E-ISSN: 3026-3239
Vol. 3, No. 2, July - December (2024), pp.874-885

Bitcoin as A Safe Haven Or Hedge Against Inflation And Rupiah Exchange Rate Fluctuations

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Abstract

Bitcoin is often promoted as "digital gold", an asset that protects wealth against inflation and currency depreciation. This study tests that claim from the perspective of Indonesian investors by examining whether Bitcoin acts as a hedge or a safe haven against domestic inflation and rupiah depreciation, using gold as a benchmark. Following the framework of Baur and Lucey (2010), daily returns of Bitcoin and gold in rupiah are regressed on USD/IDR changes with dummy variables for extreme depreciation (90th, 95th, and 99th percentiles) and GARCH(1,1) errors, over January 2018 to June 2026 (2,215 observations). Inflation-hedging ability is tested with monthly regressions on CPI inflation including high-inflation months (101 observations). The results show that Bitcoin is at most a weak hedge against rupiah depreciation on average: its coefficient is positive but insignificant (0.127). During extreme depreciation episodes, Bitcoin's rupiah value falls significantly (total effect −1.798 at the 95th percentile), so it is not a safe haven. Gold, by contrast, is a strong hedge and a strong safe haven against rupiah depreciation. Neither asset shows reliable inflation-hedging properties at the monthly horizon, and Bitcoin's estimates are too imprecise to be informative. The findings suggest that, for Indonesian investors, Bitcoin behaves more like a risk asset than a store of value and cannot substitute for gold as protection against currency crises.

Keywords: Bitcoin; safe haven; hedge; inflation; rupiah exchange rate; gold

Introduction

Protecting wealth from inflation and currency depreciation is a long-standing concern for households and investors in emerging markets. In Indonesia, the rupiah has experienced several episodes of sharp depreciation, including the 1997–1998 Asian financial crisis, the 2013 "taper tantrum", the 2018 emerging-market sell-off, the onset of the COVID-19 pandemic

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in March 2020, the global monetary tightening of 2022, and renewed pressure in 2024–2025. Inflation has generally been moderate in recent years but rose to nearly 6% on an annual basis in late 2022 after the government raised subsidized fuel prices. During such episodes, the purchasing power of rupiah savings erodes, and investors look for assets that can preserve value.

Gold has traditionally filled this role. Baur and Lucey (2010) and Baur and McDermott (2010) established that gold acts as a hedge and a safe haven for stock markets in many countries, and Capie et al. (2005) showed that gold hedges against dollar depreciation. In recent years, Bitcoin (Nakamoto, 2008) has been promoted as "digital gold": its supply is fixed at 21 million coins and it is not controlled by any central bank, which, according to its proponents, makes it immune to monetary debasement. Interest in this narrative is strong in Indonesia, where crypto investors now number in the millions.

The empirical evidence, however, is mixed. Some studies find that Bitcoin has hedging properties against the US dollar or certain assets (Dyhrberg, 2016a, 2016b; Bouri et al., 2017), while others find that it fails as a safe haven during market stress (Klein et al., 2018; Smales, 2019; Conlon & McGee, 2020). Evidence on inflation is similarly divided (Choi & Shin, 2022; Conlon et al., 2021). Crucially, most studies take the perspective of US or European investors. For an Indonesian investor, the relevant risks are domestic inflation and rupiah depreciation, and Bitcoin's behavior must be evaluated in rupiah terms. Because Bitcoin is priced in US dollars, it automatically gains in rupiah terms when the rupiah weakens—unless its dollar price falls at the same time, which may happen if rupiah weakness coincides with global risk aversion.

This study therefore asks: (1) Is Bitcoin a hedge or a safe haven against rupiah depreciation? (2) Is Bitcoin a hedge against Indonesian inflation? (3) How does Bitcoin compare with gold in these roles? The study contributes by applying the hedge and safe-haven framework from the perspective of an emerging-market investor, by distinguishing average conditions from extreme depreciation episodes, and by explicitly separating the mechanical currency-translation effect from Bitcoin's own price response.

