

Exchange Rate, Financial Leverage, and Corporate Profitability: The Moderating Role of Foreign Ownership in Indonesian Manufacturing Companies

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Abstract

Purpose: This study aims to examine the effect of the exchange rate and financial leverage on the profitability of manufacturing companies in Indonesia and to investigate the moderating role of foreign ownership in these relationships.

Design/methodology/approach: his study employed an explanatory quantitative approach using secondary panel data. The sample consisted of 34 manufacturing companies listed on the Indonesia Stock Exchange during the 2023–2025 period, resulting in 82 observations after outlier elimination. Profitability, measured by Return on Assets (ROA), served as the dependent variable. The independent variables were the exchange rate, measured by the annual percentage change in the Jakarta Interbank Spot Dollar Rate (JISDOR), and financial leverage, measured by the natural logarithm of the Debt-to-Equity Ratio (DER). Foreign ownership, measured as the percentage of shares held by foreign investors, was used as the moderating variable. Data were analyzed using Moderated Regression Analysis (MRA) with SPSS after satisfying the classical assumption tests, including normality, multicollinearity, heteroscedasticity, and autocorrelation.

Findings: The results indicate that the exchange rate has no significant effect on ROA ($p = 0.427$), leading to the rejection of H1. Financial leverage has a significant negative effect on ROA ($p = 0.022$; coefficient = -1.682), supporting H2. Foreign ownership does not moderate the relationship between the exchange rate and ROA ($p = 0.732$) or between financial leverage and ROA ($p = 0.334$), resulting in the rejection of H3 and H4. However, foreign ownership has a significant positive direct effect on ROA ($p = 0.018$; coefficient = 0.060), representing an additional finding. The proposed model explains 11.1% of the variation in ROA, with an Adjusted R^2 of 0.053.

Practical implications: Manufacturing companies should maintain financial leverage at an optimal level to minimize interest expenses and reduce the risk of financial distress. Increasing foreign ownership may improve corporate profitability through knowledge transfer, technological advancement, and enhanced corporate governance. In addition, investors may consider foreign ownership as a complementary indicator when evaluating corporate performance.

Originality/value: This study integrates Pecking Order Theory, Agency Theory, and Resource Dependence Theory to examine the moderating role of foreign ownership in the relationships between the exchange rate, financial leverage, and profitability. Such an integrated framework remains limited in the existing literature, particularly in the context of Indonesian manufacturing companies during the 2023–2025 period.

Paper type: Empirical

Keywords: Exchange Rate, Financial Leverage, Foreign Ownership, Profitability, Return On Assets, Manufacturing Companies.

1. Introduction

The manufacturing industry is one of the strategic sectors that plays a significant role in Indonesia's economy. This sector contributes substantially to Gross Domestic Product (GDP), employment generation, export growth, and the enhancement of national economic

competitiveness (Ministry of Industry of the Republic of Indonesia, 2026). According to Statistics Indonesia (2026), the manufacturing sector has consistently been the largest contributor to Indonesia's GDP, with its contribution increasing from 18.67% in 2023 to 19.07% in 2025. The sector also recorded a growth rate of 5.30% in 2025, making it the largest contributor to national economic growth among all sectors. Furthermore, the Ministry of Industry (2026) reported that manufacturing output maintained a positive growth trend over the last three years, reaching 4.64% in 2023, 4.43% in 2024, and increasing to 5.30% in 2025. Despite this positive performance, the sector continues to face several challenges, including global economic uncertainty, inflationary pressures, international supply chain disruptions, and exchange rate fluctuations that may affect production costs and the financial performance of manufacturing firms (Ministry of Industry of the Republic of Indonesia, 2026).

Manufacturing firms are relatively sensitive to exchange rate movements because they rely heavily on imported raw materials, production machinery, and capital goods that are predominantly traded in United States Dollars (USD). According to Bank Indonesia (2026), the Indonesian Rupiah experienced a persistent depreciation from 2021 to 2026, with the Jakarta Interbank Spot Dollar Rate (JISDOR) reaching IDR 17,826 per USD in June 2026. A depreciation of the Rupiah increases the cost of imported inputs and production equipment, thereby raising operating expenses and potentially reducing corporate profitability (Madura, 2023). Profitability represents one of the primary indicators used to evaluate a firm's financial performance, as it reflects the firm's ability to generate earnings from its available resources (Alshammari et al., 2023). In this study, Return on Assets (ROA) is employed as the proxy for profitability because it measures the efficiency with which a company utilizes its total assets to generate profits (Perkasa & Kurniawan, 2025). Sabakodi and Andreas (2024) identified capital structure as one of the determinants affecting the profitability of manufacturing firms, while Setiadi and Lestari (2022) found that foreign ownership has a positive effect on the financial performance of manufacturing companies in Indonesia.

