Research Article

GLOBAL UNCERTAINTY DYNAMICS AND FOREIGN PORTFOLIO ADJUSTMENT: CROSS-ASSET REALLOCATION IN INDONESIA'S STOCK AND BOND MARKETS

Abdurrahman Mahdiddary, Fahmi Salam Ahmad*

Department of Economics, Faculty of Economics and Management, IPB University. Jl. Agatis, Kampus IPB Dramaga Bogor 16680, Indonesia

*Corresponding author:
Email: fahmisalam@apps.ipb.ac.id

ABSTRACT

Background: Global uncertainty can induce abrupt changes in international investors' risk appetite; however, its effects may differ across asset classes. In Indonesia, foreign portfolio adjustments in the equity and government bond markets remain insufficiently understood within an integrated macro-financial framework.
Purpose: This study examines how global uncertainty shocks are transmitted through Indonesia's macro-financial system and how foreign investors adjust their positions across the equity and debt markets.
Design/methodology/approach: Quarterly data for 2006–2025 are analyzed using a Vector Error Correction Model (VECM), complemented by Impulse Response Functions (IRF) and Forecast Error Variance Decomposition (FEVD). The VIX, exchange rate, policy rate, stock index, government bond yield and foreign portfolio investment in equity and debt securities are included in the model jointly.
Findings/Results: Global uncertainty initially weakens the Rupiah, affects monetary policy conditions, depresses equity prices, and raises government bond yields. Foreign investment declines in both markets, but the contraction is substantially larger in debt securities. The VIX shocks explain 25.70% of the initial variation in debt investment, compared with 6.61% for equity investment. Over longer horizons, shocks originating from each asset class increasingly explain fluctuations in the other, indicating growing cross-market interdependence and portfolio adjustment.
Conclusion: Indonesia's government bond market is more sensitive to global uncertainty than its equity market, partly because foreign bond investors are simultaneously exposed to interest rate and exchange rate risks. Therefore, policy responses should strengthen management of exchange rate risk, hedging instruments, domestic investor participation, and integrated monitoring of foreign flows across asset classes.
Originality/value (State of the art): This study jointly models global risk, macro-financial adjustment, asset prices, and foreign portfolio positions across two asset classes within a single dynamic system, unlike studies that examine equity and bond flows separately. It further highlights the asymmetric sensitivity and increasing interdependence of foreign equity and debt investments following global uncertainty shocks.

ARTICLE INFO

Keywords:
global uncertainty, foreign portfolio investment, cross-asset adjustment, equity and bond markets, VECM

How to Cite: Mahdiddary, A., & Ahmad, F. S. (2026). Global uncertainty dynamics and foreign portfolio adjustment: Cross-asset reallocation in Indonesia's stock and bond markets. *AI, Big Data and Quantitative Methods in Finance*, 1(2). https://doi.org/10.17358/abq.1.2.63

INTRODUCTION

Rising global uncertainty can trigger sudden shifts in international investors' risk appetite. For emerging economies characterized as small open economies, such as Indonesia, changes in global investor sentiment can quickly translate into portfolio adjustments, with implications for domestic financial stability. When market anxiety intensifies, as reflected by the CBOE Volatility Index (VIX), commonly referred to as the fear gauge, global investors tend to become more risk-averse and reduce their exposure to riskier assets while reallocating funds toward instruments perceived as safer and more resilient. Consistent with the Mundell-Fleming framework, such external shocks can lead to capital outflows and put downward pressure on the domestic currency, thus raising pressures for exchange rate depreciation and possibly inducing adjustments in the central bank policy rate.

EISSN: 3163-6586, Copyright © 2026 by Authors. This is an open access article under the CC BY license

But the response of foreign investors to global shocks is not necessarily linear or symmetric across asset classes. During Global Financial Crisis in 2008, VIX went up by 31,59% when Jakarta Composite Index (IHSG) dropped steeply to 2087 and the Indonesian government bond yields rose to 12.77%. In 2020 a different pattern emerged, in the COVID-19 pandemic. The yield of government bonds was relatively stable at around 6.94%. However, the VIX rose sharply to 30.26% and the IHSG fell to 5,190. However, this apparent stability in bond yields came with a substantial decline in foreign ownership of government bonds, which fell from 38.57% in 2019 to 25.16% in 2020. These movements across asset classes indicate that foreign investors may not only withdraw capital from Indonesia in the face of global uncertainty, but also re-allocate their portfolio across assets as risk and return conditions change.Such behavior is in line with the logic of Portfolio Choice Theory, which emphasizes the continuous rebalancing of asset holdings by investors in the search for their desired risk-return trade-off. Trends in global uncertainty, domestic asset prices, and foreign ownership in Indonesia (2006-2025) in Figure 1.