Literature Review

Hedge and Safe Haven: Definitions

Baur and Lucey (2010) provide the definitions most widely used in the literature. A **hedge** is an asset that is uncorrelated or negatively correlated with another asset or risk on average. A **safe haven** is an asset that is uncorrelated or negatively correlated with another asset or risk during periods of extreme market stress. Baur and McDermott (2010) further

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distinguish between *weak* forms (uncorrelated) and *strong* forms (negatively correlated, i.e., moving in the opposite direction). A hedge thus offers protection on average, whereas a safe haven offers protection precisely when it is most needed. Ranaldo and Söderlind (2010) apply a similar concept to currencies, showing that certain currencies appreciate during global stress.

In this study, the risk being hedged is a loss of purchasing power of rupiah wealth. Rupiah depreciation means that rupiah holdings buy fewer foreign goods and assets. An asset hedges this risk if its rupiah value rises when the rupiah depreciates, so the definitions are expressed in terms of co-movement with depreciation: a coefficient that is zero indicates a weak hedge (or weak safe haven), and a positive coefficient indicates a strong hedge (or strong safe haven). For inflation, an asset is a hedge if its nominal return rises with inflation, and a full hedge in the sense of Fisher (1930) if it rises one-for-one.

Gold as a Hedge and Safe Haven

Gold's role as a store of value is well documented. Baur and Lucey (2010) find that gold is a hedge for stocks and a safe haven during extreme stock market declines in the US, UK, and Germany, and Baur and McDermott (2010) extend this to major developed markets, although the effect is weaker in emerging markets. Capie et al. (2005) show that gold has acted as a hedge against the US dollar, though imperfectly. Evidence on gold as an inflation hedge is more nuanced: Erb and Harvey (2013) show that gold preserves purchasing power over very long horizons but is a poor inflation hedge over short and medium horizons because of large swings in its real price.

Bitcoin as a Hedge and Safe Haven

Early studies were relatively optimistic. Dyhrberg (2016a) finds that Bitcoin shares some characteristics with gold and the dollar, and Dyhrberg (2016b) reports that it can hedge against the FTSE index and the dollar in the short term. Bouri et al. (2017) find that Bitcoin is a poor hedge but can serve as a safe haven against weekly declines in Asian stocks. Later studies are more skeptical. Klein et al. (2018) conclude that Bitcoin is not the new gold: it behaves differently from gold during market stress and positively correlates with declining markets. Smales (2019) argues that Bitcoin's volatility, illiquidity, and transaction costs undermine its use as a safe haven. Shahzad et al. (2019) find that Bitcoin's safe-haven properties are time-varying and generally weaker than those of gold. Conlon and McGee (2020) show that Bitcoin fell alongside equities during the COVID-19 crash, and Iyer (2022) documents rising correlations between crypto and equity markets after 2020. Baur et al. (2018) argue that Bitcoin is primarily a speculative asset.

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Bitcoin and Inflation

Asset returns and inflation have a complex relationship: Bodie (1976) and Fama and Schwert (1977) show that common stocks are often negatively related to inflation in the short run. For Bitcoin, Choi and Shin (2022) find that Bitcoin prices rise in response to inflation shocks in the US, consistent with an inflation hedge, but that Bitcoin is not a safe haven against financial uncertainty. Conlon et al. (2021) find little evidence of inflation-hedging properties across time scales. Evidence from emerging markets with their own currencies and inflation dynamics remains scarce.

Hypotheses

Based on the above, the study tests the following hypotheses. **H1:** Bitcoin is a hedge against rupiah depreciation. **H2:** Bitcoin is a safe haven against extreme rupiah depreciation. **H3:** Bitcoin is a hedge against Indonesian inflation. For comparison, the same hypotheses are tested for gold.