Previous studies examining the relationship between exchange rates and corporate profitability have reported inconclusive findings. Napilah and Ramdani (2025) found that exchange rate fluctuations negatively affected Return on Assets (ROA) of export-oriented manufacturing firms in Indonesia's footwear industry. Badriyah et al. (2025) reported that exchange rates strengthened the effect of ROA on the stock prices of manufacturing companies. In contrast, Kumowal and Lumapow (2022) found that exchange rates had no significant effect on the profitability of manufacturing firms listed on the Indonesia Stock Exchange. Likewise, empirical evidence regarding the relationship between financial leverage and profitability remains mixed. Sabakodi and Andreas (2024) found that the Debt-to-Equity Ratio (DER) had a positive and significant effect on ROA among manufacturing firms during the 2019–2022 period. Del Alpi et al. (2023) also reported a significant relationship between leverage and corporate profitability. Conversely, Saparuddin (2025) found that DER had a negative and significant effect on ROA in manufacturing firms operating in the chemical subsector, while Cita and Apriliani (2025) reported that DER had no significant effect on ROA in manufacturing companies within the basic and chemical industries. Regarding foreign ownership, Setiadi and Lestari (2022) found that foreign ownership positively affected ROA in Indonesian manufacturing firms. Similarly, Perkasa and Kurniawan (2025) reported a positive and significant relationship between foreign ownership and ROA among companies included in the LQ45 Index. Agusti and Tjahjono (2024) further demonstrated that foreign ownership strengthened the relationship between financial performance, capital structure, and firm value. However, Setiawan and Kurniawati (2023) found that foreign ownership had no significant effect on the financial performance of manufacturing firms. Moreover, empirical studies investigating the moderating role of foreign ownership in the relationship between exchange rates and profitability, as well as between financial leverage and profitability, remain limited

(Agusti & Tjahjono, 2024). Based on these research gaps, this study examines whether foreign ownership moderates the effects of exchange rates and financial leverage on the profitability of Indonesian manufacturing firms during the 2023–2025 period.

Based on the identified research background and gaps, this study aims to examine the effect of exchange rates on the profitability of Indonesian manufacturing firms, investigate the effect of financial leverage on corporate profitability, analyze the moderating role of foreign ownership in the relationship between exchange rates and profitability, and examine the moderating role of foreign ownership in the relationship between financial leverage and profitability.

This study contributes theoretically by extending the literature on the moderating role of foreign ownership in the relationship between exchange rates, financial leverage, and corporate profitability. Specifically, it integrates the Pecking Order Theory (Myers & Majluf, 1984), Agency Theory (Jensen & Meckling, 1976), and Resource Dependence Theory (Pfeffer & Salancik, 1978) into a single conceptual framework to explain how foreign ownership may influence the relationship between exchange rates, financial leverage, and firm profitability.

From a practical perspective, this study provides insights for corporate managers, investors, and policymakers in understanding the determinants of manufacturing firms' profitability under conditions of global economic volatility, particularly with respect to leverage management and foreign ownership structure.

Based on the analysis of 34 manufacturing firms during the 2023–2025 period, comprising 82 observations after outlier elimination, the results indicate that exchange rates have no significant effect on ROA ($p = 0.427$). Financial leverage, proxied by the Debt-to-Equity Ratio (DER), has a negative and significant effect on ROA ($p = 0.022$; coefficient = -1.682). Foreign ownership does not moderate the relationship between exchange rates and ROA ($p = 0.732$), nor does it moderate the relationship between financial leverage and ROA ($p = 0.334$). Nevertheless, foreign ownership has a positive and significant direct effect on ROA ($p = 0.018$; coefficient = 0.060).

The findings provide practical implications for manufacturing firms to maintain financial leverage at an optimal level in order to minimize interest expenses and the risk of financial distress that may reduce profitability. Firms may also consider increasing the proportion of foreign ownership as a strategy to enhance profitability through knowledge transfer, technological advancement, and improved corporate governance practices. For investors, foreign ownership may serve as an additional indicator when evaluating the future performance of manufacturing firms in Indonesia.

2. Literature Review and Hypotheses Development

2.1 Theoretical Foundation

Pecking Order Theory

The Pecking Order Theory proposed by Myers and Majluf (1984) explains that firms follow a hierarchy of financing preferences by utilizing internal funds first, followed by debt financing, while issuing equity is considered the last alternative. This theory is based on the existence of information asymmetry between managers and investors, which encourages firms to rely on debt when internal funds become insufficient. In the context of this study, exchange rate fluctuations may influence firms' working capital requirements through changes in the cost of imported raw materials and foreign currency liabilities. Consequently, financing decisions become an important factor in determining a firm's ability to maintain profitability (Sabakodi & Andreas, 2024).

Agency Theory

Agency Theory, introduced by Jensen and Meckling (1976), explains that the relationship between shareholders as principals and managers as agents may create agency conflicts due to differences in objectives and information possessed by both parties. The presence of foreign shareholders is expected to improve the effectiveness of corporate monitoring because foreign investors generally possess greater international experience, higher corporate governance standards, and stronger monitoring capabilities than domestic investors. Through these governance mechanisms, foreign ownership can encourage more efficient managerial decision-making and improve the effectiveness of corporate asset management (Agusti & Tjahjono, 2024).

Resource Dependence Theory

Resource Dependence Theory, developed by Pfeffer and Salancik (1978), argues that firms obtain strategic resources through relationships with external parties, including foreign investors. Foreign ownership may provide access to financial capital, advanced technology, international business networks, and superior managerial practices. Consequently, firms with a higher proportion of foreign ownership are expected to have a greater capacity to maintain profitability than firms dominated by domestic investors (Setiadi & Lestari, 2022).