Global uncertainty has been identified as an important pull factor for portfolio investment outflows from emerging markets in previous studies (Choi et al. 2022; Gourio et al. 2015). Simarmata et al. (2025) and Rahmawati and Makaliwe (2021) show that in Indonesia domestic macroeconomic conditions, especially interest rates and exchange rates as well as asset price movements, significantly impact foreign capital flows. At the global level, Agoraki et al. (2023) find that equity and bond instruments can react asymmetrically to shocks, which can lay the basis for flight-to-safety behavior. But, the existing literature on Indonesia has mostly studied the foreign capital flows in equity and bond markets separately or in a partial perspective. Therefore, there is little empirical evidence regarding the joint position adjustment of foreign investors in equity and debt instruments to an increase in global uncertainty.This understanding is important, especially as movements in one asset class may coincide with or diverge from movements in another, indicating a broader process of cross-asset reallocation rather than a uniform withdrawal of foreign capital.

Based on this background, this study investigates the effects of global uncertainty shocks on the Indonesian financial market and foreign portfolio investment in equity and debt instruments. In particular, the study examines the dynamic responses of IDR/USD exchange rate, BI rate, IHSG, government bond yields, equity capital, and debt securities to shocks in VIX. It further evaluates the relative contribution of global uncertainty and domestic variables to fluctuations in foreign investment in both asset classes.

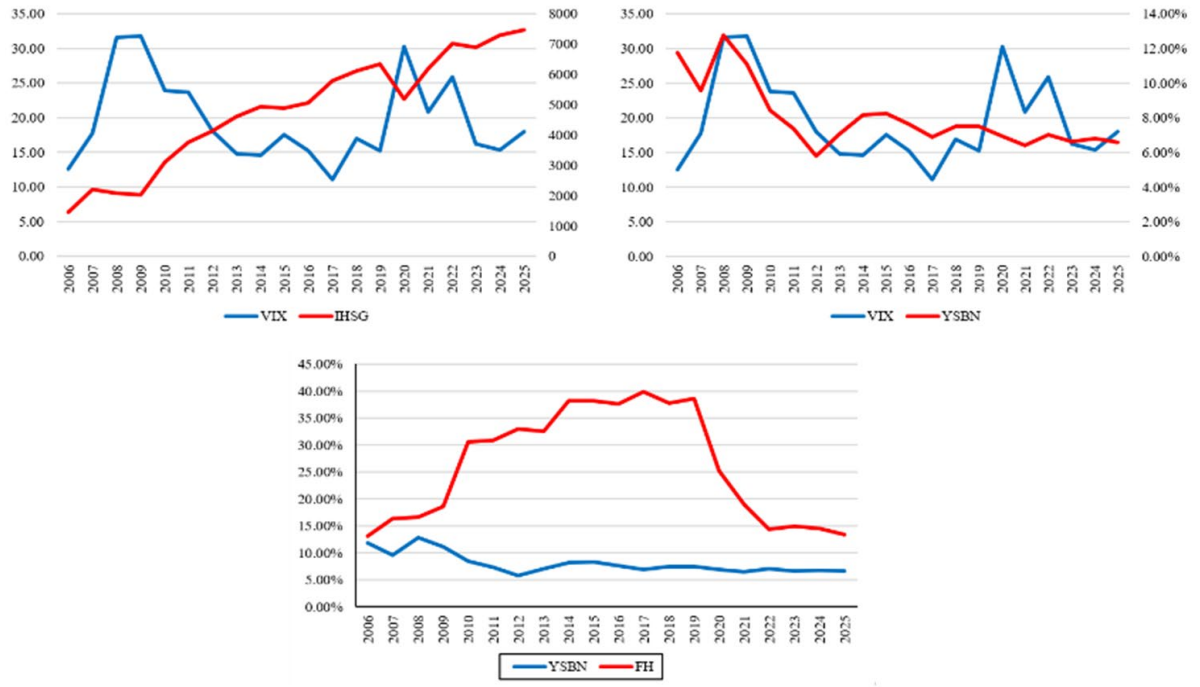


Figure 1. Trends in global uncertainty, domestic asset prices, and foreign ownership in Indonesia (2006-2025)

To address these research problems, this study adopted an integrated empirical approach consisting of three analytical stages. First, a vector error correction model (VECM) is employed to capture the short-run dynamics and long-run relationships among global uncertainty, domestic macro-financial variables, asset prices, and foreign portfolio investment. Second, impulse response functions (IRF) are used to trace the transmission of global uncertainty shocks through exchange rates, monetary policy, stock prices, government bond yields and foreign capital flows. Third, forecast error variance decomposition (FEVD) is applied to identify the relative contributions of global and domestic shocks to variations in foreign equity and debt investment, including cross-market spillovers. By integrating these analyses, this study evaluates asymmetric portfolio responses and assesses the extent to which foreign investment across asset classes becomes interconnected following global uncertainty shocks.

This study is based on the Mundell-Fleming framework, asset pricing theory and portfolio choice theory, expecting that the increase in global uncertainty will generate depreciation pressure on the Rupiah, adjustments in monetary policy conditions, declining stock prices and higher government bond yields. These developments are expected to lead to a reduction in foreign portfolio investment in both equity and debt securities, although the magnitude and persistence of the responses may vary across asset classes. The interest rate and foreign exchange risks associated with foreign investment in debt securities are likely to make it more sensitive. Moreover, this paper expects that shocks to one asset class will increasingly contribute to fluctuations in foreign investment in the other, reflecting possible cross-market interdependence. Nevertheless, whether these dynamics represent actual portfolio reallocation remains an empirical question.

