Signifikan: Jurnal Ilmu Ekonomi
Volume 13(2), 2024: 383 - 398
P-ISSN: 2087-2046; E-ISSN: 2476-9223
https://doi.org/10.15408/sjie.v13i2.42464

Unpacking the Forces Behind Indonesia's Foreign Debt: What Drives Long-Term and Short-Term Borrowing?

Faisal Fadli[1*], Vietha Devia Sagita S[2], Yulis Oktaviana[3]
[1,2,3]Universitas Brawijaya, Malang, Indonesia
E-mail: [1]faishalfadli@ub.ac.id, [2]vietha.devia@ub.ac.id, [3]yulis_okt30@student.ub.ac.id
[*]**Corresponding author**

JEL Classification:
F34
E44
E31
F41
H63
C32

Received: 19 November 2024

Revised: 09 December 2024

Accepted: 11 December 2024

Available online: December 2024

ABSTRACT

Research Originality: This research explores the factors influencing Indonesia's foreign debt, providing insights into the long-term and short-term effects of inflation, exchange rates, the Fed Funds Rate (FFR), budget deficit, and exports. The originality lies in the comprehensive analysis of these variables using time series data from 2005 to 2022.

Research Objectives: This study examines the impact of key macroeconomic variables on Indonesia's foreign debt, analyzing both long-term and short-term relationships to inform policy and future research.

Research Methods: The study uses time series data from 2005 to 2022, applying the Error Correction Model (ECM) with EViews10 to analyze the dynamic relationships between foreign debt and the influencing factors.

Empirical Results: The study finds that in the long term, exchange rates and exports positively influence foreign debt, while inflation has a negative impact. In the short term, only the Fed Funds Rate (FFR) negatively affects foreign debt. All variables are significantly influential in both the short and long term.

Implications: These findings highlight the importance of managing inflation, exchange rates, and exports in the long term while considering the short-term impact of global financial conditions, such as the FFR, on Indonesia's foreign debt.

Keywords:

external debt; inflation; exchange rate; the fed funds rate; budget deficit

How to Cite:

Fadli, F. (2024). Unpacking the Forces Behind Indonesia's Foreign Debt: What Drives Long-Term and Short-Term Borrowing? *Signifikan: Jurnal Ilmu Ekonomi*, *13*(2), 383-398. https://doi.org/10.15408/sjie.v13i2.42464.

INTRODUCTION

Foreign debt plays a critical role in developing emerging economies, including Indonesia. It is a key financial instrument for infrastructure development, industrial growth, and poverty alleviation. Foreign debt sources include private banks and international institutions like the IMF and the World Bank (Dey & Tareque, 2020). However, the increasing reliance on foreign debt poses significant risks, including fiscal and financial instability, if not managed carefully (Manasseh et al., 2022; Yusuf & Mohd, 2021).

As of 2022, Indonesia ranks seventh globally in foreign debt among middle-income countries, amounting to USD 417.53 billion. By August 2023, this figure reached IDR 7,870.35 trillion, reflecting a consistent upward trend, except for declines in 2021–2022 due to the COVID-19 pandemic (Bank Indonesia, 2023). This condition underscores the urgency of analyzing the factors influencing foreign debt to inform better management and policy formulation. Key economic factors, including inflation, exchange rates, international interest rates, budget deficits, and export performance, significantly influence the dynamics of foreign debt. For example, as Keynesian and Irving Fisher's theories explain, inflation affects debt-servicing costs, real debt value, and exchange rate fluctuations (Sumba, 2023). The exchange rate reflects the currency's comparative value and influences debt repayment capacity, with significant fluctuations observed in Indonesia from 2005 to 2022 (Nizamuddin et al., 2024). Similarly, international interest rates, such as the Fed Funds Rate (FFR), impact borrowing costs and repayment risks, particularly during global financial crises (Alekseievska et al., 2024).

The budget deficit also contributes to rising foreign debt. According to Keynesian and Ricardian theories, deficits arise when government expenditures exceed revenues, often necessitating external borrowing to bridge fiscal gaps (Sanusi, 2022). On the other hand, export performance is pivotal in reducing debt burdens by generating foreign exchange reserves critical for repayments (Kim et al., 2020). Economic theories and empirical evidence suggest that inflation, exchange rates, international interest rates, budget deficits, and export performance significantly influence foreign debt dynamics. The relationship between inflation and foreign debt aligns with Paul Samuelson's Imported Inflation Theory (1971), which posits that inflation, exacerbated by exchange rate fluctuations, increases the government's debt repayment burden (Espinosa, 2023). While inflation reduces the actual value of debt, it also raises interest payment costs and complicates monetary policy. Moreover, inflation has a significant negative long-term effect on foreign debt, indicating that while inflation influences debt, it cannot mitigate its growing burden (Sharaf & Shahen, 2023).

Exchange rates and foreign debt are linked through the Purchasing Power Parity (PPP) theory, which reflects the comparative price of goods between countries (Adistya et al., 2024). High exchange rates often make debt repayment more challenging because exchange rate volatility affects macroeconomic conditions and foreign debt (Ahmed et al., 2021). A depreciating rupiah, for instance, directly increases Indonesia's debt obligations denominated in foreign currencies. International interest rates, such as the Fed Funds

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

Rate (FFR), are critical determinants of foreign debt. According to Keynesian theory, interest rates significantly impact investment and borrowing decisions (Akram, 2022). High FFR rates increase global borrowing costs, indirectly raising debt levels for developing economies (Farooq et al., 2021). For Indonesia, fluctuations in the FFR directly affect borrowing terms and repayment schedules, emphasizing the need for cautious monetary policy alignment.

