

SPILOVER EFFECTS OF GLOBAL MARKETS AND THE INFLUENCE OF FISCAL POLICY IN INDONESIA ON RUPIAH DEPRECIATION (2016–2025)



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Abstract

This study aims to analyze the impact of global market spillover effects and fiscal policy on the depreciation of the Indonesian Rupiah exchange rate during the 2016–2025 period. The Rupiah exchange rate (EXR) is used as the dependent variable, while the Federal Funds Rate (FFR) and global oil prices (OIL) serve as proxies for external shocks. Tax revenue (TAX) and government expenditure (GOVEXP) are employed as indicators of domestic fiscal policy. The analytical method applied is the Domowitz-Elbadawi *Error Correction Model* (ECM) to examine both short-run and long-run relationships among variables. The results indicate that, in the short run, all independent variables do not significantly affect the Rupiah exchange rate, except government expenditure, which shows a positive effect at the 10 percent significance level. In the long run, FFR, TAX, and GOVEXP significantly influence the exchange rate at the 10 percent significance level with a negative relationship, while OIL has no significant effect. However, the study is limited by the relatively narrow representation of external shock variables, as broader indicators such as global risk sentiment, capital flow volatility, and exchange rate pressures from major trading partners are not included in the model. This limitation may create omitted variable bias and reduce the robustness of the findings. Nevertheless, the results suggest that external factors play a more dominant role in influencing the Rupiah exchange rate in the long run, while fiscal policy functions as a stabilization instrument amid global economic dynamics.

Keywords: Spillover Effect, Rupiah Exchange Rate, Fiscal Policy, Global Market Volatility, Error Correction Model (ECM), Rupiah Depreciation, Federal Funds Rate (FFR), Oil Prices, Tax Revenue, Government Expenditure.

INTRODUCTION

The stability of the exchange rate has become one of the most important issues in maintaining macroeconomic stability in developing countries, particularly in emerging market economies such as Indonesia. In an increasingly integrated global financial system, exchange rate movements are no longer determined solely by domestic economic conditions, but are also strongly influenced by external shocks originating from global financial markets. One of the main external factors affecting the Indonesian Rupiah is the monetary policy of the United States, especially changes in the Federal Funds Rate (FFR), which often trigger capital flow reversals and exchange rate volatility in emerging economies (Ying et al., 2024). This phenomenon reflects the existence of spillover effects, where economic and financial shocks from advanced economies spread rapidly to developing countries through international financial market channels.

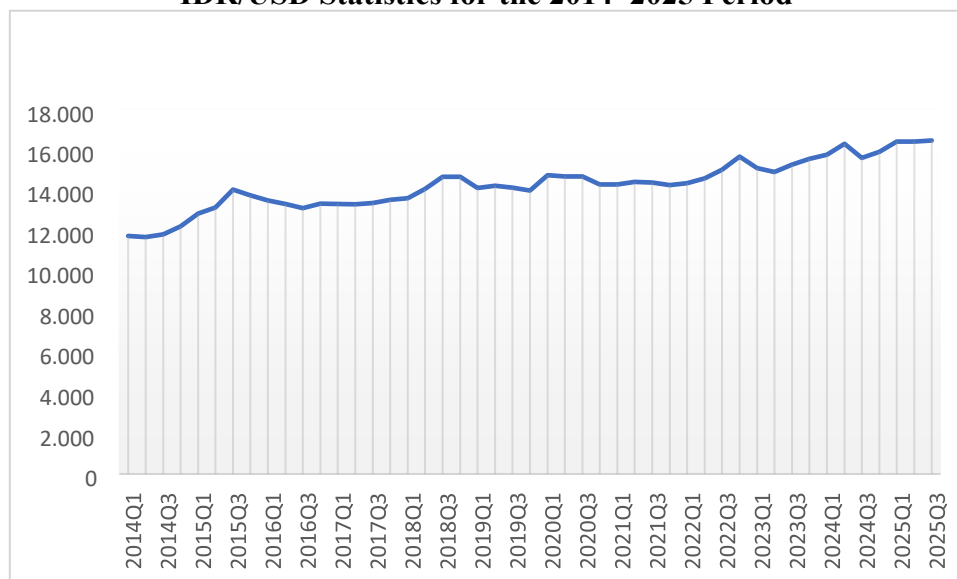
Indonesia is highly vulnerable to these spillover effects due to its openness to global trade and capital flows. During the 2016–2025 period, the Rupiah experienced significant fluctuations against the U.S. Dollar, particularly during periods of global monetary tightening. Historical evidence shows that the normalization of U.S. monetary policy and the termination of Quantitative Easing encouraged capital outflows from Indonesia, resulting in depreciation pressure on the Rupiah (Erida & Sucihatiningsih, 2023). In addition, global uncertainty following the post-pandemic recovery period further increased volatility in international financial markets, making exchange rate stability a major challenge for policymakers.