The explicit novelty of this research lies in its integrated approach. Unlike previous studies that generally analyze these financial components in isolation, this paper simultaneously models macro-financial adjustments (exchange rates and interest rates), asset price changes (stock index and bond yields), and foreign portfolio flows across two distinct asset classes (equity and bonds) within a single dynamic framework. This unified system enables a comprehensive analysis of how global uncertainty propagates through monetary and macroeconomic channels before being reflected in foreign portfolio positions. More importantly, it provides direct empirical evidence on whether changes in foreign investment during periods of heightened uncertainty reflect broad-based capital withdrawal or tactical cross-asset reallocation, thereby offering a more integrated understanding of shock transmission in Indonesia's financial market.

METHODS

This study uses secondary data with a quarterly time series extending from Q1 2006 to Q4 2025. The data were systematically collected from the official publications of Bank Indonesia, the Central Bureau of Statistics (BPS), and Investing. The endogenous variables within this framework comprise a global uncertainty proxy (CBOE Volatility Index/VIX), domestic macroeconomic indicators (IDR/USD Exchange Rate/LNK and Bank Indonesia policy rate/ BIR), domestic asset prices (Composite Stock Price Index/LNIHSG and 10-Year Government Bond Yield/ YSBN), and proxies for foreign portfolio investments (the ratio of Equity Capital to nominal GDP or ECPDB and the ratio of Debt Securities to nominal GDP or DSPDB).

The analysis employs a vector error correction model (VECM) specification in the framework of Usman et al. (2022). This model was selected precisely because it has a good capacity to simultaneously capture the short-run dynamic interactions among interconnected macro-financial variables while allowing their continuous adjustment toward long-run equilibrium relationships. According to preliminary tests, all variables seemed to be stationary at first difference, I (1). In addition, the Johansen Cointegration Test showed the existence of three cointegrating equations at 5% significance level. The results provide strong evidence in favor of the existence of a long-run relationship governing the dynamics of the system which is the basic rationale for using the VECM framework. The general equation of the model is specified as follows:

$$\Delta y_t = \Pi y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \, \Delta y_{t-i} + \varepsilon_t$$

Where: y_t(vector of endogenous variables consisting of VIX, the IDR/USD exchange rate, BI Rate, the Jakarta Composite Index (IHSG), 10-year government bond yield, Equity Capital, and Debt Securities); Δ (first-difference operator); Π (matrix representing the long-

run relationship); Γ_i (coefficient matrix representing short-run dynamics); p (optimal lag length); ε_t (vector of residuals or random disturbances).

The impulse response function (IRF) and forecast error variance decomposition (FEVD) are used to investigate the system's reaction to global uncertainty and the role of these shocks in foreign portfolio investment volatility. We follow Holtemöller (2017) and perform Cholesky decomposition to orthogonalize the shocks and to identify the individual contribution of the innovation as the VECM considers all variables as endogenous in a system of interrelated equations. The ordering of the variables is based on the assumed macro-financial transmission mechanism and the principles of portfolio choice theory: VIX, LNK, BIR, LNIHSG, YSBN, ECPDB, and DSPDB.

This ordering is under the assumption that the global uncertainty is the most exogenous source of shocks in the system. The anticipated increase in the VIX is expected to first affect domestic financial conditions, notably the exchange rate, which could then trigger a monetary policy response by way of policy rate adjustments. These macro adjustments are then passed on to the domestic asset markets through changes in stocks value and bond yields. Changes in these asset prices ultimately alter the relative risk-return profile perceived by foreign investors and may lead them to rebalance their portfolios between equity and debt instruments.

The Cholesky ordering is motivated by theoretical considerations of the transmission of global uncertainty in a small open economy. The VIX is placed first because global risk sentiment is assumed to be predetermined at time t relative to South Korea's domestic macro-financial developments. The exchange rate (LNK) and policy rate (BIR) captures the assumed transmission of external shocks through currency markets and monetary policy adjustments. The domestic asset prices, stock index (LNIHSG) and government bond yield (YSBN) are expected to capture their response to macro-financial conditions. Finally, foreign portfolio investments in equity (ECPDB) and debt securities (DSPDB) are positioned at the end, reflecting the assumption that foreign investment flows react contemporaneously to changes in the global risk, domestic financial conditions and asset prices. The ECPDB is presented before the DSPDB as an identification assumption, not as an assumption of an empirically established causal hierarchy between the two markets. The Cholesky decomposition is sensitive to the ordering of variables, but the specification is kept the same throughout the analysis so that the interpretation of the IRF and FEVD results is consistent with a coherent theoretical framework. Accordingly, the findings are interpreted conditionally based on the assumed recursive identification structure.

The IRF is used to trace the direction, magnitude, and persistence of responses in each variable following a one-standard-deviation shock to another variable, with particular attention to the responses of the ECPDB and DSPDB to an increase in global uncertainty. This analysis helps identify whether equity and debt instruments exhibit different degrees of sensitivity and persistence in response to external shocks.