As Keynesian theory explains, budget deficits drive foreign debt accumulation (Kentikelenis & Stubbs, 2022). When government expenditures exceed revenues, external loans often bridge fiscal gaps (al-Rubaie & Ahmed, 2023). There is a positive relationship between budget deficits and foreign debt, reinforcing that deficits necessitate increased borrowing, potentially escalating financial risks (Liu et al., 2022). Conversely, exports mitigate foreign debt burdens, supported by the Balance of Payments Theory (Sabado, 2023). A negative correlation exists between export performance and foreign debt, as higher exports generate foreign exchange reserves to service debt obligations (Oberholzer, 2023). Enhancing export competitiveness is thus crucial for reducing dependency on foreign loans.

This study analyzes long-term and short-term influences of inflation, exchange rates, FFR, budget deficits, and exports on Indonesia's foreign debt during 2005–2022 to build upon this theoretical framework. Previous research provides critical insights into these relationships. For instance, several studies identified significant effects of exchange rates and exports on foreign debt (Kim et al., 2020; Nurjanah & Mustika, 2021a; Djalo et al., 2023), while some studies emphasized the impact of U.S. monetary policy on global debt (Abraham et al., 2020; Gupta & Dubey, 2024; Kose et al., 2021). However, these studies often lack comprehensive analysis, integrating all key variables over extended periods.

Given these multifaceted influences, understanding Indonesia's foreign debt's short- and long-term determinants is crucial. This study applies the Error Correction Model (ECM) to analyze the effects of inflation, exchange rates, FFR, budget deficits, and exports on foreign debt during 2005–2022. The ECM framework allows for assessing equilibrium relationships over time, addressing gaps in previous research by providing a nuanced understanding of both immediate and delayed impacts (Georgescu et al., 2024).

The findings of this study contribute to theoretical advancements and practical policy insights. By identifying dominant factors and their relative impacts, the research seeks to assist policymakers in designing strategies to ensure sustainable debt management and economic stability. Thus, this study is a vital resource for academics, practitioners, and government agencies in addressing Indonesia's growing foreign debt challenges.

METHOD

This study uses a descriptive-quantitative approach to analyze the factors influencing Indonesia's foreign debt from 2005 to 2022. The data utilized in this study are secondary and sourced from reputable institutions such as the Central Statistics Agency, Bank Indonesia, the World Bank, and the Ministry of Finance of the Republic of Indonesia.

The dataset consists of annual time-series data, as annual observations provide sufficient intervals to capture long-term trends and minimize the noise associated with higher-frequency data, such as quarterly or monthly observations. This frequency is particularly suitable given the focus on macroeconomic indicators like inflation, exchange rates, and the budget deficit, which often exhibit smoother trends over yearly periods.

The analysis employs the Error Correction Model (ECM) technique, widely recognized for examining short-term dynamics and long-term equilibrium relationships among non-stationary variables (QASEEM, 2024; Silvia et al., 2023). The ECM was selected for several reasons. First, it deals with Non-Stationary Data. Time-series data often exhibit trends and variability that render them non-stationary. The ECM is particularly useful in addressing this challenge, combining short-term changes with long-term equilibrium through cointegration analysis.

Second. Focus on Long- and Short-Term Dynamics: This study aims to distinguish between short-term deviations and long-term relationships between variables such as inflation, exchange rates, and foreign debt. The ECM technique uniquely identifies these dual effects, offering a more comprehensive understanding of the data. Third, suitability for Annual Data: Annual data often results in fewer observations, which limits the application of more granular econometric methods. The ECM, however, works effectively with limited datasets, provided there is a clear long-term equilibrium relationship among variables.

The general form of the ECM equation is as follows:

Long-Term Equation:

$$ULN_t = \beta_0 + \beta_1 INF_t + \beta_2 NT_t + \beta_3 FFR_t + \beta_4 DA_t + \beta_5 EXPORT_t + \varepsilon_t$$

Short-Term Equation:

$$D(ULN_t) = \beta_0 + \beta_1 D(INF_t) + \beta_2 D(NT_t) + \beta_3 D(FFR_t) + \beta_4 D(DA_t) + \beta_5 D(EXPORT_t) + \beta_6 ECT(-1) + \varepsilon_t$$

$$ECT = Y_{t-1} - \beta_0 - \beta_1 X_{t-1}$$

Where:

ULN = Foreign Debt (Million US$)
INF = Inflation (Percent)
NT = Exchange Rate (Rupiah against US$)
FFR = *Fed Funds Rate*
DA = Budget Deficit (Trillion Rupiah)
EXPORTS = Exports (Million US$)
ECT = Short-term residual value (*Error Correction Model*)

By employing the ECM with annual data, this study provides robust insights into how macroeconomic variables influence Indonesia's foreign debt over both the short and long term. This approach also accounts for the inherent time-lagged effects of macroeconomic policies, ensuring a more accurate interpretation of the results.

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

RESULTS & DISCUSSION

The first stage in the ECM model analysis is the stationarity test of the data used in this study. The data used is *time series data* for 2005-2022. The results of the stationarity test using the ADF (*Augmented Dickey-Fuller*) method can be seen in Table 1. A stationarity test needs to be done on time series data because if there is non-stationary data, there will be a spurious regression phenomenon (spurious regression). Based on the test results with the ADF method above, it can be seen that several variables used are not stationary at the level and first difference degrees, so they are retested at the second difference degree. Therefore, the results of the stationarity test of all variables at the second difference degree are used in this study by looking at the probability value of the ADF Test, where each variable has a probability value of less than 0.05, which means that all variables are stationary at the second difference.