METHOD

Data

The study uses daily closing prices of Bitcoin (BTC/USD), gold (XAU/USD), and the USD/IDR exchange rate from January 2018 to June 2026, aligned to Indonesian business days (2,215 return observations), and the monthly Indonesian consumer price index (CPI) from Statistics Indonesia (BPS) for the same period (101 monthly observations). Bitcoin and gold prices are converted into rupiah by multiplying by the USD/IDR rate, so that returns reflect the experience of an Indonesian investor. In this illustrative version, all series are simulated (see the notice on the first page). Table 1 defines the variables.

Table 1. Variable definitions

Variable	Definition	Frequency
R_BTC	Log return of Bitcoin in rupiah (BTC/USD × USD/IDR), %	Daily, monthly
R_GOLD	Log return of gold in rupiah (XAU/USD × USD/IDR), %	Daily, monthly
DEP	Log change of USD/IDR, % (positive = rupiah depreciation)	Daily, monthly
INF	Monthly CPI inflation (log change of CPI), %	Monthly

Exchange-Rate Model

Following Baur and Lucey (2010) and Baur and McDermott (2010), the hedge and safe-haven properties against rupiah depreciation are tested with:

$$R_{i,t} = a + b_0 DEP_t + b_1 DEP_t D(q_{90}) + b_2 DEP_t D(q_{95}) + b_3 DEP_t D(q_{99}) + \varepsilon_t \quad (1)$$

$$h_t = \omega + \alpha \varepsilon^2_{t-1} + \beta h_{t-1} \quad (2)$$

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where $D(q_x)$ equals 1 if the depreciation on day t exceeds the xth percentile of its distribution (thresholds: 0.33%, 0.46%, and 0.90% per day) and 0 otherwise. The errors follow a GARCH(1,1) process (Bollerslev, 1986) with Student-t innovations. The asset is a **weak hedge** if b_0 is not significantly different from zero and a **strong hedge** if $b_0 > 0$. Because the dummies are nested, the total effect in each extreme quantile is the sum of b_0 and the relevant interaction coefficients (e.g., $b_0 + b_1 + b_2$ for the 95th percentile), tested with a Wald test. The asset is a **weak safe haven** if the total effect is not significantly different from zero and a **strong safe haven** if it is significantly positive. As a decomposition, the model is also estimated with returns in US dollars: because the rupiah return equals the dollar return plus DEP, the dollar-return coefficients equal the rupiah coefficients minus one, isolating each asset's own price response from the currency-translation effect.

Inflation Model

Inflation-hedging ability is tested on monthly data with:

$$R_{i,t} = a + c_0 INF_t + c_1 INF_t D(INF > q_{90}) + \varepsilon_t \quad (3)$$

estimated with Newey–West standard errors. A positive c_0 indicates a hedge; the Fisher hypothesis of a full hedge is tested as H_0: $c_0 = 1$. The total effect $c_0 + c_1$ measures behavior during high-inflation months (inflation above 0.50% per month). Real returns and 12-month correlations with inflation are reported as complementary descriptive evidence.

Results and Discussion

Descriptive Statistics

Table 2 reports descriptive statistics. Bitcoin is by far the most volatile asset, with a daily standard deviation of 3.41% in rupiah terms, compared with 0.89% for gold and 0.31% for the exchange rate. At the monthly frequency, Bitcoin's standard deviation (14.72%) is roughly 57 times that of inflation (0.26%). All series display excess kurtosis, indicating fat tails, which justifies the use of Student-t GARCH errors. The largest daily rupiah depreciation in the sample is 1.69%.

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Table 2. Descriptive statistics (%)

Series	Mean	Std. dev.	Min	Max	Skewness	Kurtosis
Daily						
R_BTC (IDR)	0.033	3.407	−22.33	18.25	−0.21	7.13
R_GOLD (IDR)	0.023	0.889	−4.17	6.51	0.35	6.24
DEP (USD/IDR)	−0.009	0.314	−2.00	1.69	0.07	6.81
Monthly						
R_BTC (IDR)	0.897	14.722	−37.81	43.25	0.07	3.10
R_GOLD (IDR)	0.465	4.566	−9.79	12.19	0.29	2.81
INF	0.220	0.260	−0.40	1.17	0.48	3.99

Note: Daily N = 2,215; monthly N = 101. Source: simulated data.