2.2 Literature Review

Corporate Profitability

Profitability refers to a firm's ability to generate earnings by utilizing all available resources during a given period and serves as one of the primary indicators of financial performance (Alshammari et al., 2023). This study employs Return on Assets (ROA) as the proxy for profitability because it reflects a firm's ability to generate net income from all assets employed in its operational activities (Perkasa & Kurniawan, 2025). Vilantika, Handayani, and Putri (2024) found that financial performance, as measured by profitability and solvency, has a significant effect on bond ratings in banking companies, reinforcing the importance of profitability as a key indicator of corporate financial health and creditworthiness. Compared with Return on Equity (ROE), ROA provides a more comprehensive measure because it evaluates the efficiency of all economic resources managed by the firm rather than focusing solely on shareholders' equity (Alshammari et al., 2023).

Exchange Rate and Corporate Profitability

The exchange rate represents the value of one country's currency relative to another country's currency and influences production costs, imported raw material prices, foreign currency liabilities, and export competitiveness (Madura, 2023). Manufacturing firms that rely on imported raw materials tend to experience higher production costs when the Indonesian Rupiah depreciates, which may reduce corporate profitability. Napilah and Ramdani (2025) found that exchange rate fluctuations had a negative relationship with ROA among export-oriented manufacturing firms in Indonesia's footwear industry. Badriyah et al. (2025) reported that exchange rates strengthened the relationship between ROA and the stock prices of manufacturing companies. In contrast, Kumowal and Lumapow (2022) found that exchange rates had no significant effect on the profitability of manufacturing firms listed on the Indonesia Stock Exchange.

Financial Leverage and Corporate Profitability

Financial leverage refers to the extent to which a firm utilizes debt financing to support its operating and investment activities (Brigham & Houston, 2022). In this study, the Debt-to-Equity Ratio (DER) is employed as a proxy for financial leverage because it reflects the proportion of funds provided by creditors relative to shareholders' equity. According to the Pecking Order Theory, firms resort to debt financing when retained earnings are insufficient to finance investment activities (Myers & Majluf, 1984). Excessive reliance on debt may increase financial risk, interest expenses, and the likelihood of financial distress, which may ultimately reduce corporate profitability (Brigham & Houston, 2022). Sabakodi and Andreas (2024) found that DER had a positive and significant effect on ROA among Indonesian manufacturing firms. Similarly, Del Alpi et al. (2023) reported a significant relationship between financial leverage and the financial performance of manufacturing companies. In contrast, Saparuddin (2025) found that DER had a negative effect on ROA because higher debt levels increased interest expenses and financial distress costs. Meanwhile, Cita and Apriliani (2025) reported that DER had no significant effect on ROA among manufacturing firms in the basic and chemical industries. Jihadi, Vilantika, Hashemi, Arifin, Bachtiar, and Sholichah (2021) examined the effect of liquidity, leverage, and profitability on firm value among Indonesian manufacturing firms. Their findings confirmed that leverage and profitability significantly influence firm value, providing empirical support for the relationship between capital structure decisions and corporate financial performance. The study also demonstrated that financial ratios, including leverage and profitability, serve as important determinants of firm value in the Indonesian manufacturing sector.

Foreign Ownership and Corporate Profitability

Foreign ownership refers to the proportion of a company's shares held by foreign individuals or institutional investors (OECD, 2023). According to Agency Theory, the presence of foreign shareholders can mitigate agency conflicts by strengthening corporate monitoring mechanisms (Jensen & Meckling, 1976). Setiadi and Lestari (2022) found that foreign ownership had a positive effect on ROA among Indonesian manufacturing firms. Likewise, Perkasa and Kurniawan (2025) argued that foreign investors could enhance corporate profitability by improving corporate governance quality. Agusti and Tjahjono (2024) further demonstrated that foreign ownership plays a stronger role as a moderating variable than as an independent variable because it strengthens the relationship between capital structure, financial performance, and firm value. However, Setiawan and Kurniawati (2023) found that foreign ownership had no significant effect on the financial performance of manufacturing firms.

2.3 Research Gap

Previous studies have produced inconsistent findings regarding the relationship between exchange rates and corporate profitability. Napilah and Ramdani (2025) reported a negative effect, whereas Kumowal and Lumapow (2022) found no significant relationship. Similar inconsistencies have also been identified in the relationship between financial leverage and profitability. Sabakodi and Andreas (2024) reported a positive effect, Saparuddin (2025) found a negative effect, and Cita and Apriliani (2025) reported no significant relationship. With respect to foreign ownership, most previous studies documented a positive effect on profitability (Setiadi & Lestari, 2022; Perkasa & Kurniawan, 2025), whereas Setiawan and Kurniawati (2023) found no significant effect on corporate financial performance. Furthermore, empirical studies examining the moderating role of foreign ownership in the relationship between exchange rates and profitability, as well as between financial leverage and profitability, remain limited (Agusti & Tjahjono, 2024). Based on these research gaps, this study investigates whether foreign ownership moderates the effects of exchange rates and financial leverage on the profitability of Indonesian manufacturing firms during the 2023–2025 period.