Table 1. Stationarity Test Results with the ADF Method

Variables	URT Test	ADF Test	Prob. (5%)	Stationary
Foreign Debt (ULN)	Level	-2.053933	0.2634	No
	1st Difference	-1.432644	0.5402	No
	2nd Difference	-4.202594	0.0064	Yes
Inflation	Level	-2.171413	0.2223	No
	1st Difference	-6.492968	0.0001	Yes
	2nd Difference	-10.16984	0.0000	Yes
Exchange rate	Level	-0.128840	0.9311	No
	1st Difference	-3.101868	0.0468	Yes
	2nd Difference	-4.536849	0.0035	Yes
FFR	Level	-4.007612	0.0085	Yes
	1st Difference	-2.925658	0.0643	No
	2nd Difference	-6.276671	0.0002	Yes
Budget Deficit	Level	1.664718	0.9988	No
	1st Difference	-4.995570	0.0015	Yes
	2nd Difference	-5.960767	0.0003	Yes
Export	Level	-0.249599	0.9141	No
	1st Difference	-2.456146	0.1435	No
	2nd Difference	-4.533741	0.0039	Yes

The results obtained are shown in Table 2. The ECT variable is obtained using the long-term regression equation's residual results. The cointegration results above show that the probability of *the Error Correction Term* (ECT) is 0.0051, so there is a long-term balance of the independent variable against the dependent variable in this study because the ECT probability value is less than 0.05. This step follows the requirements for conducting the *Error Correction Model* (ECM) method test.

Table 2 Cointegration Test Results

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistics		**-4.228139**	**0.0051**
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

The long-term equation of the ECM test estimation results is as follows:

$$ULN_t = -66.77820 - 474.9123 * INF_t + 23.43817 * NT_t - 139.5808 * FFR_t + 0.050179 * DA_t + 0.568791 * EXPORT_t + \varepsilon_t$$

Table 3 shows the results of the F-Statistic Test, T-Statistic Test, and Determination Coefficient Test (*R-Square*) from the long-term model equation above. The independent variables—Inflation, Exchange Rate, The Fed Funds Rate, Budget Deficit, and Exports—significantly affect Foreign Debt in Indonesia from 2005 to 2022. In the long term, Inflation, Exchange Rate, and Exports significantly influence Foreign Debt. However, The Fed Funds Rate and Budget Deficit do not have significant effects. The Determination Coefficient (R-Square) test shows that the independent variables explain 96% of the variation in Foreign Debt.

Table 3. Results of F-Test, t-Test, R2 Test Long-Term Estimates

Variables	Coeff.	t-Statistic	Prob.	Information
Inflation	-474.9123	-3.127134	0.0087	Significant
Exchange rate	23.43817	5.518943	0.0001	Significant
FFR	-139.5808	-0.339089	0.7404	Not Significant
Budget Deficit	0.050179	1.372666	0.1950	Not Significant
Export	0.568791	4.041274	0.0016	Significant
C	-66.77820	-1.397828	0.8634	
R-Square	0.968870			
Adj. R-Square	0.955899			
F-statistic	74.69652			
Prob. F-statistic	0.000000			

In the long term, the estimation results show that inflation changes negatively affect foreign debt. In addition to the budget deficit, the domestic inflation rate affects the volume of foreign debt loans (Abuka et al., 2019; Dal Borgo, 2021; Prah & Tenakwah, 2017). If domestic inflation increases, the borrowing country will reconsider the decision to provide loans to Indonesia, as Indonesia faces a significant risk (the recipient of the loan), which may result in the inability to repay the debt and interest on the loan. Therefore, when domestic inflation increases, the volume of foreign debt will be lower. Based on Keynesian theory, which states that inflation can reduce the actual value of debt when inflation increases, the value of the domestic currency (rupiah) will depreciate

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

(Arisa, 2020; Hidayat et al., 2019; Yusnaini, 2023). Therefore, in the long term, inflation will have a negative effect. High and uncontrolled inflation signals a weak domestic economy, which reduces the trust of countries willing to lend. This condition will also prompt borrowing countries to reconsider, calculate debt and interest, and choose to hold off on loans to focus on improving the poor economy.

Based on the results of the long-term estimation, the Exchange Rate has a positive direction towards foreign debt. This is because when the domestic currency strengthens (appreciates), it can reduce export competitiveness, result in a trade balance deficit, and impact the country's ability to pay its foreign debt. This result is in line with several studies that use the exchange rate variable as one of the independent variables that have an effect in the long term but no effect in the short term (Chowdhury et al., 2023; Morina et al., 2020; Saqib et al., 2021). Keynesian theory also states that when the exchange rate appreciates, domestic money strengthens, which builds confidence in the country making loans, ultimately increasing foreign debt (Wanyama et al., 2020).

The long-term estimation results show that Fed interest rate changes have an insignificant effect. This result is in line with several studies, which state that the foreign interest rate (the Fed Funds Rate) does not have a significant effect on Indonesia's foreign debt (Malini et al., 2022; Nurjanah & Mustika, 2021b; Pramudita & Ivander, 2022). This condition is because, besides Indonesia is highly dependent on and requiring loans as an instrument to cover domestic capital shortages, the Fed Funds Rate is relatively low compared to Indonesia's borrowing needs, with a value of US $32.573 billion. The country with the highest lending to Indonesia is Singapore, with a US $57.455 billion value. Thus, Indonesia considers the Singapore interest rate (SIBOR) more significantly when deciding on foreign debt.