Meanwhile, the FEVD is used to measure the relative contribution of each shock to the variance of the forecast error of the variables at different time horizons. The FEVD of ECPDB and DSPDB provides evidence about the extent to which fluctuations in foreign investment in each asset class are driven by global uncertainty and shocks coming from other macroeconomics and financial variables. By comparing the sources of variation across equity and debt instruments, the analysis helps assess whether foreign portfolio adjustment is characterized primarily by broad-based capital withdrawal or shifts in the allocation of foreign investment across asset classes. This provides an empirical basis for understanding cross-asset reallocation and potential flight-to-safety behavior in Indonesia's financial market.

RESULTS

Macro-Financial Context and Portfolio Flow Dynamics

The transmission of global uncertainty to Indonesia's financial system is evident in episodes of pronounced macro-financial stress. During major global risk-off events, such as the 2008 Global Financial Crisis, when the VIX reached 51.72, and the COVID-19 pandemic in 2020, when the VIX exceeded 30.26, Indonesia experienced substantial exchange rate depreciation, accompanied by sharp declines in domestic asset prices. These episodes highlight the vulnerability of Indonesia's financial markets to shifts in global investor sentiment.

More importantly, historical data point to considerable differences in the magnitude and volatility of foreign investment movements across asset classes during periods of heightened global uncertainty. As shown in Figure 2, the volume of foreign capital circulating in the debt securities market is substantially larger than that in the equity market. On average, net foreign flows in debt securities reached USD 2613 million, compared with only USD 22 million in the equity market. This large difference suggests that foreign investors' responses to global shocks may vary considerably across asset classes, emphasizing the necessity of jointly examining equity and debt securities when assessing foreign portfolio adjustments in Indonesia.

Consequently, periods of heightened global uncertainty tend to be associated with sharper and more pronounced capital reversals in the debt-security market. The largest recorded outflow from this market reached USD 6072 million, substantially exceeding the maximum outflow of USD 2354 million observed in the equity market. This difference highlights the greater magnitude of foreign capital movements in the debt market and suggests that debt securities may be particularly sensitive to shifts in global investor sentiment. However, a larger volume of capital movements should not, by itself, be interpreted as evidence that the debt market is inherently more vulnerable or poses greater systemic risk than the equity market. Rather, it indicates that foreign portfolio adjustments are considerably larger in the debt markets. Therefore, the underlying transmission of these capital movements is examined further through the dynamic VECM results presented below.

Transmission of Global Shocks to Macro-Financial Stability

The transmission of global uncertainty to Indonesia's domestic economy does not occur in isolation. Instead, the shock is transmitted through a sequence of macroeconomic and monetary channels before ultimately affecting domestic asset prices. The results of the impulse response function (IRF) show that a shock to global uncertainty, proxied by VIX, causes an instantaneous depreciation of the Rupiah (LNK) and the response reaches its peak in the second period. This pattern is consistent with the Mundell-Fleming framework where increasing global risk aversion prompts investors to cut their exposure to emerging market assets and increase their demand for safe haven currencies, particularly the US dollar. The resulting pressure on foreign exchange markets contributes to the depreciation of the domestic currency.

Exchange rate depreciation also becomes an important channel through which the initial shock affects foreign investors. A weaker Rupiah reduces the value of investment returns when converted into investors' home currencies, thereby increasing the currency risk associated with Indonesian assets. The expectation of further depreciation may reinforce this concern, which may encourage investors to cut their domestic asset holdings. Capital withdrawals, in turn, can place additional pressure on the exchange rate, creating a feedback process in which currency depreciation and investor risk aversion reinforce one another.

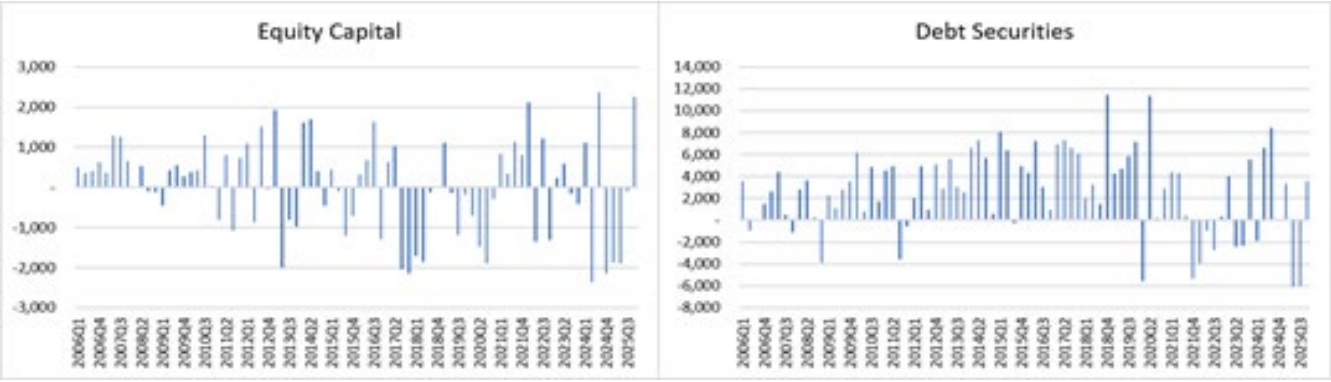


Figure 2. Foreign capital flows in equity and debt markets

The reaction of Bank Indonesia's policy rate (BIR) illustrates the change in the monetary policy conditions after the external shock. In the first two periods the policy rate responded positively, indicating the initial tightening response to the sharp decline in the value of the Rupiah. One explanation is that higher interest rates were used to help stabilize the exchange rate and maintain the attractiveness of Rupiah-denominated assets by maintaining the domestic interest rate differential. Such a response may also help contain the risk of further capital outflows during the initial phase of heightened uncertainty.