2.4 Hypotheses Development

Exchange rates are macroeconomic factors that may affect production costs, imported raw material prices, and corporate competitiveness, thereby influencing corporate profitability (Madura, 2023). For manufacturing firms, currency depreciation may increase operating costs; however, its impact depends on the firm's reliance on imported inputs and the risk management strategies implemented. Adilla (2021) found that exchange rates had no significant effect on the performance of manufacturing firms. Similar findings were reported by Ashwa (2023), who concluded that exchange rates had no significant effect on the stock prices of manufacturing companies. Furthermore, *Firm Value Determination with Inflation and Exchange Rate as a Moderating Variable* (2021) also reported that exchange rates did not have a significant effect in the estimated model. Based on these arguments, the first hypothesis is formulated as follows.

H1: Exchange rates affect corporate profitability.

Financial leverage reflects the use of debt as a source of corporate financing. According to the Pecking Order Theory, firms rely on debt financing when internal funds are insufficient to finance investment activities (Myers & Majluf, 1984). Higher debt levels may increase interest expenses and financial risk, thereby affecting corporate profitability. Junaidi and Muksal (2021) demonstrated that the Debt-to-Equity Ratio (DER) had a significant effect on Return on Assets (ROA). Anggraeni and Banani (2021) also found that financial leverage significantly affected corporate performance. These findings are further supported by other studies on Indonesian manufacturing firms showing that DER influences ROA through higher financing costs and increased financial distress risk. Based on these arguments, the second hypothesis is formulated as follows.

H2: Financial leverage affects corporate profitability.

Foreign ownership reflects the proportion of company shares held by foreign investors and is expected to improve corporate governance through more effective monitoring mechanisms (Jensen & Meckling, 1976). However, the moderating role of foreign ownership in the relationship between exchange rates and corporate profitability remains inconclusive. Syafrizal and Farabi (2023) found that foreign ownership and exchange rates had no significant effect on corporate decisions. Likewise, Setiawan and Kurniawati (2023) reported that foreign ownership had no significant effect on the financial performance of manufacturing firms. In addition, Olugbenga et al. (2025) found that the interaction between foreign ownership and exchange rates did not produce a consistent effect on corporate profitability. Based on these arguments, the third hypothesis is formulated as follows.

H3: Foreign ownership moderates the effect of exchange rates on corporate profitability.

According to Agency Theory, foreign ownership is expected to improve the effectiveness of monitoring corporate financing decisions, thereby influencing the relationship between financial leverage and profitability. However, empirical evidence regarding this moderating role remains inconclusive. Setiadi and Lestari (2022) found that foreign ownership affected corporate performance but did not moderate the relationship between leverage and profitability. Okeke et al. (2025) reported that foreign ownership influenced leverage practices without strengthening the relationship between leverage and profitability. Similar findings were reported by *The Ownership Structure in Building Financial Performance Using Leverage as a Mediation Variable* (2023), which showed that foreign ownership had a stronger influence on financing structure than as a moderating variable. Based on these arguments, the fourth hypothesis is formulated as follows.

H4: Foreign ownership moderates the effect of financial leverage on corporate profitability.

Based on the Pecking Order Theory and Agency Theory, corporate profitability is influenced by both external and internal factors related to firms' operational conditions and financing decisions. Exchange rates may influence profitability through changes in production costs and foreign currency liabilities, whereas financial leverage reflects the use of debt, which may either enhance or reduce a firm's ability to generate profits. In addition, foreign ownership

is expected to improve monitoring effectiveness, corporate governance quality, and firms' access to strategic resources and international business networks. However, previous empirical studies have reported mixed findings regarding the relationships among these variables. Therefore, this study examines the effects of exchange rates and financial leverage on corporate profitability, as well as the moderating role of foreign ownership in manufacturing firms listed on the Indonesia Stock Exchange during the 2023–2025 period. Based on the foregoing discussion, the hypotheses of this study are formulated as follows.

H1: Exchange rates affect corporate profitability.

H2: Financial leverage affects corporate profitability.

H3: Foreign ownership moderates the effect of exchange rates on corporate profitability.

H4: Foreign ownership moderates the effect of financial leverage on corporate profitability.

3. Research Method

3.1 Research Design

This study employed a quantitative approach using an explanatory research design to examine the causal relationships between exchange rate, financial leverage, and corporate profitability, as well as to investigate the moderating role of foreign ownership. A quantitative approach was selected because it enables hypothesis testing and explains causal relationships among variables using numerical data obtained from corporate financial statements and macroeconomic indicators (Hair et al., 2022). The study utilized secondary panel data, which combine cross-sectional and time-series observations. The cross-sectional data consisted of manufacturing companies listed on the Indonesia Stock Exchange (IDX), while the time-series data covered the 2023–2025 observation period. The use of panel data provides a larger number of observations, improves parameter estimation efficiency, and controls for unobservable firm-specific heterogeneity (Wooldridge, 2021).