Based on the theory of monetary policy, changes in interest rates can affect the flow of international funds or capital originating from foreign debt (Bräuning & Ivashina, 2020; Kumhof et al., 2020). Additionally, macro variables, such as the negative balance of public spending in international trade and interest rates, determine foreign debt demand in countries like Nigeria and Morocco (Benkhaira & El Hassani, 2023; Coulibaly et al., 2024). The estimation results, both in the long and short term, show that the Budget Deficit variable has an insignificant relationship to foreign debt in Indonesia. This result means that an increase or decrease in the budget deficit, in both the long and short term, does not affect foreign debt in Indonesia. Therefore, this result does not follow the hypothesis of this study, which suggests that the Budget Deficit has a positive and significant effect on Foreign Debt.

The long-term estimation results indicate a positive relationship between the budget deficit and foreign debt. This result suggests that when the budget deficit increases, foreign debt also increases, and vice versa when the deficit decreases, which follows Keynesian Theory (Amade & Oyigebe, 2024; Onwuka, 2022). However, the relationship is insignificant, meaning it has no statistically significant impact. This result could be because the positive correlation is not strong enough to influence foreign debt substantially in the long run.

The long-term results show that the export variable has a positive and significant relationship with foreign debt. This result is in line with the Export-Import Model Theory, as increasing exports in Indonesia is done to encourage economic growth (Hendrayanti et al., 2024). On the other hand, Indonesia still needs foreign debt to finance industry, development, and national growth (Juliansyah et al., 2022). Moreover, foreign debt helps meet export industries' financing and capital needs. In the long term, this research hypothesis is rejected, meaning the export variable positively affects foreign debt.

The short-term equation of the ECM test estimation results is as follows:

$$D(D(ULN_t)) = 0.249349 - 38.16920 *D(D(INF_t)) - 2.525842*D(D(NT_t)) - 102.7577*D(D(FFR_t)) + 0.017714*D(D(DA_t)) - 0.042682*D(D(EXPORT_t)) - 0.579911*ECT(-1)$$

The imbalance correction coefficient ECT is an imbalance error (*disequilibrium error*) (Ibrahim & Bashir, 2023). So, when ECT equals zero, X and Y are in equilibrium. This value explains how fast it takes to get the equilibrium value. The coefficient value of ECT is 0.579911, where the absolute value is less than one with a negative direction. The magnitude of the equilibrium value of -0.579911 is that the adjustment process to the imbalance of changes in Foreign Debt in 2005-2022 is relatively slow. This value also means that if there is a past imbalance of 100%, the change in Foreign Debt will adjust by decreasing by 57.99%. Thus, it can be interpreted that Foreign Debt takes 5-6 years to reach full equilibrium (100%).

Table 4. Results of F Test, T Test, R2 Test Short-Term Estimates

Variables	Coeff.	t-Statistic	Prob.	Information
D(D(Inflation))	-38.16920	-0.625201	0.5474	Not Significant
D(D(Exchange Rate))	-2.525842	-0.476295	0.6452	Not Significant
D(D(FFR))	-102.7577	-0.340281	0.0415	Significant
D(D(Budget Deficit))	0.017714	0.961939	0.3612	Not Significant
D(D(Export))	-0.042682	-0.287705	0.7801	Not Significant
ECT(-1)	-0.579911	-2.077944	0.0375	Significant
C	0.249349	0.079684	0.9382	
R-Square	0.385791			
Adj. R-Square	-0.023681			
F-statistic	0.942167			
Prob. F-statistic	0.010607			

Table 4 shows the results of the F-Statistic Test, t-Statistic Test, and Determination Coefficient Test (*R-Square*) from the short-term model equation above. Simultaneously, the independent variables—Inflation, Exchange Rate, The Fed Funds Rate, Budget Deficit, and Exports—significantly affect Foreign Debt in Indonesia from 2005 to 2022. However, in the short term, Inflation, Exchange Rate, Budget Deficit, and Exports do not significantly affect Foreign Debt. Only the Fed Funds Rate has a significant negative effect. The

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

Determination Coefficient (R-Square) test reveals that the independent variables explain 39% of the variation in Foreign Debt in the short term, with the remaining 61% explained by factors outside the study.

The short-term estimation results show that the inflation rate does not significantly affect foreign debt. This result means that an increase or decrease in inflation in the short term cannot affect foreign debt in Indonesia. If foreign debt is stated in foreign currency, changes in the exchange rate will have a more significant influence than the inflation factor on the amount of foreign debt. The trendline of the data graph for each variable shows that the exchange rate has an increasing trendline and tends to be linear with the trendline of foreign debt (positive relationship), compared to the trendline of the inflation data graph. This result shows that the exchange rate has a more significant influence than inflation on foreign debt. Domestic inflation may affect the exchange rate, but this is very complex and depends on global economic factors and the monetary policies of other countries. Therefore, while inflation may not significantly impact in the short term, persistent or extreme changes in the long term can affect external debt and require special attention in external debt management (Brandao-Marques et al., 2024).