But the response of the policy rate turns negative after the third period, implying that the stance of monetary policy becomes more accommodative. 'With this change, as the pressure on the exchange rate abates in the short term, monetary policy can place more emphasis on supporting domestic economic activity and on liquidity. Keeping interest rates high for an extended period could increase the cost of financing and further squeeze domestic demand. The subsequent easing therefore reflects the need to balance exchange rate stabilization with the broader objective of mitigating the adverse effects of external shocks on the domestic economy.

These macro-financial adjustments are then passed on to domestic asset prices through the asset price channel. The IRF results indicate that the VIX shock has a negative impact on the composite stock price index (LNIHSG) which reaches its lowest point in the second period, while the 10-year government bond yield (YSBN) increases significantly. These moves are in line with the basic logic of the asset pricing theory. Higher global risk premia, coupled with tighter domestic financial conditions in the initial phase of the shock, increase the required return or discount rate that investors use. A higher discount rate lowers the present value of expected future cash flows, and puts downward pressure on equity valuations. In the bond market, rising required returns translate into lower bond prices and, consequently, higher yields. Thus, the IRF results illustrate how an increase in global uncertainty propagates from external risk sentiment to the exchange rate and monetary policy before ultimately being reflected in Indonesia's stock and bond markets.

Asymmetric Vulnerability of Foreign Portfolios

While previous studies generally agree that global uncertainty can trigger capital outflows from emerging markets, the IRF results reveal a pronounced asymmetry in the magnitude of these responses across asset classes in the short run (Figure 3). Following a shock to the VIX, both equity investment (ECPDB) and debt securities investment (DSPDB) respond with immediate outflow. However, the response in the debt market is substantially larger, with the initial contraction reaching -0.0083, compared with only -0.0012 in the equity market during the first period. This difference suggests that foreign investment in debt securities is considerably more sensitive to increases in global uncertainty than investment in equities.

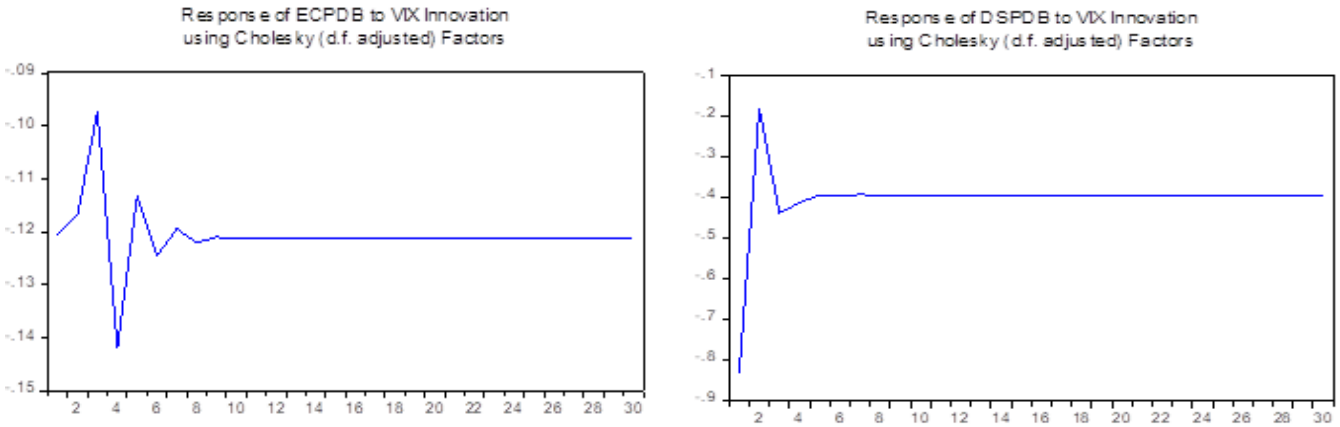


Figure 3. IRF graph of equity capital and debt securities

One possible explanation for this asymmetry is that foreign bond investors are exposed to greater interest rate and exchange rate risks. Equity returns are subject to changes in asset prices and corporate earnings, whereas government bonds usually make fixed nominal payments. For foreign investors, the change in the exchange rate also influences the value of these payments when they are converted into the investor's home currency. Consequently, a global risk shock can expose bond investors to pressures from both domestic interest rate movements and currency depreciation simultaneously.