Hedge and Safe Haven Against Rupiah Depreciation

Table 3 presents the main results. For Bitcoin in rupiah terms, the average coefficient on depreciation is 0.127 and not significant ($p = 0.636$). Bitcoin therefore qualifies only as a **weak hedge**: on average, its rupiah value is unrelated to rupiah movements. The decomposition in the dollar-return column explains why. If Bitcoin's dollar price were unaffected by the rupiah, its rupiah value would rise one-for-one with depreciation. Instead, Bitcoin's dollar price falls significantly when the rupiah weakens (coefficient −0.873, $p = 0.001$), offsetting almost the entire translation gain. Rupiah weakness tends to coincide with global risk aversion and dollar strength, which are also bad for Bitcoin.

In extreme depreciation episodes, Bitcoin performs worse. The total effect at the 90th percentile is −0.752 ($p = 0.311$), but at the 95th percentile it is −1.798 and significantly negative ($p < 0.001$), and at the 99th percentile it is −0.743 ($p = 0.067$). On the days when the rupiah falls most sharply, Bitcoin's rupiah value tends to fall as well. Bitcoin is therefore **not a safe haven** against extreme rupiah depreciation, and H2 is rejected; H1 is supported only in its weak form.

Gold behaves very differently. Its average coefficient is 0.786 and highly significant ($p < 0.001$), so gold is a **strong hedge**: its rupiah value rises with depreciation, recovering about 79% of the loss in the rupiah's value. Its total effects in extreme quantiles are all positive and significant, rising to 1.194 at the 99th percentile, making gold a **strong safe haven**. The dollar decomposition shows that gold's dollar price falls slightly on average when the rupiah weakens (−0.214) but becomes flat or positive in extreme episodes (total effect 0.194 at the 99th percentile), consistent with flight-to-safety demand. Figure 1 illustrates these patterns using average returns across depreciation quantiles.

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Table 3. Hedge and safe-haven regressions against rupiah depreciation (daily)

	BTC (IDR)	Gold (IDR)	BTC (USD)	Gold (USD)
Constant	0.124*	0.015	0.124*	0.015
	(0.068)	(0.018)	(0.068)	(0.018)
DEP (b_0) – hedge	0.127	0.786***	−0.873***	−0.214***
	(0.268)	(0.066)	(0.268)	(0.066)
DEP × D(q90)	−0.879	0.124	−0.879	0.124
	(0.810)	(0.239)	(0.810)	(0.239)
DEP × D(q95)	−1.046	0.102	−1.046	0.102
	(0.846)	(0.265)	(0.846)	(0.265)
DEP × D(q99)	1.055*	0.181	1.055*	0.181
	(0.608)	(0.188)	(0.608)	(0.188)
Total effects – safe haven				
90th percentile	−0.752	0.910***	−1.752**	−0.090
95th percentile	−1.798***	1.013***	−2.798***	0.013
99th percentile	−0.743*	1.194***	−1.743***	0.194
GARCH α	0.027	0.000	0.027	0.000
GARCH β	0.323	0.958	0.323	0.958
Student-t ν	4.00	5.50	4.00	5.50

Note: Standard errors in parentheses. Total effects are sums of b_0 and nested interaction coefficients, with Wald-test significance. ***, **, * denote significance at 1%, 5%, and 10%. Source: simulated data.