On the other hand, in the short term, the Exchange Rate variable does not significantly affect foreign debt. This result means that every increase or decrease in the exchange rate has not been able to affect foreign debt. This result is in line with several studies, which state that the exchange rate is not significant in the short term but is significant in the long term, as it depends on the term of the foreign debt incurred by each country (Koijen & Yogo, 2021; Şen et al., 2020; Zahra et al., 2023). In general, foreign debt has a long-term maturity. Therefore, the exchange rate cannot affect foreign debt in the short term.

Meanwhile, based on the results of short-term estimates, the Fed Funds Rate variable has a significant negative effect. This result is in line with Monetary Policy Theory, as an increase in this interest rate will raise the cost of debt interest and increase the burden of debt payments in the future (Blanchard, 2023). Therefore, when interest rates are high, Indonesia will hold back from borrowing foreign debt. This result is in line with several studies, which state that an increase in the Fed Funds Rate significantly affects the amount of foreign debt and debt maturity (especially short-term debt) in both developed and developing countries (Aslam & Jaafar, 2020; Elkhishin & Mohieldin, 2021; Wray & Nersisyan, 2020).

Similarly, in the short term, the Budget Deficit variable shows a positive but insignificant relationship with foreign debt. This research further supports the idea that changes in the budget deficit, whether increasing or decreasing, do not significantly affect foreign debt in the short term. These findings are in line with several studies, which suggest that the budget deficit does not significantly affect foreign debt in Indonesia, as the budget deficit can be financed domestically without reliance on foreign loans (Handaria et al., 2022; Jokolelono et al., 2023; Nizamuddin et al., 2024). Domestic resources, such as high tax revenues, government bonds, and asset sales, can be used to cover the deficit.

While in the short term, the export variable has an insignificant relationship with foreign debt. This result means that an increase or decrease in exports still cannot affect foreign debt, even though there is a negative relationship. However, this impact is not statistically significant enough, possibly due to other variables or events during the research period that caused exports not to have a significant effect on Indonesia's foreign debt.

The results of this short-term estimation do not match the hypothesis, where the export variable has a negative effect. This result aligns with several studies, which concluded that the export variable has a negative and insignificant effect in the short term (Ahmad et al., 2021; Emako et al., 2022; Zaman et al., 2021). According to the Trade Balance Theory, high foreign debt is due to a high trade balance deficit (Truong & Van Vo, 2023). Low exports and high imports will increase the burden of foreign debt, reducing the ability to pay it off and eventually leading to a mounting debt burden (Rajković et al., 2020). Conversely, consistent and sustainable increases in exports in the long term can help reduce foreign debt and strengthen a country's trade balance. However, the impact may not always be significant in the short term due to other complex factors affecting foreign debt, such as exchange rates and commodity price variability (Blavasciunaite et al., 2020).

CONCLUSION

This study analyzes the factors that influence Indonesia's foreign debt during 2005-2022 using the Error Correction Model (ECM) method. In the long term, inflation has a negative effect on foreign debt, meaning that an increase in inflation will reduce foreign debt. However, inflation does not have an effect in the short term. The exchange rate positively affects foreign debt in the long term, but it is not significant in the short term, indicating that exchange rate changes affect debt more in the long run. The Fed Funds Rate (FFR) does not significantly affect foreign debt in the long term. However, it has a negative effect in the short term, suggesting that an increase in the FFR interest rate can reduce Indonesia's foreign debt. The budget deficit does not significantly impact foreign debt in the long or short term, although there is a positive relationship. Exports positively influence foreign debt in the long term, while the effect is not significant in the short term.

The government needs to control inflation to maintain stability, as stable inflation reflects a healthy economy and boosts investor confidence. Additionally, the stability of the Rupiah exchange rate should be prioritized, as large fluctuations, primarily depreciation, can increase the burden of foreign debt. The government must also consider the monetary policies of lending countries, such as the FFR interest rate, when deciding to borrow, particularly in the short term. Since the budget deficit does not significantly affect foreign debt, the government should reduce dependence on foreign borrowing by exploring other funding alternatives, such as increasing tax revenues or developing the domestic bond market. Lastly, boosting exports remains crucial to strengthening the economy in the

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

long run. The government should seek strategies other than foreign debt to finance the industrial and development sectors. The government can manage foreign debt more effectively and maintain Indonesia's economic stability by implementing these measures..

REFERENCES

Abraham, F., Cortina Lorente, J. J., & Schmukler, S. (2020). Growth of Global Corporate Debt: Main Facts and Policy Challenges. *Policy Research Working Paper 9394*. World Bank.

Abuka, C., Alinda, R. K., Minoiu, C., Peydró, J. L., & Presbitero, A. F. (2019). Monetary Policy and Bank Lending in Developing Countries: Loan Applications, Rates, and Real Effects. *Journal of Development Economics*, *139*, 185–202. https://doi.org/10.1016/j.jdeveco.2019.03.004.

Adistya, P. A., Radise, S. B., & Agustin, G. (2024). The Analysis Between Purchasing Power Parity and Exchange Rates, Inflation and Gross Domestic Product in Developing and Developed Countries Asia and Europe During Covid-19 Pandemic. *International Journal of Business, Law, and Education*, *5*(1), 897–918. https://doi.org/10.56442/ijble.v5i1.518.

Ahmad, S., Ali, M., & Hussain, I. U. (2021). The Exchange Rate and Its Impact on Pakistani Exports: An ARDL Approach. *Journal of Management, Economics, and Industrial Organization*, *5*(3), 62–69. https://doi.org/10.31039/jomeino.2021.5.3.5.