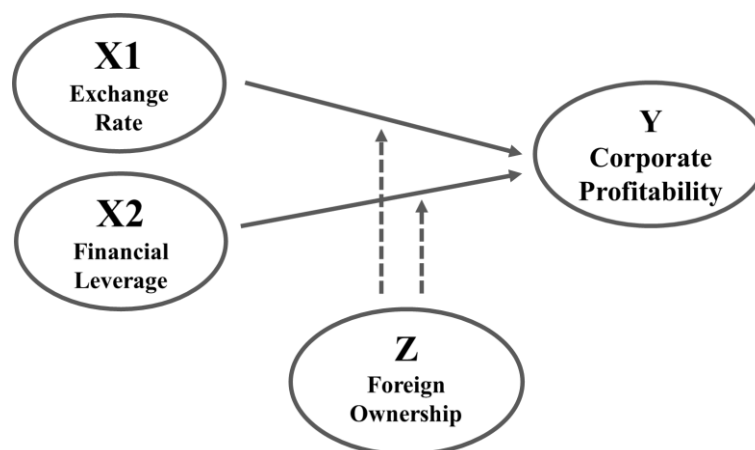


Figure 1. Research Conceptual Framework

Source: Authors' own creation

3.2 Population and Sample

The population of this study consisted of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2023–2025 period. The manufacturing sector was selected because it plays a substantial role in Indonesia's economy and exhibits operational

characteristics that are highly affected by macroeconomic conditions, particularly exchange rate fluctuations. Furthermore, manufacturing firms have diverse financing structures and ownership compositions, making them appropriate for examining the relationships among exchange rate, financial leverage, foreign ownership, and corporate profitability.

The sample was determined using purposive sampling, whereby companies were selected based on specific criteria aligned with the objectives of the study (Sekaran & Bougie, 2020). The sampling criteria were as follows: (1) manufacturing companies listed on the Indonesia Stock Exchange throughout the 2023–2025 period; (2) companies that published complete annual reports during the observation period; (3) companies that disclosed foreign ownership information in their annual reports or other official sources; (4) companies with complete data on Return on Assets (ROA), Debt-to-Equity Ratio (DER), and other variables required in this study; and (5) companies that were not delisted, permanently suspended, or reclassified into another sector during the observation period. Based on these criteria, 34 manufacturing companies were selected, resulting in 102 firm-year observations (34 companies $\times$ 3 years).

3.3 Research Variables and Operational Definitions

Return on Assets (ROA).

The dependent variable in this study is corporate profitability, proxied by Return on Assets (ROA). ROA measures a firm's ability to generate net income from its total assets. It is calculated using the following formula:

$$ROA = \left(\frac{\text{Net Income}}{\text{Total Assets}} \right) \times 100\%$$

A higher ROA indicates that a company utilizes its assets more efficiently to generate profits (Brigham & Ehrhardt, 2022).

Exchange Rate

The first independent variable is the exchange rate, represented by the annual percentage change in the Indonesian Rupiah against the United States Dollar based on the Jakarta Interbank Spot Dollar Rate (JISDOR) published by Bank Indonesia. The exchange rate is calculated as follows:

$$\text{Exchange Rate} = \left(\frac{JISDOR_t - JISDOR_{t-1}}{JISDOR_{t-1}} \right) \times 100\%$$

The exchange rate variable is expressed as an annual percentage change, where a negative value indicates Rupiah appreciation, while a positive value indicates Rupiah depreciation against the U.S. Dollar.

Debt-to-Equity Ratio (DER)

The second independent variable is financial leverage, proxied by the Debt-to-Equity Ratio (DER). DER measures the proportion of debt financing relative to shareholders' equity in a firm's capital structure. The ratio is calculated using the following formula:

$$DER = \left(\frac{\text{Total Liabilities}}{\text{Total Equity}} \right) \times 100\%$$

A higher DER indicates greater reliance on external financing through debt (Brigham & Ehrhardt, 2022). In this study, the DER variable was transformed using the natural logarithm, LN(DER), to address heteroscedasticity detected during the classical assumption tests.

Foreign Ownership (FO)

he moderating variable in this study is foreign ownership (FO), defined as the percentage of outstanding shares held by foreign investors. It is calculated as follows:

$$FO = \left(\frac{\text{Foreign} - \text{Owned Shares}}{\text{Total Outstanding Shares}} \right) \times 100\%$$

Foreign ownership data were obtained from companies' annual reports and share ownership records published by the Indonesia Stock Exchange (IDX) and the Indonesia Central Securities Depository (KSEI) (Setiadi & Lestari, 2022).

3.4 Data Collection Procedure

This study employed secondary data collected using the documentation method. The data were obtained from annual reports, financial statements, corporate share ownership reports, and official publications issued by government institutions and capital market authorities. Company data were collected from annual reports and financial statements available on the official website of the Indonesia Stock Exchange (www.idx.co.id) and the respective companies' official websites. Exchange rate data were obtained from the Jakarta Interbank Spot Dollar Rate (JISDOR) published by Bank Indonesia. Foreign ownership data were collected from annual reports, share ownership records published by the Indonesia Central Securities Depository (KSEI), and other reliable official sources.

The data collection process consisted of identifying companies that met the sampling criteria, collecting annual reports and financial statements, obtaining JISDOR exchange rate data from Bank Indonesia, collecting foreign ownership data from annual reports and KSEI publications, compiling all observations into a panel dataset, and verifying data completeness before statistical analysis.