These two channels can feed off each other when the VIX rises. Higher interest rates at home translate into higher bond yields and thus a lower market value of existing bonds, resulting in losses in the secondary market. At the same time, the depreciation of the rupiah reduces the value of the returns received by foreign investors when converted into foreign currency. The combination of these risks can make debt securities less attractive in periods of heightened uncertainty, prompting investors to cut back on their bond holdings more aggressively. This phenomenon provides a plausible explanation for the larger and faster outflow observed in the DSPDB relative to that in the ECPDB. The FEVD results provide further evidence of the important role of exchange rate dynamics in the bond market. Shocks to the exchange rate (LNK) account for as much as 27.18% of the variation in the 10-year government bond yield (YSBN) during the early periods. The relatively large contribution of this implies that exchange rate movements are an important source of fluctuations in the domestic bond market after external shocks. Depreciation of the Rupiah can raise concerns about foreign-currency returns and increase the risk premium demanded by international investors, which may contribute to selling pressure in the bond market and, subsequently, higher bond yields.

The results extend the findings of Simarmata et al. (2025) which emphasizes the need for exchange rate risk to explain the stronger response of foreign investment in debt securities. More generally, the results indicate that the effects of global shocks should not be assumed to be homogeneous across domestic financial assets. Instead, the magnitude of capital adjustment depends on the characteristics and risk exposures of each asset class. The stronger response of debt securities relative to equities, therefore, provides evidence that foreign portfolio adjustment in Indonesia involves an important cross-asset dimension rather than simply representing a uniform withdrawal of capital from the domestic market.

Empirical Evidence of Cross-Asset Reallocation

Beyond the immediate capital outflows identified by the IRF, the FEVD provides a broader perspective on the factors underlying foreign portfolio movements over time (Figure 4). Rather than showing a uniform response across asset classes, the results suggest that the sources of variation in foreign investment change as the adjustment process unfolds. In the equity market, the variance of ECPDB in the first period is dominated by its shocks, which account for 86.19% of the variation, while shocks to global uncertainty (VIX) contribute 6.61%. In contrast, the direct effects of domestic macroeconomic variables such as the exchange rate (LNK) and policy rate (BIR) are small in the short run. This pattern indicates that equity flows are initially driven primarily by their market dynamics and the direct effect of global investor sentiment rather than immediate domestic policy adjustments.

However, the contribution of shocks originating from the debt market becomes increasingly important over longer horizons. In the first period, DSPDB contributes 0% to the variance of ECPDB, but its contribution rises to 19.64% by period 10 and reaches 23.64% by period 30. This gradual increase suggests that equity and debt investments are not independent over the longer term. As financial conditions evolve, developments in the debt market become increasingly relevant to fluctuations in foreign equity investment. Such a pattern is consistent with the possibility that foreign investors adjust their positions across asset classes as they reassess relative risks, returns, and liquidity conditions during prolonged periods of financial stress.

The debt market displayed a different pattern. Compared to equities, the DSPDB is considerably more responsive to global uncertainty in the initial stages of the shock. VIX shocks account for 25,70% of the forecast error variance of DSPDB in the first period, almost four times the corresponding contribution to ECPDB. The exchange rate also becomes increasingly important over time, explaining 9,31% of the variation in DSPDB in period 10. These results point to the importance of exchange rate conditions for foreign investment in debt securities. Foreign investors also take into account the expected returns on domestic bonds in their currency,

so that a depreciation of the exchange rate can reduce the foreign currency value of expected returns and increase the perceived risk of domestic bonds. This gives empirical evidence supporting the importance of currency risk in driving investment in foreign bonds, and is broadly consistent with the findings in Simarmata et al. (2025). FEVD graph of debt securities in Figure 5.

As the adjustment continues, the relationship between the two asset classes becomes increasingly significant. The contribution of equity market shocks to the variance of DSPDB rises from 1.02% in the first period to 18.69% in period 10 and reaches 23.78% by period 30. A similar pattern is observed in the opposite direction, with shocks to DSPDB accounting for 23.64% of the variance in ECPDB by period 30. Each market explains about one-fourth of the long-run variation in the other, indicating significant interlinkages between foreign investments in equity and debt securities. These results are consistent with the view that portfolio decisions in one market may be influenced by developments in the other, particularly when investors face changing risks and returns in that market.

The theory of portfolio choice helps to understand this interconnectedness. Foreign investors are constantly re-evaluating the relative attractiveness of available assets in terms of expected returns, risks and opportunity costs. In periods of market stress, lower equity prices and higher bond yields may alter the risk-return profiles of the two asset classes relative to each other. Under such conditions, investors may reduce their exposure to one type of asset while increasing their exposure to another, rather than immediately withdrawing all their funds from the domestic market. However, the FEVD results should be interpreted as evidence of increasing interdependence in the sources of variation across the two markets rather than as direct proof that capital is mechanically transferred from one asset to the other. Establishing actual portfolio reallocation would require more direct evidence of offsetting flows between asset classes.

It is important to acknowledge that the estimated cross-asset spillovers are conditional on the Cholesky identification scheme used in this study. The ordering is theoretically motivated by the assumed transmission of global uncertainty through domestic macro-financial conditions and asset markets before affecting foreign portfolio investment. Therefore, the FEVD results should be interpreted as evidence of dynamic interdependence within the specified model rather than as definitive proof of direct portfolio reallocation or ordering-invariant relationships. This consideration does not negate the observed patterns but establishes the scope within which the empirical findings should be interpreted for the study.