Theoretically, spillover effects occur through the transmission of financial market shocks, particularly via portfolio investment flows and investor risk perception in integrated global markets (Neluka, 2021). Wang et al. (2024) explain that monetary tightening in advanced economies tends to strengthen the U.S. Dollar and encourage capital outflows from emerging markets, thereby weakening local currencies. In Indonesia, this transmission mechanism is reflected in the persistent depreciation pressure on the Rupiah whenever global financial uncertainty increases.

Besides external shocks, domestic fiscal policy also plays an important role in influencing exchange rate stability. Fiscal policy affects investor confidence, fiscal sustainability, and domestic economic resilience against external pressures. Well-managed fiscal policy may function as an automatic stabilizer by maintaining economic stability and reducing market uncertainty during periods of exchange rate depreciation (Ariadne & Sri, 2023). Conversely, weak fiscal credibility and uncontrolled budget deficits may increase country risk premiums and intensify capital outflows, leading to further depreciation of the domestic currency.

Figure 1 illustrates the movement of the Rupiah exchange rate against the U.S. Dollar during the 2016–2025 period. The figure shows that the Rupiah tended to depreciate during periods of global monetary tightening, indicating the strong influence of external spillover effects on Indonesia's exchange rate dynamics.

Figure 1.
IDR/USD Statistics for the 2014–2025 Period



Source: Bank Indonesia (processed data, 2025)

The analysis of Figure 1 indicates that Rupiah volatility during the 2016–2025 period was highly influenced by external dynamics. Wang et al. (2024) emphasize that the spillover effect of global monetary policies creates uncertainty in international financial markets, triggering capital outflows from Indonesia. In response to these conditions, the role of fiscal policy becomes highly important as an economic buffer. However, the challenge of balancing growth stimulus and exchange rate stability remains a crucial issue that requires further examination.

The data presented in the graph show that whenever monetary tightening occurs in the United States, such as increases in the Federal Reserve's interest rates, the Rupiah tends to experience depreciation pressure. This represents a clear example of a spillover effect, where the policies of one country influence the financial stability of another through capital market transmission channels (Wang et al., 2024). In responding to such depreciation, fiscal policy functions as a stabilizing instrument (automatic stabilizer). For example, the government may provide energy subsidies to control inflation when import prices rise due to exchange rate depreciation, or manage budget deficits to maintain investor confidence (Bank Indonesia, 2023).

Although many studies have examined the impact of global variables on the Rupiah exchange rate, significant gaps remain in the existing literature. First, previous studies often focus solely on external monetary factors without deeply integrating the role of domestic fiscal policy as a controlling variable in mitigating these spillover effects. Second, limited research has incorporated recent data through 2025, which includes the post-pandemic global interest rate normalization period. There remains a gap in understanding the effectiveness of Indonesia's fiscal interventions in addressing increasingly complex and interconnected external shocks in recent years.

Based on these issues, this study aims to empirically analyze the impact of global market spillover effects and examine the extent to which Indonesia's fiscal policy influences

Rupiah exchange rate movements during the 2016–2025 period. The findings are expected to provide policy insights for the government in synchronizing fiscal strategies with global market dynamics to maintain Rupiah exchange rate stability against persistent external pressures.

REVIEW OF LITERATURE

Previous studies generally indicate that exchange rate movements in developing countries are influenced by both external spillover effects and domestic macroeconomic conditions. Most studies emphasize that global monetary policy, particularly from the United States, plays an important role in creating exchange rate volatility in emerging economies, including Indonesia.

