dependent. Global studies report mixed evidence, with Bitcoin sometimes acting as a diversifier and sometimes moving more like a risky speculative asset (Corbet et al., 2018; Ji et al., 2018; Klein et al., 2018). Gold remains the more reliable safe-haven asset, especially during market stress (Baur & Lucey, 2007; Beckmann et al., 2015).

The Vietnamese case is especially informative because it combines high crypto adoption, a strong gold culture, and stock markets that remain relatively shallow and retail-driven. Recent evidence from Do et al. (2026) suggests that Bitcoin's apparent co-movement with gold and stocks in Vietnam is not robust after proper econometric correction. This implies that Bitcoin does not yet function as a stable safe haven in Vietnam and does not generate strong causal spillovers into domestic financial markets.

For investors, the main lesson is caution. Bitcoin may offer upside potential, but it is not a dependable hedge. For policymakers, the lesson is to monitor crypto markets carefully without overstating systemic risk. For researchers, the topic remains open, especially in frontier markets where market structure, regulation, and investor behavior differ sharply from advanced economies ■

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BITCOIN, VÀNG VÀ THỊ TRƯỜNG CHỨNG KHOÁN: TỔNG QUAN VỀ TÁC ĐỘNG LAN TỎA VÀ HÀM Ý CHÍNH SÁCH CHO VIỆT NAM

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TÓM TẮT:

Bài viết tổng quan các nghiên cứu về Bitcoin, vàng và thị trường chứng khoán, tập trung vào hiệu ứng lan tỏa, vai trò tài sản trú ẩn an toàn và các hàm ý chính sách đối với Việt Nam. Dù Bitcoin thường được gọi là "vàng kỹ thuật số", bằng chứng thực nghiệm vẫn chưa thống nhất, với nhiều nghiên cứu cho thấy mối liên hệ yếu, không ổn định hoặc phụ thuộc vào từng giai đoạn thị trường với các tài sản truyền thống. Các kết quả gần đây tại Việt Nam cho thấy mối quan hệ đồng biến giữa Bitcoin với vàng và cổ phiếu không còn vững chắc khi đã kiểm soát tính nội sinh và tự tương quan. Nhìn chung, Bitcoin hiện vẫn nên được xem là một tài sản đầu cơ hơn là một công cụ phòng ngừa đáng tin cậy, trong khi vàng vẫn là tài sản trú ẩn an toàn ổn định hơn. Bài viết đưa ra các hàm ý về giáo dục nhà đầu tư, giám sát tài chính và quản lý tài sản số tại Việt Nam.

Từ khóa: Bitcoin,vàng, thị trường cổ phiếu, hiệu ứng lan tỏa biến động, tài sản trú ẩn an toàn.