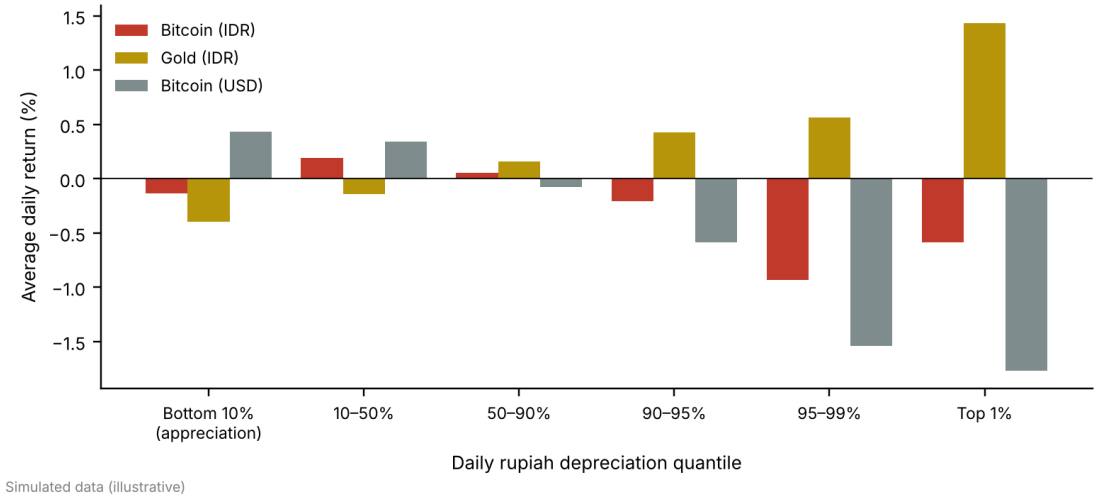


Figure 1. Average daily returns by rupiah depreciation quantile

Source: simulated data (illustrative).

Sub-Period Analysis

Table 4 repeats the analysis for 2018–2021 and 2022–2026. Bitcoin remains a weak hedge in both periods, with insignificant average coefficients. Its failure as a safe haven is consistent across periods: in 2018–2021 the total effect at the 95th percentile is −2.367 ($p < 0.001$), and in 2022–2026 the total effects are negative and significant at all three thresholds. The 2022–2026 period, which includes the crypto market crash and global monetary tightening, shows the clearest evidence that Bitcoin falls when the rupiah is under severe pressure. Gold

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remains a strong hedge in both sub-periods and a strong safe haven at the 95th and 99th percentiles, although in 2022–2026 its total effect at the 90th percentile is not significant, making it only a weak safe haven at that threshold.

Table 4. Sub-period results (rupiah returns)

	BTC 2018–2021	Gold 2018–2021	BTC 2022–2026	Gold 2022–2026
DEP (b_0) – hedge	0.102	0.896***	0.218	0.676***
Total, 90th percentile	0.984	1.022***	−2.431**	0.902***
Total, 95th percentile	−2.367***	1.101***	−1.175**	0.887***
Total, 99th percentile	−0.420	1.326***	−1.224**	1.065***
Observations	1,043	1,043	1,172	1,172

Note: Quantile thresholds re-computed within each sub-period. ***, **, * denote significance at 1%, 5%, and 10%. Source: simulated data.

Hedge Against Inflation

Table 5 reports the inflation results. For Bitcoin, the coefficient on monthly inflation is 7.45 but far from significant (p = 0.279), and the model explains only 1.5% of the variation in returns. The standard error is so large that the data can reject neither zero (no hedge) nor one (a full Fisher hedge, p = 0.349). During high-inflation months, the total effect is −3.20 (p = 0.551), and Bitcoin's average real return in those months is −3.66%. Bitcoin therefore shows no reliable inflation-hedging property in this sample, and H3 is not supported. Its monthly volatility is simply too high relative to the variation in Indonesian inflation for any link to be detected.

Gold also fails as a short-term inflation hedge: its coefficient is −4.69 (p = 0.039), and the Fisher hypothesis of a full hedge is rejected (p = 0.012). This is consistent with Erb and Harvey (2013), who show that gold is a poor inflation hedge over short horizons. At the 12-month horizon, the correlations of both Bitcoin (−0.35) and gold (−0.42) with inflation are negative in this sample, though these overlapping-window correlations are descriptive only. Over the full period, both assets delivered positive average real returns (0.68% and 0.25% per month), but with negative real returns in roughly half of all months.