Several studies consistently found that the Federal Funds Rate (FFR) significantly contributes to Rupiah depreciation. Nugroho et al. (2017) found that the Federal Funds Rate significantly affected the Rupiah exchange rate in both the short and long run ($p < 0.05$). Similar findings were reported by Saba and Aliyu (2024), who showed that U.S. monetary policy spillovers significantly contributed to currency depreciation in developing countries ($p < 0.01$). Sari et al. (2021) and Lestari and Mahendra (2023) also concluded that global interest rates significantly weakened the Rupiah through capital outflow mechanisms and tighter global liquidity conditions. In line with these findings, Erida and Sucihatningsih (2023) found that the termination of *Quantitative Easing* in the United States significantly pressured the Rupiah exchange rate ($p < 0.01$), confirming Indonesia's vulnerability to external monetary shocks. These findings support the spillover transmission theory proposed by Neluka (2021) and Gomez et al. (2022), which explains that financial integration enables shocks in advanced economies to spread rapidly to emerging markets through portfolio investment channels and financial market volatility.

In addition to global interest rates, several studies highlighted the importance of global uncertainty and market volatility in influencing exchange rates. Ying et al. (2024) found that *Economic Policy Uncertainty* significantly increased currency depreciation pressures in developing countries ($p < 0.01$) due to capital flight and rising investor risk aversion. Neluka (2021) also demonstrated that global stock market volatility significantly affected Asian exchange rates ($p < 0.01$) through financial market transmission mechanisms. These findings indicate that exchange rate movements are strongly connected to changes in global investor sentiment and international financial market conditions.

The relationship between global oil prices and exchange rate movements, however, shows inconsistent findings. Nugroho et al. (2017) found that oil prices were not significant in the short run ($p > 0.1$) but became significant in the long run ($p < 0.01$). Similar findings were reported by Sari et al. (2021) and Indra et al. (2019), who concluded that rising oil prices significantly weakened the Rupiah due to higher import costs and current account pressures. In contrast, Saba and Aliyu (2024) argued that oil price stability may strengthen exchange rates in the long run. These differences suggest that the impact of oil prices depends on the economic structure and transmission mechanisms within each country.

From the domestic perspective, fiscal policy also plays an important role in determining exchange rate stability. Wibowo and Pratama (2019), Prabowo (2021), and Rahmawati (2020) found that government expenditure and fiscal deficits significantly contributed to Rupiah depreciation, particularly when fiscal expansion was not supported by

adequate revenue capacity. Conversely, Rosnawintang (2022) and Mulyadi (2018) emphasized that disciplined fiscal management and deficit control significantly improved investor confidence and supported exchange rate stability in the long run ($p < 0.05$). These findings support the argument of Ariadne and Sri (2023), who stated that credible fiscal policy functions as an *automatic stabilizer* in mitigating external shocks.

Several other studies also emphasized the importance of domestic macroeconomic variables in influencing exchange rate dynamics. Sindi Kurnia (2022) found that inflation, money supply, and domestic interest rates significantly affected Rupiah depreciation ($p < 0.05$), while Damayanti Yulita Putri (2018) showed that exchange rate movements were significantly related to domestic liquidity conditions ($p < 0.01$). These findings indicate that exchange rate depreciation is influenced not only by external spillovers but also by domestic macroeconomic stability.

Overall, previous studies demonstrate that exchange rate depreciation in emerging economies results from the interaction between external spillover effects and domestic policy conditions. However, most prior studies tend to examine external factors and fiscal policy separately, with limited research integrating both aspects within a single analytical framework. In addition, only a few studies have incorporated recent data covering the post-pandemic global monetary normalization period up to 2025. Therefore, this study seeks to fill the gap by simultaneously analyzing the impact of global market spillover effects and fiscal policy on Rupiah depreciation in Indonesia during the 2016–2025 period using the Domowitz-Elbadawi *Error Correction Model* (ECM).