Ahmed, R., Aizenman, J., & Jinjarak, Y. (2021). Inflation and Exchange Rate Targeting Challenges Under Fiscal Dominance. *Journal of Macroeconomics*, *67,* 103281. https://doi.org/10.1016/j.jmacro.2020.103281

Akram, T. (2022). A Simple Model of the Long-term Interest Rate. *Journal of Post Keynesian Economics*, *45*(1), 130–144. https://doi.org/10.1080/01603477.2021.1878906.

al-Rubaie, Q. L. A., & Ahmed, A. S. (2023). Measuring and Analyzing the Repercussions of Public Debt in Financing the General Budget Deficit for the Iraqi Economy After 2003 Using the (Eviews) Program. *Materials Today: Proceedings*, *80*, 3144–3154. https://doi.org/10.1016/j.matpr.2021.07.180.

Alekseievska, H., Bril, M., Kotenok, A., Tomchuk, O., Budiaiev, M., & Popenko, S. (2024). Monetary Instruments in Addressing Economic Crises: Effectiveness and Challenges. *Financial and Credit Activity: Problems of Theory and Practice*, *5*(58), 9–22. https://doi.org/10.55643/fcaptp.5.58.2024.4504.

Amade, M., & Oyigebe, P. (2024). Budget Deficit and Economic Growth in Nigeria: An Empirical Analysis. *International Journal of Health Economics and Policy*, *9*(1), 1–18.

Arisa, G. M. (2020). Impact of External Debt on Inflation and Exchange Rate in Kenya. (*Unpublished Master's Thesis).* Kenyatta University, Nairobi.

Aslam, M., & Jaafar, R. (2020). Budget Deficit and the Federal Government Debt in Malaysia. In Yonk, R. M., & Bobek, V (Eds). *Perspectives on Economic Development - Public Policy, Culture, and Economic Development*. https://doi.org/10.5772/intechopen.91457

Benkhaira, J., & El Hassani, H. (2023). Economic Recovery Through the Money Supply and Public Spending in Morocco: an Empirical Investigation. *African Journal of Economic and Management Studies, in-press*. https://doi.org/10.1108/AJEMS-04-2023-0134.

Blanchard, O. (2023). *Fiscal Policy under Low Interest Rates*. Cambridge: MIT Press.

Blavasciunaite, D., Garsviene, L., & Matuzeviciute, K. (2020). Trade Balance Effects on Economic Growth: Evidence from European Union Countries. *Economies*, *8*(3), 54. https://doi.org/10.3390/economies8030054.

Brandao-Marques, L., Casiraghi, M., Gelos, G., Harrison, O., & Kamber, G. (2024). Is High Debt Constraining Monetary Policy? Evidence from Inflation Expectations. *Journal of International Money and Finance*, *149*(143), 103206. https://doi.org/10.1016/j.jimonfin.2024.103206

Bräuning, F., & Ivashina, V. (2020). Monetary Policy and Global Banking. *Journal of Finance*, *75*(6), 3055–3095. https://doi.org/10.1111/jofi.12959.

Chowdhury, E. K., Dhar, B. K., & Gazi, M. A. I. (2023). Impact of Remittance on Economic Progress: Evidence from Low-Income Asian Frontier Countries. *Journal of the Knowledge Economy*, *14*(1), 382–407. https://doi.org/10.1007/s13132-022-00898-y.

Coulibaly, I., Gnimassoun, B., Mighri, H., & Saadaoui, J. (2024). International Reserves, Currency Depreciation and Public Debt: New Evidence of Buffer Effects in Africa. *Emerging Markets Review*, *60,* 101130. https://doi.org/10.1016/j.ememar.2024.101130.

Dal Borgo, M. (2021). The Effect of an Income Shock on Subnational Debt: Micro Evidence from Mexico. *World Bank Working Paper.*

Dey, S. R., & Tareque, M. (2020). External Debt and Growth: Role of Stable Macroeconomic Policies. *Journal of Economics, Finance and Administrative Science*, *25*(50), 185–204.

Djalo, M. U., Yusuf, M., & Pudjowati, J. (2023). The Impact of Foreign Debt on Export and Import Values, The Rupiah Exchange Rate, and The Inflation Rate. *Jurnal Ekonomi*, *12*(1), 1124-1132.

Elkhishin, S., & Mohieldin, M. (2021). External Debt Vulnerability in Emerging Markets and Developing Economies During the COVID-19 Shock. *Review of Economics and Political Science*, *6*(1), 24–47. https://doi.org/10.1108/REPS-10-2020-0155.

Emako, E., Nuru, S., & Menza, M. (2022). The Effect of Foreign Direct Investment on Economic Growth in Developing Countries. *Transnational Corporations Review*, *14*(4), 382–401. https://doi.org/10.1080/19186444.2022.2146967.

Espinosa, E. G. (2023). *Modern Monetary Theory*. New Jersey: Routledge.

Farooq, U., Ahmed, J., & Khan, S. (2021). Do the Macroeconomic Factors Influence the Firm's Investment Decisions? A Generalized Method of Moments (GMM) Approach. *International Journal of Finance and Economics*, *26*(1), 790–801.

Georgescu, I., Nica, I., Energies, J. K.-, & 2024, U. (2024). Towards Sustainability: Understanding Norway's Ecological Footprint Through the Framework of the Environmental Kuznets Curve. *Energies, 17*(23), 6074. https://doi.org/10.3390/en17236074.

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

Gupta, V., & Dubey, A. (2024). US Monetary Policy, the Global Financial Cycle and Cross-Country Financial Cycles. *Journal of Economics and Finance, 2024*. https://doi.org/10.1007/s12197-024-09680-z.