Table 5. Inflation-hedge regressions (monthly)

	BTC (IDR)	Gold (IDR)
Constant	0.013	1.273**
	(2.009)	(0.547)
INF (c_0) – hedge	7.450	−4.687**
	(6.889)	(2.266)
INF × D(high inflation)	−10.646	3.162
	(7.829)	(2.610)
Total effect, high inflation	−3.196	−1.525
Fisher test H_0: $c_0 = 1$ (p-value)	0.349	0.012

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	BTC (IDR)	Gold (IDR)
R^2	0.015	0.040
Mean real return, all months (%)	0.68	0.25
Mean real return, high-inflation months (%)	−3.66	−0.70
12-month correlation with inflation	−0.347	−0.420

Note: Newey–West standard errors (3 lags) in parentheses. High inflation = months above the 90th percentile. N = 101. ***, **, * denote significance at 1%, 5%, and 10%. Source: simulated data.

Summary and Discussion

Table 6 summarizes the classification of both assets. The results contradict the "digital gold" narrative from the perspective of an Indonesian investor. Bitcoin's rupiah value is, on average, unrelated to rupiah movements, and it tends to fall precisely when the rupiah falls most sharply. This pattern is consistent with Klein et al. (2018), Smales (2019), and Conlon and McGee (2020), who find that Bitcoin fails as a safe haven during market stress, and with Iyer (2022), who documents its growing correlation with risk assets. The mechanism is clear from the decomposition: episodes of severe rupiah depreciation are typically driven by global risk-off shocks—rising US interest rates, a strong dollar, or financial turmoil—that also depress Bitcoin's dollar price. Bitcoin thus shares the same risk factor as the rupiah instead of offsetting it.

Table 6. Summary of hedge and safe-haven properties

Property	Bitcoin	Gold
Hedge against rupiah depreciation	Weak hedge	Strong hedge
Safe haven, 95th percentile depreciation	Not a safe haven	Strong safe haven
Safe haven, 99th percentile depreciation	Not a safe haven	Strong safe haven
Hedge against inflation (monthly)	Inconclusive (imprecise)	Not a hedge

Note: Classification at the 10% significance level following Baur and Lucey (2010) and Baur and McDermott (2010). Source: simulated data.

Gold, by contrast, confirms its traditional role in the currency dimension. It rises in rupiah terms when the rupiah weakens and does so even more strongly in extreme episodes, consistent with Baur and McDermott (2010) and Capie et al. (2005). Its failure as a short-term inflation hedge does not contradict this: Indonesian inflation has been relatively stable over the sample period, and gold's inflation-hedging ability is known to operate mainly over very long horizons (Erb & Harvey, 2013). For Bitcoin, the sample covers less than a decade of a young and highly volatile asset, which makes it difficult to identify any stable relationship with inflation.

These findings have practical implications. Indonesian investors who hold Bitcoin to protect against rupiah crises should recognize that it is more likely to amplify than to offset losses in such episodes; gold or dollar-denominated safe assets are more reliable for this

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purpose. For financial advisors and regulators such as OJK, the results caution against marketing crypto assets as protection against inflation or currency risk. Bitcoin may still have a place in a diversified portfolio for its return potential, but its role is that of a speculative risk asset, not a store of value.

CONCLUSION

This study examined whether Bitcoin acts as a hedge or a safe haven against inflation and rupiah depreciation from the perspective of Indonesian investors, using gold as a benchmark. In this illustrative analysis, Bitcoin is at most a weak hedge against rupiah depreciation, because its dollar price tends to fall when the rupiah weakens, cancelling out the currency-translation gain. It is not a safe haven: during the most severe depreciation episodes, its rupiah value declines significantly, and this result holds in both sub-periods. Bitcoin also shows no reliable inflation-hedging property at the monthly horizon. Gold, in contrast, is a strong hedge and a strong safe haven against rupiah depreciation, though not a short-term inflation hedge. The “digital gold” label is therefore not supported for Indonesian investors.