RESEARCH METHOD

The analytical tool employed in this study is the Domowitz-Elbadawi *Error Correction Model* (ECM), which is used to capture both short-run and long-run dynamics in Rupiah exchange rate movements. The selection of the Domowitz-Elbadawi ECM is based on its ability to analyze short-term adjustments toward long-run equilibrium simultaneously within a time-series framework. Compared to alternative approaches such as the Engle-Granger ECM, the Domowitz-Elbadawi ECM is considered more suitable because it explicitly incorporates the disequilibrium adjustment mechanism through the *Error Correction Term* (ECT), allowing the model to explain how short-run deviations are corrected over time toward long-run equilibrium. In addition, unlike the Johansen cointegration approach, which is generally more appropriate for multivariate systems with large samples, this study uses a relatively limited time-series dataset, making the Domowitz-Elbadawi ECM more efficient and relevant for the research context. The ECM approach is also preferred over the *Autoregressive Distributed Lag* (ARDL) model because this study focuses specifically on the speed of adjustment from short-run disequilibrium toward long-run exchange rate equilibrium.

Before estimating the ECM model, pre-estimation tests were conducted to ensure the validity of the model. Stationarity testing was performed using the *Augmented Dickey-Fuller* (ADF) unit root test to determine the order of integration of each variable. Furthermore, cointegration testing was conducted to verify the existence of a long-run equilibrium relationship among the variables. The ECM estimation can only be applied when the variables are integrated at the same order and exhibit cointegration relationships. The

existence of cointegration indicates that although variables may fluctuate in the short run, they move together toward equilibrium in the long run:

1. Long-run Model

$$EXR_t = \beta_0 + \beta_1 FFR_t + \beta_2 OIL_t + \beta_3 TAX_t + \beta_4 GOVEXP_t + \varepsilon_t$$

2. Standard ECM Function (General Form)

$$\Delta Y_t = \alpha_0 + \sum \alpha_i \Delta X_{it} + \lambda ECT_{t-1} + \varepsilon_t$$

3. Short-run Model

$$\Delta EXR_t = \alpha_0 + \alpha_1 \Delta FFR_t + \alpha_2 \Delta OIL_t + \alpha_3 \Delta TAX_t + \alpha_4 \Delta GOVEXP_t + \lambda ECT_{t-1} + \varepsilon_t$$

Where:

EXR = Rupiah Exchange Rate

FFR = Federal Funds Rate / Global Market

OIL = Global Oil Prices

TAX = Government Tax Revenue

GOVEXP = Government Expenditure

ECT = Error correction term, $ut-1$

$ECT = \sum X_{t-1} - Y_{t-1}$

$ECT = FFR_{t-1} + OIL_{t-1} + TAX_{t-1} + GOVEXP_{t-1} - EXR_{t-1}$

The econometric model above represents a synthesis that simultaneously integrates external and domestic factors. This study adopts the spillover framework proposed by Saba and Aliyu (2024) to capture the transmission of global market shocks through the variables Federal Funds Rate (FFR) and global oil prices (OIL), which serve as proxies for global market disturbances. These variables were selected based on the argument that emerging market economies such as Indonesia are highly vulnerable to fluctuations in U.S. dollar liquidity and volatility in global energy commodity prices.

The model is further modified by incorporating government tax revenue (TAX) and government expenditure (GOVEXP), referring to the approach developed by Rosnawintang (2022), to represent the role of domestic fiscal policy. The integration of these fiscal variables aims to address an analytical gap often overlooked in pure spillover studies, namely the role of budgetary policy as a buffer against external pressures. By combining these two theoretical perspectives, the model is able to simultaneously analyze how global shocks interact with domestic fiscal responses in influencing Rupiah depreciation.

Based on theoretical considerations, this study proposes the hypothesis that Rupiah exchange rate dynamics are significantly influenced by the interaction between global shocks and domestic fiscal instruments. Increases in U.S. interest rates (FFR) and global oil prices (OIL) are expected to positively affect the exchange rate level, indicating Rupiah depreciation. This is driven by capital outflow mechanisms resulting from higher FFR and worsening current account deficits caused by rising oil prices. On the other hand, fiscal policy is expected to play a significant role in mitigating these pressures, where increased tax revenue (TAX) is projected to encourage Rupiah appreciation by reducing the country risk premium. Meanwhile, government expenditure (GOVEXP) is expected to have varying effects in the short and long run, but overall serves as a stabilization instrument to restrain Rupiah depreciation against the U.S. Dollar.

This study uses monthly time-series data from January 2016 to December 2025 obtained from Bank Indonesia, Federal Reserve Economic Data (FRED), and reports from the Ministry of Finance of the Republic of Indonesia. The variables used include the Rupiah

Exchange Rate (EXR), Federal Funds Rate (FFR), Global Oil Prices (OIL), Government Tax Revenue (TAX), and Government Expenditure (GOVEXP).