Handaria., Madris., & Saudi, N. D. S. (2022). State Budget Deficit Analysis in Indonesia Year 2002-2022. *International Research Journal of Advanced Engineering and Science*, *7*(3), 110–120.

Hendrayanti, S., Nafiah, Z., & Aminah, S. (2024). The Effect of Inflation, Export and Import on Economic Growth in Central Java. *Jurnal Ccapital: Kebijakan Ekonomi, Manajemen dan Akuntansi*, *5*(2), 1–15. https://doi.org/10.33747/capital.v5i2.189.

Hidayat, A. M., Yusiana, R., & Soleh, A. (2019). Determinants of Government Budget Deficits and Their Impact on Indonesian Foreign Debt. *International Conference on Rural Development and Enterpreneurship 2019*, *5*(1), 1–9.

Ibrahim, A. A. A., & Bashir, M. S. (2023). The Effects of Currency Devaluation on the Bilateral Trade Balance of Sudan: Cointegration and Error-Correction Modeling. *Journal of Economics, Management and Trade*, *29*(2), 16–33. https://doi.org/10.9734/jemt/2023/v29i21076.

Jokolelono, E., Djirimu, M., Mangun, N., Darwis, I., & Jaya, A. H. (2023). Determinant Factors on Indonesia's Economic Growth: An Analysis of Foreign Debt, Foreign Investment, Exports, and Exchange Reserves. *Journal of Economics, Finance and Management Studies*, *6*(5), 40-5-. https://doi.org/10.47191/jefms/v6-i5-40.

Juliansyah, H., Ganesha, Y., Ichsan, I., Nailufar, F., & Terfiadi, S. Y. (2022). Effect of Export Import and Investment on Economics Growth in Indonesia (VECM Analysis Method). *Journal of Malikussaleh Public Economics*, *5*(1), 16-25. https://doi.org/10.29103/jmpe.v5i1.8153.

Kentikelenis, A., & Stubbs, T. (2022). Austerity Redux: The Post-pandemic Wave of Budget Cuts and the Future of Global Public Health. *Global Policy*, *13*(1), 5–17. https://doi.org/10.1111/1758-5899.13028.

Kim, S. S., Chung, J., Hwang, J. H., & Pyun, J. H. (2020). The Effectiveness of Foreign Debt in Hedging Exchange Rate Exposure: Multinational Enterprises vs. Exporting Firms. *Pacific Basin Finance Journal*, *64,* 101455. https://doi.org/10.1016/j.pacfin.2020.101455.

Koijen, R. S. J., & Yogo, M. (2021). Exchange Rates and Asset Prices in a Global Demand System. *NBER Working Paper 27342.*

Kose, M. A., Nagle, P., Ohnsorge, F., & Sugawara, N. (2021). *Global Waves of Debt: Causes and Consequences*. Washington D.C.: World Bank.

Kumhof, M., Rungcharoenkitkul, P., & Sokol, A. (2020). How Does International Capital Flow? *BIS Working Papers No. 890.*

Liu, A. Y., Oi, J. C., & Zhang, Y. (2022). China's Local Government Debt: The Grand Bargain. *China Journal*, *87*(1), 40–71. https://doi.org/10.1086/717256.

Malini, H., Seinna, Y. E., & Rustam, R. (2022). Indonesia's Foreign Debt Development

and Macroeconomic Variables. *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, *11*(2), 144. https://doi.org/10.26418/jebik.v11i2.52744.

Manasseh, C. O., Abada, F. C., Okiche, E. L., Okanya, O., Nwakoby, I. C., Offu, P., Ogbuagu, A. R., Okafor, C. O., Obidike, P. C., & Nwonye, N. G. (2022). External debt and economic growth in Sub-Saharan Africa: Does governance matter? *PLoS ONE*, *17*(3), 0264082. https://doi.org/10.1371/journal.pone.0264082.

Morina, F., Hysa, E., Ergün, U., Panait, M., & Voica, M. C. (2020). The Effect of Exchange Rate Volatility on Economic Growth: Case of the CEE Countries. *Journal of Risk and Financial Management*, *13*(8), 177. https://doi.org/10.3390/jrfm13080177.

Nazamuddin, B. S., Wahyuni, S. S., Fakhruddin, F., & Fitriyani, F. (2024). The Nexus between Foreign Exchange and External Debt in Indonesia: Evidence from Linear and Nonlinear ARDL Approaches. *Journal of the Asia Pacific Economy*, *29*(2), 810–836. https://doi.org/10.1080/13547860.2022.2054153.

Nurjanah, R., & Mustika, C. (2021a). The Influence of Imports, Foreign Exchange Reserves, External Debt, and Interest Rates on the Currency Exchange Rates Against the United States Dollar in Southeast Asia Countries. *Jurnal Perspektif Pembiayaan dan Pembangunan Daerah*, *9*(4), 365–374. https://doi.org/10.22437/ppd.v9i4.12706.

Nurjanah, R., & Mustika, C. (2021b). The Influence of Imports, Foreign Exchange Reserves, External Debt, and Interest Rates on the Currency Exchange Rates Against the United States Dollar in Southeast Asia Countries. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, *9*(4), 365–374. https://doi.org/10.22437/ppd.v9i4.12706.

Oberholzer, B. (2023). Managing the Balance-of-Payments Constraint: Dilemmas and Perspectives. In. Sylla, N. S (Ed). *Imperialism and the Political Economy of Global South's Debt. Research in Political Economy, 38,* 165–191.

