



Determining The Profitability of Palm Oil Companies: The Role of Exchange Rate Volatility, Crude Palm Oil Prices, and Inflation as Moderating Variables

(Determinan Profitabilitas Perusahaan Kelapa Sawit: Peran Volatilitas Nilai Tukar, Harga Minyak Sawit Mentah (Crude Palm Oil/CPO), dan Inflasi sebagai Variabel Moderasi)

Devita Eka Wardani¹, Selvi², Mohamad Agus Salim Monoarfa³

^{1,2,3}Management, Faculty of Economics and Business, Universitas Negeri Gorontalo

devitaekawardani251102@gmail.com¹, mohamadagussalimmonoarfa@ung.ac.id², selvi@ung.ac.id³

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Abstract

Profitability is one of the primary indicators used to assess corporate financial performance, particularly in the palm oil industry, which is highly dependent on macroeconomic conditions and the dynamics of the global commodity market. This study aims to examine the effect of exchange rate volatility and Crude Palm Oil (CPO) prices on corporate profitability, with inflation serving as a moderating variable, among palm oil companies listed on the Indonesia Stock Exchange during the 2019–2024 period. This study employed a quantitative approach using secondary data obtained from corporate financial statements and relevant macroeconomic data. The sample consisted of 24 palm oil companies, resulting in 144 observations. Data were analyzed using panel data regression and Moderated Regression Analysis (MRA) to examine both the direct effects of the independent variables and the moderating role of inflation. The findings indicate that exchange rate volatility and CPO prices have a positive but statistically insignificant effect on corporate profitability. Furthermore, inflation is unable to moderate the relationship between exchange rate volatility and profitability or between CPO prices and profitability. However, when considered simultaneously, all independent variables collectively exert a significant effect on profitability. These findings suggest that macroeconomic factors jointly contribute to the financial performance of palm oil companies, although firm-specific internal factors remain the primary determinants of profitability. The results are expected to provide useful insights for corporate managers, investors, and policymakers in formulating strategies to improve corporate resilience and financial performance amid changing economic conditions.

Abstrak

Profitabilitas merupakan salah satu indikator utama yang digunakan untuk menilai kinerja keuangan perusahaan, khususnya pada industri kelapa sawit yang memiliki tingkat ketergantungan tinggi terhadap kondisi makroekonomi dan dinamika pasar komoditas global. Penelitian ini bertujuan untuk menganalisis pengaruh volatilitas nilai tukar dan harga Crude Palm Oil (CPO) terhadap profitabilitas perusahaan, dengan inflasi sebagai variabel moderasi pada perusahaan kelapa sawit yang terdaftar di Bursa Efek Indonesia selama periode 2019–2024. Penelitian menggunakan pendekatan kuantitatif dengan memanfaatkan data sekunder yang diperoleh dari laporan keuangan perusahaan dan data makroekonomi yang relevan. Sampel penelitian terdiri atas 24 perusahaan sehingga menghasilkan 144 observasi.

Analisis data dilakukan menggunakan regresi data panel dan Moderated Regression Analysis (MRA) untuk menguji pengaruh langsung maupun peran moderasi inflasi terhadap hubungan antarvariabel. Hasil penelitian menunjukkan bahwa volatilitas nilai tukar dan harga CPO memiliki pengaruh positif namun tidak signifikan secara statistik terhadap profitabilitas perusahaan. Selain itu, inflasi tidak mampu memoderasi hubungan antara volatilitas nilai tukar maupun harga CPO terhadap profitabilitas. Meskipun demikian, secara simultan seluruh variabel independen memberikan pengaruh yang signifikan terhadap profitabilitas perusahaan. Temuan ini mengindikasikan bahwa faktor-faktor makroekonomi secara bersama-sama berkontribusi terhadap kinerja keuangan perusahaan kelapa sawit, meskipun faktor-faktor internal perusahaan masih menjadi penentu utama dalam meningkatkan profitabilitas. Hasil penelitian ini diharapkan dapat menjadi referensi bagi manajemen perusahaan, investor, dan pembuat kebijakan dalam merumuskan strategi yang mampu meningkatkan ketahanan dan kinerja perusahaan di tengah fluktuasi kondisi ekonomi.