The econometric estimation process using the Domowitz-Elbadawi ECM includes classical assumption tests consisting of normality, multicollinearity, heteroscedasticity, and autocorrelation tests to ensure that the model satisfies the *Best Linear Unbiased Estimator* (BLUE) assumptions.

RESULTS AND DISCUSSION

To examine the short-run dynamics between the *Federal Funds Rate* (FFR), global oil prices (OIL), tax revenue (TAX), government expenditure (GOVEXP), and the Rupiah exchange rate (EXR), this study applies the *Error Correction Model* (ECM) approach. The estimation results of the ECM model are presented in Table 1.

Table 1.
Short-Run ECM Estimation Results

$\Delta(\text{LOGEXR})_t = 1,6647 - 0,0068\Delta(\text{FFR})_t + 0,0097\Delta(\text{LOGOIL})_t - 0,0039\Delta(\text{LOGTAX})_t$			
	(0,5481)	(0,7200)	(0,3758)
+ 0,0073 $\Delta(\text{LOGGOVEXP})_t - 0,1935\text{FFR}_{t-1} - 0,1751\text{LOGOIL}_{t-1}$			
	(0,0579)***	(0,0779)***	(0,1156)
- 0,1910 $\text{LOGTAX}_{t-1} - 0,1950\text{LOGGOVEXP}_{t-1} + 0,1947\text{ECT}_t$			
	(0,0786)***	(0,0775)***	(0,0777)***
$R^2 = 0,3385$; DW-Stat = 2,0081; F-Stat = 1,5350 ; Prob(F-Stat) = 0,1861			

Diagnostic Tests :

(1) Multicollinearity (VIF)

$\Delta(\text{FFR}) = 2,2816$; $\Delta(\text{LOGOIL}) = 1,4890$; $\Delta(\text{LOGTAX}) = 2,4723$; $\Delta(\text{LOGGOVEXP}) = 2,1670$; $\text{FFR}(-1) = 3359,845$; $\text{LOGOIL}(-1) = 86,7858$; $\text{LOGTAX}(-1) = 6358,559$; $\text{LOGGOVEXP}(-1) = 4784,680$; $\text{ECT} = 37447,76$

(2) Residual Normality (Jarque-Bera)

JB = 0,2439; Prob. JB = 0,8852

(3) Autocorrelation (Breusch-Godfrey)

$\chi^2(3) = 5,3521$; Prob. $\chi^2(3) = 0,1478$

(4) Heteroscedasticity (White Test)

$\chi^2(9) = 12,6690$; Prob. $\chi^2(9) = 0,1782$

(5) Model Linearity (Ramsey RESET)

$F(1,26) = 0,6234$; Prob. $F(1,26) = 0,4369$

Source: BPS, estimated.

Notes: *Significant at $\alpha = 0.01$; **Significant at $\alpha = 0.05$; ***Significant at $\alpha = 0.10$

Long Run Equation

$$\text{LOG}(\text{EXR})_t = 1,6647 - 0,1935\text{FFR} - 0,1751\text{LOGOIL} - 0,1910\text{LOGTAX} - 0,1950\text{LOGGOVEXP}$$

Based on the diagnostic tests presented in Table 1, the empirical probability values for residual normality, autocorrelation, heteroscedasticity, and model linearity tests are 0.8852 (>0.05), 0.1478 (>0.05), 0.1782 (>0.05), and 0.4369 (>0.05), respectively. These

results indicate that the estimated model has normally distributed residuals, is free from autocorrelation and heteroscedasticity issues, and has the correct linear specification. All VIF values for differenced variables are below 10; however, relatively high VIF values appear in lagged variables and the *Error Correction Term* (ECT). This condition is common in ECM models and does not necessarily indicate serious multicollinearity problems.

The *goodness-of-fit* statistics show that the model has a probability value of the F-statistic of 0.1861 (>0.05), indicating that the independent variables are not jointly significant at the 5 percent significance level. The coefficient of determination (R^2) is 0.3385, meaning that the *Federal Funds Rate* (FFR), global oil prices (OIL), tax revenue (TAX), and government expenditure (GOVEXP) explain 33.85 percent of the variation in the Rupiah exchange rate (EXR), while the remaining 66.15 percent is explained by other variables outside the model.