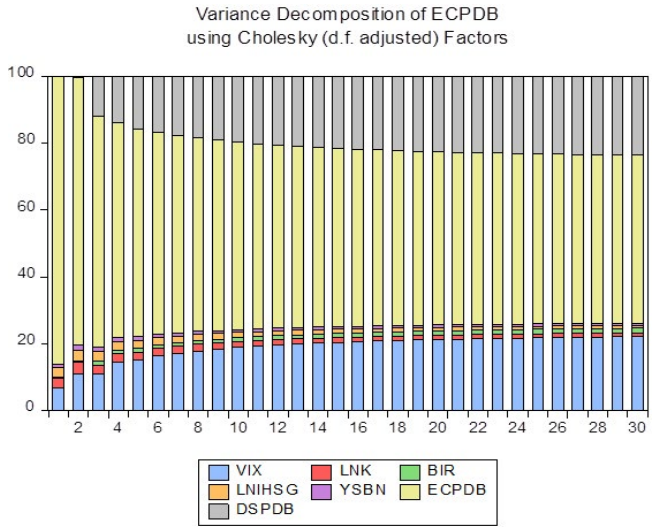


Figure 4. FEVD graph of equity capital

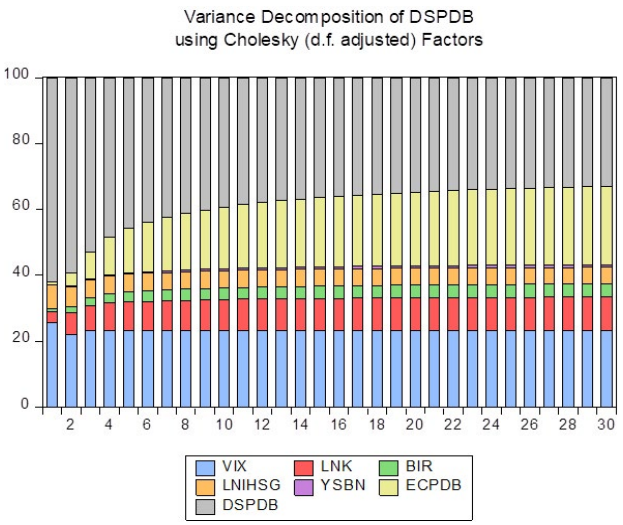


Figure 5. FEVD graph of debt securities

Taken together, these findings extend the existing discussion of flight-to-safety by shifting the focus from a purely cross-border perspective toward the possibility of reallocation within the domestic financial market. Agoraki et al. (2023) emphasize the different responses of equity and bond markets to global shocks, while the present results suggest that these differences are accompanied by growing interdependence between the two asset classes over time. The Indonesian equity and debt markets therefore appear to function not only as separate channels through which global uncertainty affects foreign capital but also as interconnected components of investors' portfolio decisions. This provides a basis for interpreting foreign portfolio adjustment as a potentially broader process of cross-asset reallocation, in which investors may rebalance between domestic asset classes before deciding whether to withdraw capital from the Indonesian market altogether.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study examines how global uncertainty is transmitted through Indonesia's macro-financial system and how foreign investors subsequently adjust their portfolios across domestic asset classes. The empirical results indicate that global uncertainty affects foreign portfolio investment through a sequence of macroeconomic and financial channels, beginning with exchange rate movements and monetary policy responses before affecting domestic asset markets. One of the main findings is the asymmetrical response of foreign investment across asset classes. Debt securities experience a substantially larger and more immediate contraction than equities following shocks to global uncertainty. The stronger response can be attributed to simultaneous exposure of foreign bond investors to interest and exchange rate risks. In the domestic market, yields are rising, which can reduce the valuation of bonds. The depreciation of the Rupiah reduces the value of returns converted to foreign currency. The simultaneous occurrence of these risks increases the sensitivity of foreign bond holdings to such global shocks.

The FEVD results further indicate that foreign investment in Indonesian equities and debt securities becomes increasingly interconnected over time. Shocks from one asset class increasingly contribute to the variation in the other, which is consistent with the possibility of cross-asset portfolio adjustments. Rather than responding to global uncertainty solely through complete capital withdrawal, foreign investors may also rebalance their positions between domestic equity and debt instruments as the relative risks, returns, and market conditions change. Nevertheless, the FEVD results provide evidence of interdependence between the two markets rather than direct proof of an actual transfer of funds from one asset class to another. This distinction is important when interpreting the observed cross-asset reallocation mechanisms.

Recommendations

The principal contribution of this study lies in demonstrating that global uncertainty does not affect foreign portfolio investment uniformly across asset classes. By examining foreign equity and debt investments within an integrated VECM framework, this study identifies differences in asset-specific sensitivity and increasing cross-market interdependence over longer horizons. These findings provide a more complex view of foreign portfolio investment dynamics beyond the conventional narrative of uniform capital withdrawal during periods of global uncertainty.

The findings have several policy implications to strengthen Indonesia's resilience to global financial shocks. First, the significance of exchange rate movements for the bond market suggests that maintaining orderly conditions in the foreign exchange market should remain a policy priority. Higher interest rates alone may provide temporary relief to the exchange rate pressures on the Rupiah, but an extended tightening may eventually hurt domestic asset valuations and increase financing costs. Strengthening the availability and affordability of foreign exchange hedging instruments could therefore provide foreign investors with greater protection against currency risk and reduce the likelihood of abrupt portfolio adjustments in the SBN market.