Corresponding Author:

Devita Eka Wardani
Faculty of Economics and Business
Universitas Negeri Gorontalo
devitaekawardani251102@gmail.com

1. INTRODUCTION

The palm oil industry is one of Indonesia's most strategic economic sectors, contributing substantially to foreign exchange earnings, employment generation, and national economic growth (Masitah et al., 2023). As the world's largest producer and exporter of crude palm oil (CPO), Indonesia relies heavily on the performance of palm oil companies to sustain economic development (Hariyanti & Syahza, 2024). Consequently, maintaining the financial performance of these companies is essential for ensuring the industry's long-term competitiveness. One of the most widely used indicators of corporate financial performance is profitability, commonly measured by Return on Assets (ROA). ROA reflects a company's ability to generate profits from its total assets, thereby indicating the efficiency of management in utilizing available resources. According to Monoarfa et al. (2020), profitability represents the value and operational performance of a company, with higher ROA indicating more effective asset utilization and stronger financial performance. Achieving sustainable profitability requires effective financial management, including strategic planning, budgeting, investment decisions, and efficient control of financial resources (Selvi et al., 2024). Nevertheless, profitability in the palm oil industry tends to fluctuate considerably because the sector is highly exposed to changes in macroeconomic conditions and international commodity markets.

The relationship between macroeconomic factors and corporate profitability can be explained through several theoretical perspectives. The Theory of the Firm suggests that firms seek to maximize profits through the efficient allocation and utilization of resources (Varian, 2014). However, firms operating in commodity-based industries such as palm oil have limited control over market prices because their revenues are largely determined by external economic conditions. The Exchange Rate Pass-Through Theory argues that exchange rate movements influence firms' export revenues, production costs, and international competitiveness, thereby affecting profitability (Campa & Goldberg, 1998). Currency depreciation may increase export revenues when transactions are denominated in foreign currencies, whereas appreciation may reduce export competitiveness and profitability. Furthermore, the Commodity Market Theory explains that commodity prices are determined primarily by global supply and demand mechanisms, making producers price takers rather than price makers (Pindyck, 2004). Consequently, fluctuations in global CPO prices directly influence corporate revenues and financial performance.

Empirical studies examining the determinants of profitability in the palm oil industry have produced inconsistent findings. Several studies reported that increasing CPO prices significantly improve the profitability of palm oil companies because higher selling prices directly increase operating revenues. In contrast, the influence of exchange rate volatility remains inconclusive. Bhargava and Konku (2023) reported that exchange rate fluctuations may reduce profitability, although the effect was statistically insignificant in certain contexts. Meanwhile, Apriani et al. (2022) found that the effect of exchange rate movements varies

across industrial sectors, indicating that firm-specific characteristics and market conditions may influence the relationship between exchange rates and profitability.

Another important macroeconomic variable affecting corporate profitability is inflation. Inflation influences firms through rising production costs, changes in input prices, and shifts in consumer purchasing power. However, previous findings regarding its effect on profitability remain contradictory. Zaky et al. (2019) found that inflation negatively affects corporate profitability because increasing production costs reduce profit margins. Conversely, Triana and Rofiuddin (2023) reported that moderate inflation may positively influence profitability by increasing product prices and corporate revenues. Furthermore, Salihu et al. (2023) demonstrated that inflation may function as a moderating variable, altering the strength of the relationship between financial and macroeconomic variables and corporate profitability. These inconsistent findings suggest that the role of inflation requires further investigation, particularly as a moderating variable rather than merely an independent predictor.

Despite the growing body of literature, several important research gaps remain. First, previous studies have reported inconsistent evidence regarding the effects of exchange rate volatility and CPO prices on the profitability of palm oil companies. Second, although inflation has frequently been examined as an independent variable, limited studies have investigated its moderating role in the relationship between macroeconomic factors and profitability. Third, studies integrating exchange rate volatility, CPO prices, and inflation within a single analytical framework remain scarce, particularly in the post-pandemic period (2019–2024), during which global commodity markets experienced substantial disruptions due to economic recovery, geopolitical tensions, and supply chain uncertainties.

To address these gaps, this study develops an integrated analytical framework by examining the effects of exchange rate volatility and CPO prices on the profitability of Indonesian palm oil companies while investigating inflation as a moderating variable using Moderated Regression Analysis (MRA). The study focuses on palm oil companies listed on the Indonesia Stock Exchange during the 2019–2024 period. Panel data are collected from publicly available corporate financial statements and official macroeconomic statistics. By incorporating inflation as a moderator, this study extends previous research and provides a more comprehensive understanding of how macroeconomic conditions influence the profitability of Indonesia's palm oil industry. The findings are expected to contribute to the literature on corporate finance and commodity-based industries while providing practical implications for corporate managers, investors, and policymakers in managing financial performance under changing macroeconomic conditions.