3.5 Data Analysis Technique

The data were analyzed using SPSS software. The analysis began with descriptive statistics to summarize the characteristics of each research variable through the mean, maximum, minimum, and standard deviation values. The second stage involved classical assumption tests, including the One-Sample Kolmogorov–Smirnov Test for normality, Tolerance and Variance Inflation Factor (VIF) for multicollinearity, the Glejser test for heteroscedasticity, and the Durbin–Watson test for autocorrelation (Gujarati & Porter, 2021). These tests were conducted to ensure that the regression model satisfied the underlying assumptions and produced unbiased and reliable estimation results (Wooldridge, 2021).

The third stage employed Moderated Regression Analysis (MRA) to examine both the direct effects and interaction effects among the research variables. Before constructing the interaction terms, all interacting variables were mean-centered to reduce the potential for multicollinearity between the main effects and the interaction terms (Hayes, 2022). Two interaction variables were created: INT1 (Exchange Rate $\times$ Foreign Ownership) and INT2 (LN(DER) $\times$ Foreign Ownership). The regression model is specified as follows:

$$ROA = \beta_0 + \beta_1(CX1) + \beta_2(CLN_X2) + \beta_3(CZ) + \beta_4(INT1) + \beta_5(INT2) + \varepsilon$$

where:

- ROA = Corporate profitability
- CX1 = Mean-centered exchange rate
- CLN_X2 = Mean-centered LN(DER)
- CZ = Mean-centered foreign ownership
- INT1 = CX1 $\times$ CZ
- INT2 = CLN_X2 $\times$ CZ

- β_0 = Constant
- β_1 – β_5 = Regression coefficients
- ε = Error term

The final stage consisted of hypothesis testing, including the t-test (partial test) to examine the individual effects of each independent variable on profitability, the F-test (simultaneous test) to evaluate the joint effect of all independent variables, and the coefficient of determination (Adjusted R^2) to assess the explanatory power of the regression model (Gujarati & Porter, 2021). A hypothesis was accepted when the p-value was less than the 5% significance level ($\alpha = 0.05$). Conversely, a hypothesis was rejected when the p-value exceeded 0.05.

4. Result and Discussion

4.1 Overview of the Research Object

This study was conducted on manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2023–2025 period. The manufacturing sector was selected because it is one of the major contributors to Indonesia's economy and possesses operational characteristics that are affected by changes in macroeconomic conditions, particularly exchange rate fluctuations. Furthermore, manufacturing firms exhibit diverse financing structures and ownership compositions, making them appropriate for examining the relationships among exchange rate, financial leverage, foreign ownership, and corporate profitability.

The study employed secondary data obtained from the annual reports and financial statements of manufacturing companies published by the Indonesia Stock Exchange and the respective companies' official websites. Exchange rate data were obtained from Bank Indonesia using the annual percentage change in the Jakarta Interbank Spot Dollar Rate (JISDOR), while foreign ownership data were collected from the share ownership information disclosed in the companies' annual reports.

The sample was selected using purposive sampling based on the criteria described in Chapter III. A total of 34 manufacturing companies met the sampling criteria during the 2023–2025 period, resulting in 102 firm-year observations (34 companies $\times$ 3 years). Subsequently, outlier identification was conducted using statistical procedures, resulting in 20 observations being classified as outliers and excluded from the analysis. Consequently, the final dataset consisted of 82 observations used in the subsequent analyses.

4.2 Research Results

4.2.1 Descriptive Statistics Analysis

Descriptive statistical analysis was performed to describe the characteristics of each research variable, including the minimum, maximum, mean, and standard deviation values. The variables analyzed consisted of Exchange Rate (X1), measured as the annual percentage change; Financial Leverage (X2), proxied by the Debt-to-Equity Ratio (DER); Return on Assets (ROA) as the dependent variable; and Foreign Ownership (Z).

Table 4.1 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
X1 (Exchange Rate, %)	82	-4.65	0.98	-2.3566	2.46408
Y (ROA, %)	82	-4.53	20.00	7.0720	5.33177
Z (Foreign Ownership, %)	82	0.01	92.52	29.3724	31.03838
X2 (DER, times)	82	0.00	5.06	3.4646	1.25461

Source: Authors' calculations based on SPSS output (2026).

Based on Table 4.1, all research variables consisted of 82 observations. The exchange rate variable (X1) had a mean value of -2.3566% , with a standard deviation of 2.46408, a minimum value of -4.65% , and a maximum value of 0.98% . The negative mean indicates that, on average, the Indonesian Rupiah appreciated against the U.S. Dollar during the 2023–2025 period. However, the observed range from -4.65% to 0.98% indicates considerable variation in exchange rate movements across the observation period. The profitability variable (ROA) had a mean value of 7.0720% , a standard deviation of 5.33177, a minimum value of -4.53% , and a maximum value of 20.00% . The relatively high standard deviation indicates substantial variation in profitability among manufacturing firms. Some firms experienced negative profitability, whereas others generated ROA of up to 20.00% . The foreign ownership variable (Z) recorded a mean value of 29.3724% , with a standard deviation of 31.03838, a minimum value of 0.01% , and a maximum value of 92.52% . The large standard deviation indicates considerable variation in foreign ownership across manufacturing firms, ranging from companies almost entirely owned by domestic investors to those predominantly owned by foreign investors. The leverage variable (DER) had a mean value of 3.4646, a standard deviation of 1.25461, a minimum value of 0.00, and a maximum value of 5.06. The average DER indicates that manufacturing firms relied on debt financing approximately 3.46 times their equity during the observation period.