Second, the higher sensitivity of debt securities to global uncertainty underscores the need to build a more diversified and resilient investor base in the domestic government bond market. The temporary selling pressure from foreign investors could be absorbed by increased participation by stable, long-term domestic institutional investors such as pension funds and other

long-term savings institutions. A broader domestic investor base would reduce dependence on foreign capital and potentially limit excessive increases in government bond yields during periods of global financial stress.

Third, the evidence of growing interdependence between equity and debt markets suggests that capital flow monitoring and financial market policy should consider both asset classes as part of an integrated framework. Independent monitoring of foreign portfolio flows across stock and bond markets might miss the reallocation between the two. Adequate secondary market liquidity in both markets can help facilitate orderly portfolio adjustments and reduce the chances that temporary reallocations will turn into broader capital flights. Such measures would allow domestic financial markets to absorb external shocks more effectively while preserving their capacity to retain foreign capital during periods of heightened global uncertainty.

FUNDING STATEMENT: This research did not receive any specific grants from funding agencies in the public, commercial, or not-for-profit sectors.

CONFLICTS OF INTEREST: The authors declare no conflicts of interest.

DECLARATION OF GENERATIVE AI STATEMENT: During the preparation of this manuscript, the authors used ChatGPT to assist with language refinement, grammar checking, and improving the clarity and organization of the manuscript. After using this tool, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

REFERENCES

Agoraki, M. K., Wu, H., Xu, T., & Yang, M. (2023). Money never sleeps: capital flows under global risk and uncertainty. *Journal of International Money and Finance*, 103013. https://doi.org/10.1016/j.jimonfin.2023.103013

Asian Bonds Online. (2026). Indonesia data . Retrieved July 1, 2026, from https://asianbondsonline.adb.org/indonesia/data/

Indonesian Statistics. (2026). Query builder. Retrieved July 1, 2026, from https://www.bps.go.id/id/query-builder

Indonesian Central Bank. (2026). Metadata statistics Indonesian economy and finance. Retrieved August 8, 2026, from https://www.bi.go.id/id/statistik/metadata/seki/default.aspx

Bank Indonesia. (2026). *Statistik ekonomi dan keuangan Indonesia*. Retrieved July 1, 2026, from https://www.bi.go.id/id/statistik/ekonomi-keuangan/seki/default.aspx#headingFour

Bekaert, G., Hoerova, M., & Lo, D. (2013). Risk, uncertainty and monetary policy. *Journal of Monetary Economics*, 60(7), 771–788. https://doi.org/10.1016/j.jmoneco.2013.06.003

Bodie, Z., Kane, A., & Marcus, A. J. (2014). *Investments* (10th ed.). McGraw-Hill Education.

Choi, S., Ciminelli, G., & Furceri, D. (2022). Is domestic uncertainty a local pull factor driving foreign capital inflows? New cross-country evidence. *Journal of International Money and Finance*, 102764. https://doi.org/10.1016/j.jimonfin.2022.102764

Gourio, F., Siemer, M., & Verdelhan, A. (2015). *Uncertainty and international capital flows* (Society for Economic Dynamics 2015 Meeting Papers No. 880). https://doi.org/10.2139/ssrn.2626635

Holtemöller, O. (2017). *Structural vector autoregressive models and monetary policy analysis*. https://doi.org/10.18452/3441

Investing.com. (2026). *Historical data (IDX Composite, Indonesia 10-Year Bond Yield, IDR/USD, and Volatility S&P 500)*. Diambil 1 Juli 2026, dari https://id.investing.com/

Markowitz, H. M. (1952). Portfolio selection. *The Journal of Finance*, 7(1), 77–91. https://doi.org/10.1111/j.1540-6261.1952.tb01525.x

Mishkin, F. S. (1995). Symposium on the monetary transmission mechanism. *Journal of Economic Perspectives*, 9(4), 3–10. https://doi.org/10.1257/jep.9.4.3

Rahmawati, W., & Makaliwe, W. A. (2021). Dampak pertumbuhan ekonomi, kontrol korupsi, dan yield terhadap investasi asing di pasar SUN. *EKUITAS (Jurnal Ekonomi dan Keuangan)*, 5(2). https://doi.org/10.24034/j25485024.y2021.v5.i2.4550

Simarmata, R. F., Wijaya, R. S., & Perdana, P. (2025). The influence of the IHSG, BI rate, exchange rate, and Indonesian government bond yield on foreign portfolio investment in Indonesia. *International Journal of Business and Applied*

Economics, 4(4), 216. https://doi.org/10.55927/ijbae.v4i4.216

Tobin, J. (1958). Liquidity preference as behavior towards risk. *The Review of Economic Studies*, 25(2), 65–86. https://doi.org/10.2307/2296205

Usman, M., Loves, L., Russel, E., Ansori, M., Warsono, W., Widiarti, W., & Wamiliana, W. (2022). Analysis of some energy and economics variables by using the VECMX model in Indonesia. *International Journal of Energy Economics and Policy*, 12(3). https://doi.org/10.32479/ijeep.11897