The study has limitations. Most importantly, the present results are based on simulated data and must be re-estimated with actual market and CPI data before substantive conclusions can be drawn. In addition, the inflation analysis relies on a relatively short monthly sample, and the regression framework captures linear co-movement within quantiles but not time-varying dynamics. Future research could use time-varying approaches such as DCC-GARCH, wavelet coherence, or quantile regression, extend the analysis to other cryptocurrencies and stablecoins, and examine whether Bitcoin’s properties differ during domestic versus global shocks.

References

Baur, D. G., Hong, K., & Lee, A. D. (2018). Bitcoin: Medium of exchange or speculative assets? *Journal of International Financial Markets, Institutions and Money, 54*, 177–189.

Baur, D. G., & Lucey, B. M. (2010). Is gold a hedge or a safe haven? An analysis of stocks, bonds and gold. *The Financial Review, 45*(2), 217–229.

Baur, D. G., & McDermott, T. K. (2010). Is gold a safe haven? International evidence. *Journal of Banking & Finance, 34*(8), 1886–1898.

Bodie, Z. (1976). Common stocks as a hedge against inflation. *The Journal of Finance, 31*(2), 459–470.

E-ISSN: 3026-3239
Vol. 3, No. 2, July - December (2024), pp.874-885

Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity. *Journal of Econometrics, 31*(3), 307–327.

Bouri, E., Molnár, P., Azzi, G., Roubaud, D., & Hagfors, L. I. (2017). On the hedge and safe haven properties of Bitcoin: Is it really more than a diversifier? *Finance Research Letters, 20*, 192–198.

Capie, F., Mills, T. C., & Wood, G. (2005). Gold as a hedge against the dollar. *Journal of International Financial Markets, Institutions and Money, 15*(4), 343–352.

Choi, S., & Shin, J. (2022). Bitcoin: An inflation hedge but not a safe haven. *Finance Research Letters, 46*, 102379.

Conlon, T., Corbet, S., & McGee, R. J. (2021). Inflation and cryptocurrencies revisited: A time-scale analysis. *Economics Letters, 206*, 109996.

Conlon, T., & McGee, R. (2020). Safe haven or risky hazard? Bitcoin during the COVID-19 bear market. *Finance Research Letters, 35*, 101607.

Dyhrberg, A. H. (2016a). Bitcoin, gold and the dollar – A GARCH volatility analysis. *Finance Research Letters, 16*, 85–92.

Dyhrberg, A. H. (2016b). Hedging capabilities of bitcoin. Is it the virtual gold? *Finance Research Letters, 16*, 139–144.

Erb, C. B., & Harvey, C. R. (2013). The golden dilemma. *Financial Analysts Journal, 69*(4), 10–42.

Fama, E. F., & Schwert, G. W. (1977). Asset returns and inflation. *Journal of Financial Economics, 5*(2), 115–146.

Fisher, I. (1930). *The theory of interest*. Macmillan.

Iyer, T. (2022). *Cryptic connections: Spillovers between crypto and equity markets* (Global Financial Stability Notes No. 2022/01). International Monetary Fund.

Klein, T., Pham Thu, H., & Walther, T. (2018). Bitcoin is not the New Gold – A comparison of volatility, correlation, and portfolio performance. *International Review of Financial Analysis, 59*, 105–116.

Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system*. https://bitcoin.org/bitcoin.pdf

Ranaldo, A., & Söderlind, P. (2010). Safe haven currencies. *Review of Finance, 14*(3), 385–407.

E-ISSN: 3026-3239
Vol. 3, No. 2, July - December (2024), pp.874-885

Shahzad, S. J. H., Bouri, E., Roubaud, D., Kristoufek, L., & Lucey, B. (2019). Is Bitcoin a better safe-haven investment than gold and commodities? *International Review of Financial Analysis, 63*, 322–330.

Smales, L. A. (2019). Bitcoin as a safe haven: Is it even worth considering? *Finance Research Letters, 30*, 385–393.