4.2.2 Classical Assumption Tests

Classical assumption tests were conducted to ensure that the regression model satisfied the underlying assumptions before hypothesis testing using Moderated Regression Analysis (MRA). The tests included normality, multicollinearity, heteroscedasticity, and autocorrelation tests.

4.2.2.1 Normality Test

The normality test was performed using the One-Sample Kolmogorov–Smirnov Test on the regression residuals to determine whether the residuals followed a normal distribution.

Table 4.2 Normality Test Results

Variable	Test Statistic	Asymp. Sig. (2-tailed)
Unstandardized Residual	0.060	0.200

Source: Authors' calculations based on SPSS output (2026).

As presented in Table 4.2, the Asymp. Sig. (2-tailed) value was 0.200, which is greater than the significance level of 0.05. Therefore, the regression residuals are normally distributed, indicating that the normality assumption has been satisfied.

4.2.2.2 Multicollinearity Test

The multicollinearity test was conducted to examine whether a high correlation existed among the independent variables. The assessment was based on the **Tolerance** and **Variance Inflation Factor (VIF)** values.

Table 4.3 Multicollinearity Test Results

Variable	Tolerance	VIF
X1 (Exchange Rate)	1.000	1.000
Z (Foreign Ownership)	0.852	1.174
X2 (DER)	0.852	1.174

Source: Authors' calculations based on SPSS output (2026).

Based on Table 4.3, all independent variables had tolerance values above 0.10 and VIF values below 10. Therefore, the regression model does not exhibit multicollinearity.

4.2.2.3 Heteroscedasticity Test

The heteroscedasticity test was conducted using the Glejser method, in which the absolute residual values were regressed on the independent variables. The initial test indicated heteroscedasticity because the DER variable produced a significance value of 0.000. To address

this issue, the DER variable was transformed using the natural logarithm [LN(DER)], after which the heteroscedasticity test was repeated.

Table 4.4 Glejser Heteroscedasticity Test Results

Model	B	Std. Error	Beta	t	Sig.
(Constant)	5.176	1.048	—	4.940	.000
X1	-0.017	0.138	-0.014	-0.123	.903
Z	0.008	0.012	0.080	0.660	.511
X2	-0.411	0.294	-0.170	-1.400	.166

Source: Authors' calculations based on SPSS output (2026).

The significance values for the exchange rate, LN(DER), and foreign ownership variables were 0.903, 0.166, and 0.511, respectively, all exceeding 0.05. Therefore, the regression model is free from heteroscedasticity. The natural logarithm transformation successfully resolved the heteroscedasticity problem.

4.2.2.4 Autocorrelation Test

The autocorrelation test was conducted using the **Durbin–Watson test** to determine whether serial correlation existed among the regression residuals. Prior to the final analysis, the dataset was arranged chronologically according to the observation years (2023, 2024, and 2025) to maintain the consistency of panel observations.

Table 4.5 Durbin–Watson Test Results

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
0.314	0.099	0.064	5.15848	2.078

Source: Authors' calculations based on SPSS output (2026).

The Durbin–Watson statistic was 2.078, which is close to 2, indicating the absence of autocorrelation in the regression model. Therefore, the autocorrelation assumption has been satisfied.

4.3 Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) was employed to examine the effects of Exchange Rate and Financial Leverage on Return on Assets (ROA), with Foreign Ownership serving as the moderating variable. Before constructing the interaction terms, all interacting variables were mean-centered to minimize potential multicollinearity between the main effects and the interaction terms. Two interaction variables were generated: INT1 (Exchange Rate × Foreign Ownership) and INT2 [LN(DER) × Foreign Ownership]. The regression model included five independent variables: Exchange Rate (CX1), LN(DER) (CLN_X2), Foreign Ownership (CZ), INT1, and INT2.

4.3.1 Coefficient of Determination (R²)

Table 4.6 MRA Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
0.333	0.111	0.053	5.18967	2.052

Source: Authors' calculations based on SPSS output (2026).

The results indicate an R Square value of 0.111 and an Adjusted R Square value of 0.053. This implies that 11.1% of the variation in Return on Assets (ROA) can be explained by Exchange Rate, LN(DER), Foreign Ownership, and the interaction variables included in the model, whereas the remaining 88.9% is explained by other factors outside the model, such as firm size, sales growth, inflation, interest rates, operational efficiency, and production costs.

4.3.2 Simultaneous Test (F-test)

Table 4.7 ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	255.773	5	51.155	1.899	0.104
Residual	2046.880	76	26.933		
Total	2302.653	81			

Source: Authors' calculations based on SPSS output (2026).

The F-test produced a significance value of **0.104**, which exceeds the **0.05** significance level. Therefore, Exchange Rate, LN(DER), Foreign Ownership, and the interaction variables do not jointly have a statistically significant effect on Return on Assets (ROA). These findings indicate that, collectively, the independent variables included in the model are insufficient to explain the variation in manufacturing firms' profitability.