2. RESEARCH METHODOLOGY

2.1 Research Location

The research was conducted on palm oil plantation companies listed on the Indonesia Stock Exchange (IDX) using data accessed from the official IDX website and various other supporting data sources. Data collection and processing were conducted in 2025 using the companies' financial statements for the 2019-2024 period.

2.2 Research Approach

This study employs a quantitative approach. The quantitative approach was chosen because the study aims to test the effect of exchange rate volatility and CPO prices on profitability, with inflation as a moderating variable, among palm oil companies listed on the Indonesia Stock Exchange for the 2019-2024 period.

2.3 Population and Sample

The population in this study consists of all 33 palm oil companies listed on the Indonesia Stock Exchange. The sampling technique employed purposive sampling based on specific criteria, resulting in a sample of 24 companies with a total of 144 observation data points over the six-year observation period.

2.4 Operational Definitions

Operational definitions provide an explanation of the variables used in the study, including independent variables, dependent variables, and moderator variables. Their purpose is to establish clear boundaries and measurement criteria so that each variable can be objectively measured in accordance with the study's objectives. In this study, the variables used include exchange rate volatility and CPO prices as independent variables, profitability as the dependent variable, and inflation as the moderating variable.

1) Profitability

$$ROA = \frac{\text{Earning After Tax}}{\text{Total Aktiva}}$$

2) Exchange Rate Volatility

$$S = \sqrt{\frac{1}{T-1} \sum_{t=1}^T (rt - r)^2}$$

3) Crude Palm Oil Price (CPO)

For the operational variable of CPO prices, no specific formula was used for calculation. CPO prices were measured based on the annual average global price of crude palm oil in USD/ton, obtained from international market price data during the study period. This price was used because it reflects global commodity price conditions that influence export revenues and the profitability of palm oil companies.

4) Inflation

$$Inflasi_t = \frac{IHK_t - IHK_{t-1}}{IHK_{t-1}} \times 100\%$$

2.5 Panel Data Regression

Panel data regression is a statistical analysis method used to process combined data from time series and cross-sectional data (across individuals or companies) simultaneously within a single research model.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Notes:

- Y = Profitability (ROA)
- α (alpha) = constant
- β_1, β_2 = regression coefficients
- X_1 = Exchange Rate Volatility
- X_2 = Crude Palm Oil Price (CPO)
- ε (error) = error term

2.6 Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) is an analytical technique that uses a linear regression-based approach by adding an interaction term between the independent variables and the moderator variable in the regression equation model.

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 (X_1 \times Z) + \beta_5 (X_2 \times Z) + \varepsilon$$

Notes:

- Y = Profitability (ROA)
- X_1 = Exchange Rate Volatility
- X_2 = Crude Palm Oil Price (CPO)
- Z = Inflation (moderating variable)
- $X_1 \times Z$ dan $X_2 \times Z$ = Interaction terms between the independent and moderator variables
- a = Constant
- $\beta_1 - \beta_5$ = Regression coefficients
- ε = Error term

3. RESULTS AND DISCUSSION

3.1 Panel Data Regression Analysis

The results of the panel data regression estimates using the Random Effects Model are presented in the Table 1.

Table 1. Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.286799	1.464691	-0.878546	0.3811
X1	0.542331	0.528137	1.026876	0.3062
X2	0.330088	0.088949	3.710979	0.0003

Source: Data processed using EViews13

Based on the results of the panel data regression using the Random Effects Model (REM) with the assistance of the EViews application, the following regression equation was obtained:

$$Y = -1.286799 + 0.542331X_1 + 0.330088X_2 + \varepsilon$$

The regression equation above can be interpreted as follows:

- 1) The constant (C) of -1.286799 indicates that if the exchange rate volatility variable (X_1) and the Crude Palm Oil price (X_2) are held constant or set to zero, the firm's profitability (Y) is estimated to be -1.286799.
- 2) The regression coefficient for exchange rate volatility (X_1) of 0.5423 indicates that a one-unit increase in exchange rate volatility will increase the company's profitability by 0.5423, assuming all other variables in the model are held constant. However, based on a p-value of 0.3062 (> 0.05), this variable has an effect but is not statistically significant on the company's profitability (ROA).

- 3) The regression coefficient for CPO price (X2) of 0.3301 indicates that a one-unit increase in CPO price will increase the company's profitability by 0.3301, assuming all other variables remain constant. A probability value of 0.0003 (< 0.05) indicates that this variable has a significant effect on the company's profitability (ROA).