Onwuka, I. (2022). Budget Deficit, Inflation and Economic Growth in Nigeria: An Empirical Analysis. *International Journal of Economics and Financial Research*, *81*, 1–14. https://doi.org/10.32861/ijefr.81.1.14.

Prah, D., & Tenakwah, E. J. (2017). Impact of Government Domestic Borrowing on Interest Rate. *International Journal of Advanced Research and Development*, *2*(5), 86–90.

Pramudita, N. D., & Ivander. (2022). The Impact of Macro Economic Factors on the FED Funds Rate in South East Asian Emerging Markets. *International Journal of Economics and Finance Studies*, *14*(1), 340–357. https://doi.org/10.34109/ijefs.20220015.

QASEEM, F. I. (2024). Monetary Policy Dynamics and Economic Growth: An Empirical Analysis of Indonesia's Economy using Time-Series Data and Error Correction Model (ECM). *Cognizance Journal of Multidisciplinary Studies*, *4*(3), 284–303. https://doi.org/10.47760/cognizance.2024.v04i03.026.

Rajković, M., Bjelić, P., Jaćimović, D., & Verbič, M. (2020). The Impact of the Exchange Rate on the Foreign Trade Imbalance during the Economic Crisis in the New EU Member States and the Western Balkan Countries. *Economic Research-Ekonomska Istrazivanja*, *33*(1), 182–203. https://doi.org/10.1080/1331677X.2019.1708771.

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464

Sabado, J. R. F. (2023). Determinants of Balance of Payment: A Comparative Review of Developing and Least Determinants of Balance of Payment Fluctiations in The Philippines:1981-2019. *European Journal of Economic and Financial Research*, *7*(1), 1-31.

Sanusi, A. R. (2022). Fiscal Constraints and Economic Development: Policy Options in Times of Fiscal Crises. *The 63rd Annual Conference of the Nigerian Economic Society (NES)*.

Saqib, A., Chan, T. H., Mikhaylov, A., & Lean, H. H. (2021). Are the Responses of Sectoral Energy Imports Asymmetric to Exchange Rate Volatilities in Pakistan? Evidence From Recent Foreign Exchange Regime. *Frontiers in Energy Research*, *9,* 614463.

Şen, H., Kaya, A., Kaptan, S., & Cömert, M. (2020). Interest Rates, Inflation, and Exchange Rates in Fragile EMEs: A Fresh Look at the Long-Run Interrelationships. *Journal of International Trade and Economic Development*, *29*(3), 289–318.

Sharaf, M. F., & Shahen, A. M. (2023). Does External Debt Drive Inflation in Sudan: Evidence from Symmetric and Asymmetric ARDL Approaches. *Journal of Business and Socio-Economic Development*, *3*(4), 293–307. https://doi.org/10.1108/jbsed-03-2023-0023.

Silvia, E., Sihotang, N. V., Sihotang, D., & Silvia, E. (2023). Causality Analysis of Inflation and Economic Growth Using the Error Correction Model (ECM). *Indonesia Accounting Research Journal*, *11*(1), 23–36.

Sumba, J. (2023). Fiscal Deficit Financing and Inflation in Sub-Saharan Africa. *(Unpublished Thesis).* University of Embu.

Truong, L. D., & Van Vo, D. (2023). The Asymmetric Effects of Exchange Rate on Trade Balance of Vietnam. *Heliyon*, *9*(4), e14455. https://doi.org/10.1016/j.heliyon.2023.e14455.

Wanyama, H. N., Byaruhanga, J., & Ngala, C. (2020). Effect of External Debt on Real Estate Investment in Kenya. *Journal of Finance and Economics*, *8*(4), 183–189.

World Bank. (2023). *Inflation of Indonesia*. Washington, DC: World Bank.

World Bank. (2023). *Exchange Rates Official of Indonesia*. Washington, DC: World Bank.

Wray, L. R., & Nersisyan, Y. (2020). Does the National Debt Matter? *Japanese Political Economy*, *46*(4), 261–286. https://doi.org/10.1080/2329194X.2020.1867586.

Yusnaini, Y. (2023). The Effect of Inflation Rate and Foreign Exchange on Company Value at Bank Mandiri Tbk. *RIGGS: Journal of Artificial Intelligence and Digital Business*, *1*(2), 45–50. https://doi.org/10.31004/riggs.v1i2.58.

Yusuf, A., & Mohd, S. (2021). The Impact of Government Debt on Economic Growth in Nigeria. *Cogent Economics & Finance*, *9*(1), 1946249. https://doi.org/10.1080/23322039.2021.1946249

Zahra, A., Nasir, N., Rahman, S. U., & Idress, S. (2023). Impact of Exchange Rate, and Foreign Direct Investment on External Debt: Evidence from Pakistan Using ARDL

Cointegration Approach. *IRASD Journal of Economics*, *5*(1), 709–719. https://doi.org/10.52131/joe.2023.0501.0110.

Zaman, M., Pinglu, C., Hussain, S. I., Ullah, A., & Qian, N. (2021). Does Regional Integration Matter for Sustainable Economic Growth? Fostering the Role of FDI, Trade Openness, IT Exports, and Capital Formation in BRI Countries. *Heliyon*, *7*(12), e08559. https://doi.org/10.1016/j.heliyon.2021.e08559,

http://journal.uinjkt.ac.id/index.php/signifikan
https://doi.org/10.15408/sjie.v13i2.42464