In the short run, the *Federal Funds Rate* (FFR) does not have a significant effect on the Rupiah exchange rate (EXR), with a probability value of 0.5481 (>0.05). The coefficient of -0.0068 indicates that a 1 percent increase in FFR would reduce the Rupiah exchange rate by 0.0068 percent, assuming other variables remain constant. In the long run, FFR has a coefficient of -0.1935, meaning that a 1 percent increase in FFR would reduce the Rupiah exchange rate by 0.1935 percent, although the effect is only significant at the 10 percent level.

Global oil prices (OIL) also do not significantly affect the Rupiah exchange rate in the short run, with a probability value of 0.7200 (>0.05). The coefficient of 0.0097 indicates that a 1 percent increase in global oil prices would increase the Rupiah exchange rate by 0.0097 percent. In the long run, OIL has a coefficient of -0.1751, implying that a 1 percent increase in global oil prices would reduce the exchange rate by 0.1751 percent.

Tax revenue (TAX) does not significantly affect the Rupiah exchange rate in the short run, with a probability value of 0.3758 (>0.05). The coefficient of -0.0039 indicates that a 1 percent increase in tax revenue would reduce the Rupiah exchange rate by 0.0039 percent. In the long run, TAX has a coefficient of -0.1910, meaning that a 1 percent increase in tax revenue would reduce the Rupiah exchange rate by 0.1910 percent, with significance approaching the 10 percent level.

Government expenditure (GOVEXP) has a positive and marginally significant effect on the exchange rate in the short run, with a probability value of 0.0579 (<0.10). The coefficient of 0.0073 indicates that a 1 percent increase in government expenditure would increase the Rupiah exchange rate by 0.0073 percent. In the long run, GOVEXP has a coefficient of -0.1950, meaning that a 1 percent increase in government expenditure would reduce the Rupiah exchange rate by 0.1950 percent, with significance approaching the 10 percent level.

The *Error Correction Term* (ECT) coefficient of 0.1947 indicates that if short-run disequilibrium occurs, approximately 19.47 percent of the imbalance will be adjusted back toward long-run equilibrium within one period, although its significance is only observed at the 10 percent level.

Discussion

The results of this study indicate that the dynamics of the Rupiah exchange rate during the 2016–2025 period were influenced by both external spillover effects and domestic fiscal conditions. However, the effects of these variables appear to be stronger in the long run than

in the short run, indicating that exchange rate adjustments in Indonesia tend to occur gradually rather than instantaneously. This finding reflects the characteristics of emerging market economies, where exchange rate movements are highly sensitive to global expectations, investor sentiment, and domestic policy credibility.

In the short run, the Federal Funds Rate (FFR) does not significantly affect the Rupiah exchange rate. Economically, this suggests that short-term fluctuations in U.S. interest rates are not immediately transmitted into Indonesia's exchange rate market. One possible explanation is that Bank Indonesia's monetary intervention and foreign exchange reserve management were relatively effective in reducing temporary external pressures during the observation period. In addition, domestic investors and financial markets may require time to fully adjust their expectations toward changes in global monetary policy. Nevertheless, in the long run, the negative coefficient of FFR indicates that tighter U.S. monetary policy contributes to sustained depreciation pressure on the Rupiah. This finding is economically reasonable because higher U.S. interest rates tend to attract global capital back to U.S. financial assets, reducing capital inflows to emerging markets such as Indonesia. As a result, demand for the U.S. Dollar increases, weakening the Rupiah over time. This condition became particularly relevant during the post-pandemic monetary tightening period, when many developing countries experienced exchange rate pressures due to global capital reallocation.

Global oil prices (OIL) do not show a significant effect on the Rupiah exchange rate in either the short run or the long run. From an economic perspective, this finding indicates that fluctuations in international oil prices were not the primary determinant of Rupiah movements during the study period. This result may be explained by the Indonesian government's energy subsidy policies and fuel price controls, which partially insulated the domestic economy from global oil price volatility. Although theoretically rising oil prices may worsen the current account balance of oil-importing countries and weaken the exchange rate, the relatively small estimated coefficient suggests that the direct transmission mechanism from oil prices to the Rupiah was limited. This also indicates that exchange rate dynamics in Indonesia were more strongly influenced by financial market factors than commodity price shocks during the observed period.