3.2 Partial Test (t-Test)

Tabel 1. Partial Test (t-Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.220552	15.83320	-0.456039	0.6491
X1	1.977556	3.737439	0.529121	0.5976
X2	0.679782	0.931865	0.729485	0.4669
Z	2.616669	6.956571	0.376143	0.7074
X1Z	-0.531558	1.406943	-0.377810	0.7062
X2Z	-0.154861	0.411747	-0.376108	0.7074

Source: Data processed using EViews 13

Based on the table above, the results of the partial test or t-test can be explained as follows:

- 1) H1 (Exchange Rate Volatility vs. Profitability) The test results show that the exchange rate volatility variable (X1) has a calculated t-value of 0.529121 with a probability value of 0.5976. Meanwhile, the critical t-value is ± 1.977 . Since the calculated t-value is smaller than the critical t-value ($0.529121 < 1.977$) and the probability value is greater than 0.05 ($0.5976 > 0.05$), H1 is rejected. Thus, exchange rate volatility has an effect but is not significant on the profitability (ROA) of palm oil companies listed on the Indonesia Stock Exchange for the 2019-2024 period.
- 2) H2 (Crude Palm Oil Price vs. Profitability) The test results show that the Crude Palm Oil price variable (X2) has a calculated t-value of 0.729485 with a probability value of 0.4669. Meanwhile, the critical t-value is ± 1.977 . Since the calculated t-value is smaller than the critical t-value ($0.729485 < 1.977$) and the probability value is greater than 0.05 ($0.4669 > 0.05$), H2 is rejected. Thus, CPO prices have an effect but are not significant on the profitability (ROA) of palm oil companies listed on the Indonesia Stock Exchange for the 2019-2024 period.
- 3) H3 (Inflation moderates the effect of Exchange Rate Volatility on Profitability) The test results show that the interaction variable (X1Z) has a calculated t-value of -0.377810 with a probability value of 0.7062. Meanwhile, the critical t-value is ± 1.977 . Since the calculated t-value is smaller than the critical t-value ($-0.377810 < 1.977$) and the probability value is greater than 0.05 ($0.7062 > 0.05$), H3 is rejected. Thus, the interaction variable has an effect but is not significant, meaning that inflation is unable to moderate the effect of exchange rate volatility on profitability (ROA).
- 4) H4 (Inflation moderates the effect of Crude Palm Oil Price on Profitability) The test results show that the interaction variable (X2Z) has a calculated t-value of -0.376108 with a probability value of 0.7074. Meanwhile, the critical t-value is ± 1.977 . Since the calculated t-value is smaller than the critical t-value ($-0.376108 < 1.977$) and the probability value is greater than 0.05 ($0.7074 > 0.05$), H4 is rejected. Thus, the interaction term has an effect but is not significant, meaning that inflation is unable to moderate the effect of CPO prices on profitability (ROA).

3.3 Simultaneous Test (F-Test)

Tabel 2. Simultaneous Test (F-Test)

Weighted Statistics			
R-squared	0.090730	Mean dependent var	3.277203
Adjusted R-squared	0.057786	S.D. dependent var	0.306381
S.E. of regression	0.297397	Sum squared resid	12.20543
F-statistic	2.754035	Durbin-Watson stat	1.095919
Prob(F-statistic)	0.021004		

Source: Data processed using EViews13

Based on the results of the simultaneous test (F-test), an F-statistic value of 2.75 was obtained with a probability value of 0.021. This probability value is smaller than the significance level of 0.05, indicating that, simultaneously, the variables of exchange rate volatility, CPO price, inflation, and the interaction term have a significant effect on the profitability (ROA) of palm oil companies. These results indicate that changes in macroeconomic conditions and commodity prices together can explain variations in company profitability during the study period.

3.4 Coefficient of Determination (R^2)

Based on Table 3, the coefficient of determination (Adjusted R-Squared) is 0.0578. This result indicates that 5.78% of the variation in the profitability of palm oil companies can be explained by the variables of exchange rate volatility, CPO prices, inflation, and the interaction terms used in the research

model. Meanwhile, the remaining 94.22% is influenced by other factors outside the research model, such as the company's operational efficiency, plantation productivity, production cost structure, management policies, global market conditions, and other macroeconomic factors that also affect the profitability performance of palm oil companies.

3.5 Moderated Regression Analysis (MRA)

Based on Table 2, the results of the panel data regression using the Random Effects Model (REM) with the assistance of the EViews 13 application yield the following regression equation:

$$Y = -7,220552 + 1,977556X_1 + 0,679782X_2 + 2,616669Z + (-0,531558)X_{1Z} + (-0,154861)X_{2Z} + \varepsilon$$

The regression equation above can be interpreted as follows:

- 1) The constant (C) of -7.2206 indicates that if the exchange rate volatility variable (X_1), Crude Palm Oil price (X_2), inflation (Z), and interaction variables (X_{1Z} and X_{2Z}) are held constant or set to zero, the company's profitability (Y) is estimated to be -7.2206 .
- 2) The regression coefficient for exchange rate volatility (X_1) of 1.977556 indicates that a one-unit increase in exchange rate volatility will increase the company's profitability (ROA) by 1.977556 , assuming all other variables remain constant. However, based on a p-value of 0.5976 (> 0.05), this variable has an effect but is not statistically significant on profitability (ROA).
- 3) The regression coefficient for CPO price (X_2) of 0.679782 indicates that a one-unit increase in CPO price will increase the company's profitability (ROA) by 0.679782 , assuming all other variables remain constant. However, a probability value of 0.4669 (> 0.05) indicates that this variable has an effect but is not statistically significant on profitability (ROA).
- 4) The regression coefficient for the interaction variable between exchange rate volatility and inflation (X_{1Z}) of -0.531558 indicates that a one-unit increase in the interaction between exchange rate volatility and inflation reduces the company's profitability (ROA) by 0.531558 , assuming all other variables remain constant. A probability value of 0.7062 (> 0.05) indicates that this variable has an effect but is not statistically significant on profitability (ROA).
- 5) The regression coefficient for the interaction variable between CPO price and inflation (X_{2Z}) is -0.154861 , indicating that a one-unit increase in the interaction between CPO price and inflation reduces the company's profitability (ROA) by 0.154861 , assuming all other variables remain constant. A probability value of 0.7074 (> 0.05) indicates that this variable has an effect but is not statistically significant on profitability.

3.6 The Effect of Exchange Rate Volatility on Profitability

Based on the test results, the exchange rate volatility variable has a probability value of 0.5976 , which is greater than the significance level of 0.05 . These results indicate that exchange rate volatility has an effect but is not statistically significant on the profitability (ROA) of palm oil companies listed on the Indonesia Stock Exchange for the 2019–2024 period. The regression coefficient of 1.9776 indicates that exchange rate volatility has a positive relationship with company profitability.

This finding aligns with the Exchange Rate Pass-Through Theory, which explains that changes in exchange rates can affect a company's export revenue and import costs. In the export-oriented palm oil industry, a depreciation of the Rupiah has the potential to increase export receipts in domestic currency. However, exchange rate volatility also creates uncertainty regarding production costs and international transactions, making its impact on profitability statistically weaker.

This non-significant effect is likely due to companies' ability to engage in natural hedging, the implementation of financial risk management, and the dominant influence of CPO prices as the primary determinant of palm oil companies' profitability. These findings align with the study by Intan et al. (2024), which found that exchange rate volatility has an effect but is not statistically significant on ROA. Thus, exchange rate volatility has not been a dominant factor in determining the profitability of palm oil companies during the study period.

3.7 The Effect of CPO prices on Profitability

Based on the results of the analysis using the Random Effects Model (REM), the CPO price variable has a probability value of 0.4669 , which is greater than the significance level of 0.05 . These results indicate that CPO prices have an effect but are not statistically significant on the profitability (ROA) of palm oil companies listed on the Indonesia Stock Exchange for the 2019–2024 period. The regression coefficient of 0.679782 indicates that CPO prices have a positive relationship with company profitability.

This finding aligns with Commodity Market Theory, which explains that global commodity prices are determined by international market supply and demand mechanisms; thus, an increase in CPO prices could theoretically boost company revenue. However, this revenue increase is not directly followed by an increase in profitability due to production cost pressures—such as fertilizer, energy, and labor costs—which also affect the company's financial performance.

This non-significant effect suggests that the profitability of palm oil companies is more influenced by operational efficiency and cost control capabilities than by commodity price fluctuations. These findings align with the study by Siregar and Syafarudin (2019) which found that CPO prices do not affect profitability, but differ from the studies by Mutasowifin and Dwitaningsih (2022) and Zaky et al. (2019), which found a significant impact on profitability. Thus, CPO prices are not the primary determinant of palm oil companies' profitability during the study period.