Tax revenue (TAX) also does not significantly affect the Rupiah exchange rate in the short run. Economically, this suggests that changes in government revenue collection do not immediately influence market perceptions or exchange rate movements because fiscal revenues generally affect macroeconomic stability gradually. However, in the long run, the negative relationship between tax revenue and the exchange rate implies that stronger fiscal capacity may help support Rupiah stability. Higher tax revenue reflects better fiscal sustainability and stronger government credibility, which can improve investor confidence and reduce the country risk premium. Although the estimated magnitude is relatively moderate, the result remains economically meaningful because stable fiscal revenues reduce dependence on external financing and strengthen the government's ability to respond to external shocks.

Government expenditure (GOVEXP) shows a positive effect on the exchange rate in the short run, indicating that increases in public spending may initially create depreciation pressure on the Rupiah. Economically, this is plausible because expansionary fiscal policy can increase domestic demand, imports, and government financing needs, thereby increasing

pressure on foreign exchange demand. However, the effect is only marginally significant, suggesting that the short-run impact of government expenditure on exchange rate volatility remains limited. In contrast, the long-run coefficient becomes negative, implying that government spending may contribute to economic stabilization over time. Productive public expenditure, particularly in infrastructure, social protection, and economic recovery programs, can strengthen domestic economic fundamentals and improve investor confidence. Therefore, the long-run effect of government expenditure reflects its role not merely as consumption spending but also as a stabilization instrument that supports macroeconomic resilience amid external pressures.

The Error Correction Term (ECT) coefficient indicates that approximately 19.47 percent of short-run disequilibrium is corrected toward long-run equilibrium within one period. Economically, this adjustment speed can be considered relatively slow, implying that the Rupiah exchange rate requires time to fully absorb shocks originating from global financial markets and domestic policy changes. This condition reflects the nature of Indonesia's exchange rate system, where market adjustment processes depend not only on economic fundamentals but also on investor expectations, speculative activities, and policy responses from monetary and fiscal authorities.

Overall, the findings of this study demonstrate that external monetary factors, particularly the Federal Funds Rate, exert stronger long-run effects on Rupiah depreciation than domestic variables. This reinforces the argument that Indonesia remains vulnerable to global financial spillover effects due to its integration with international capital markets. However, domestic fiscal policy still plays an important role in mitigating external pressures by maintaining fiscal credibility and supporting macroeconomic stability. Therefore, effective coordination between monetary and fiscal policy becomes essential to strengthen exchange rate resilience amid increasing global economic uncertainty.

CONCLUSION

Based on the analysis using the Domowitz-Elbadawi *Error Correction Model* (ECM), the results indicate that the estimated model generally satisfies the diagnostic tests for normality, autocorrelation, heteroscedasticity, and model specification, although the overall explanatory power of the model remains relatively limited as reflected by the low coefficient of determination and the insignificant F-statistic at the 5 percent significance level. The estimation results show that in the short run, the Federal Funds Rate (FFR), global oil prices (OIL), and tax revenue (TAX) do not significantly affect the Rupiah exchange rate (EXR), while government expenditure (GOVEXP) shows a positive effect with relatively weak significance. In the long run, FFR, TAX, and GOVEXP exhibit negative relationships with the Rupiah exchange rate, whereas OIL remains insignificant. The Error Correction Term (ECT) coefficient indicates the existence of a gradual adjustment process toward long-run equilibrium. Economically, these findings suggest that Rupiah exchange rate dynamics during the 2016–2025 period were more strongly influenced by external financial factors, particularly global monetary spillover effects originating from changes in U.S. interest rates that tend to encourage capital outflows and create depreciation pressure on the Rupiah. Meanwhile, domestic fiscal policy represented by tax revenue and government expenditure appears to contribute indirectly to exchange rate stability by strengthening fiscal credibility

and supporting macroeconomic resilience. Therefore, the government is expected to strengthen coordination between fiscal and monetary policies, maintain fiscal sustainability, optimize tax performance, and improve the effectiveness of productive government expenditure in order to reduce the negative impact of global spillover effects on the Rupiah exchange rate, while future studies are recommended to include broader indicators of global financial conditions to improve the robustness of exchange rate models in Indonesia.

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