3.8 Inflation Moderates the Effect of Exchange Rate Volatility on Profitability

Based on the results of the Moderated Regression Analysis (MRA), the probability value of the interaction term between exchange rate volatility and inflation (X1Z) was 0.7062, which is greater than the significance level of 0.05. These results indicate that inflation is unable to moderate the effect of exchange rate volatility on the profitability (ROA) of palm oil companies listed on the Indonesia Stock Exchange during the 2019–2024 period. The regression coefficient for the interaction variable of -0.531558 indicates a negative relationship, but this relationship lacks statistical significance.

These results indicate that changes in the inflation rate are unable to systematically strengthen or weaken the effect of exchange rate volatility on corporate profitability. This condition is likely due to the companies' ability to make operational adjustments, achieve cost efficiency, and manage risks in response to changes in macroeconomic conditions. Thus, the effect of exchange rate volatility on profitability tends to be independent and is not influenced by the inflation rate.

This finding differs from the study by Triana and Rofiuddin (2023), which found that inflation plays a moderating role on profitability. This discrepancy suggests that the effectiveness of moderating variables is highly dependent on industry characteristics and the economic conditions of the study. Thus, inflation does not act as a moderating variable in the relationship between exchange rate volatility and the profitability of palm oil companies during the study period.

3.9 Inflation Moderates the Effect of Crude Palm Oil Prices on Profitability

Based on the results of the Moderated Regression Analysis (MRA), the probability value for the interaction variable between CPO prices and inflation (X2Z) was 0.7074, which is greater than the significance level of 0.05. These results indicate that inflation is unable to moderate the effect of CPO prices on the profitability (ROA) of palm oil companies listed on the Indonesia Stock Exchange for the 2019–2024 period. The regression coefficient of the interaction variable, at -0.154861 , indicates a negative relationship; however, this relationship lacks statistical significance.

The research results show that after including the inflation variable and the interaction variable, the effect of CPO prices on profitability changed from significant to having an effect but not significant. This condition indicates that the relationship between CPO prices and profitability is not stable; however, inflation does not play an effective interactive role in systematically strengthening or weakening this relationship.

Theoretically, inflation can increase production costs such as fertilizers, energy, and labor, thereby potentially affecting a company's profitability. However, the empirical results show that the effect of CPO prices on profitability is more influenced by internal company factors, such as operational efficiency, cost control, and production strategies. Thus, inflation is not a relevant moderating variable in the relationship between CPO prices and profitability during the study period.

These findings do not align with the studies by Zaky et al. (2019) and Siregar and Syafarudin (2019), which indicate that inflation has an impact on firm performance. This discrepancy suggests that the role of inflation is contextual and influenced by economic conditions, the study period, and the dynamics of the palm oil industry.

4. CONCLUSIONS AND SUGGESTIONS/RECOMMENDATIONS

4.1 Conclusions

Based on the research findings, exchange rate volatility and CPO prices were found to have an effect but were not statistically significant on the profitability of palm oil companies listed on the Indonesia Stock Exchange during the 2019–2024 period. Furthermore, inflation fails to moderate the relationship between exchange rate volatility or CPO prices and corporate profitability. However, when considered simultaneously, the variables of exchange rate volatility, CPO prices, inflation, and interaction terms have a significant impact on corporate profitability.

An Adjusted R-squared value of 0.057786 indicates that the model's ability to explain variations in profitability remains relatively low. These findings indicate that the profitability of palm oil companies is more influenced by internal company factors, such as operational efficiency, cost control, productivity, and managerial strategies, compared to external macroeconomic factors. Thus, changes in exchange rates, commodity prices, and inflation have not been the primary determinants of company profitability during the study period.

This study provides an empirical contribution by demonstrating that inflation has not been able to act as a moderating variable in the relationship between exchange rate volatility and CPO prices on the profitability of palm oil companies, thereby reinforcing the indication that internal company factors play a more dominant role in determining profitability compared to external macroeconomic factors.

4.2 Suggestions/Recommendations

Future research is recommended to develop a research model by incorporating internal firm variables, such as operational efficiency, cost structure, productivity, leverage, and firm size, as these factors are suspected to have a more dominant influence on the profitability of palm oil companies. Additionally, the use of more comprehensive methodological approaches, such as dynamic panel data or the Generalized Method of Moments (GMM), along with data covering broader time periods and higher frequencies, is expected to enhance the model's ability to explain variations in corporate profitability.

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