4.3.3 Partial Test (t-test) and Regression Equation

Table 4.8 Coefficients Test Results

Variable	B	Std. Error	t	Sig.
(Constant)	7.439	0.688	10.806	0.000
CX1 (Exchange Rate)	0.187	0.234	0.798	0.427
CLN_X2 [LN(DER)]	-1.682	0.717	-2.344	0.022
CZ (Foreign Ownership)	0.060	0.025	2.418	0.018
INT1 (CX1 × CZ)	-0.003	0.008	-0.344	0.732
INT2 (CLN_X2 × CZ)	-0.025	0.026	-0.972	0.334

Source: Authors' calculations based on SPSS output (2026).

Based on Table 4.8, the regression equation is expressed as follows:

$$ROA = 7,439 + 0,187(CX1) - 1,682(CLN_X2) + 0,060(CZ) - 0,003(INT1) - 0,025(INT2) + e$$

The regression equation indicates that LN(DER) has a negative regression coefficient (-1.682), whereas Exchange Rate (0.187) and Foreign Ownership (0.060) have positive coefficients. Both interaction terms, INT1 and INT2, have negative coefficients.

The partial test results indicate that:

1. Exchange Rate has a significance value of 0.427 (> 0.05), indicating that it does not significantly affect Return on Assets (ROA).
2. LN(DER) has a significance value of 0.022 (< 0.05) with a negative coefficient (-1.682), indicating a significant negative effect on Return on Assets (ROA).
3. Foreign Ownership has a significance value of 0.018 (< 0.05) with a positive coefficient (0.060), indicating a significant positive effect on Return on Assets (ROA).
4. The interaction between Exchange Rate and Foreign Ownership has a significance value of 0.732 (> 0.05), indicating that Foreign Ownership does not moderate the relationship between Exchange Rate and Return on Assets.
5. The interaction between **LN(DER) and Foreign Ownership** has a significance value of **0.334** (> 0.05), indicating that Foreign Ownership does not moderate the relationship between Financial Leverage and Return on Assets.

4.4 Discussion

4.4.1 The Effect of Exchange Rate on Corporate Profitability (H1)

The hypothesis testing results indicate that the exchange rate does not have a significant effect on Return on Assets (ROA), as evidenced by a significance value of 0.427 (> 0.05). Therefore, H1, which proposes that the exchange rate affects corporate profitability, is rejected. This finding suggests that fluctuations in the Indonesian Rupiah against the United States

Dollar during the 2023–2025 period did not exert a sufficiently strong influence on the ability of manufacturing firms to generate profits from their total assets. The insignificant effect may be attributed to the varying degrees of exchange rate exposure among manufacturing firms. Not all firms rely heavily on imported raw materials, and some may have implemented hedging strategies to mitigate foreign exchange risk (Madura, 2023). Furthermore, the average annual exchange rate change during the observation period was negative (-2.3566%), indicating that the Rupiah appreciated on average against the U.S. Dollar, thereby reducing pressure on production costs compared with previous periods characterized by continuous currency depreciation.

These findings can be explained through the perspectives of Pecking Order Theory (Myers & Majluf, 1984) and Resource Dependence Theory (Pfeffer & Salancik, 1978). According to Pecking Order Theory, firms prioritize internal financing over debt and equity financing. Consequently, exchange rate fluctuations do not necessarily lead firms to alter their capital structure because financing decisions are primarily determined by internal funding availability and long-term investment requirements rather than short-term exchange rate movements (Sabakodi & Andreas, 2024). Meanwhile, Resource Dependence Theory argues that firms obtain strategic resources through relationships with external stakeholders, including access to alternative suppliers and global supply networks (Pfeffer & Salancik, 1978). Manufacturing firms with lower dependence on imported raw materials or greater flexibility in sourcing domestic inputs are better positioned to absorb exchange rate volatility, thereby minimizing its impact on production costs and profitability. Collectively, these theoretical perspectives explain why exchange rate movements do not necessarily exert a direct and significant influence on corporate profitability, as internal financial policies and resource management strategies play a more dominant role in determining financial performance.

The present findings are consistent with previous empirical studies reporting that exchange rates do not significantly influence corporate profitability or financial performance in manufacturing firms. Kumowal and Lumapow (2022), examining Indonesian manufacturing companies during the 2017–2020 period, concluded that exchange rate fluctuations had no significant effect on profitability and were unable to mediate stock returns through profitability. Similarly, Apriliani, Suhono, Pardistya, and Megawati (2026), who investigated manufacturing firms included in the LQ45 Index during 2020–2024, found that the Rupiah exchange rate had no significant partial effect on stock prices, indicating that short-term exchange rate fluctuations do not directly affect investors' valuation of manufacturing firms. Likewise, Adilla (2021) reported that exchange rate sensitivity failed to influence the stock prices of manufacturing companies listed on the Indonesia Stock Exchange. Another study examining the effects of inflation, exchange rates, liquidity, and profitability on manufacturing firms' stock prices during the 2019–2022 period also confirmed that exchange rates had no significant partial effect on stock prices, suggesting that Rupiah fluctuations do not directly influence market valuation. Overall, the findings reinforce empirical evidence that exchange rates are not the primary determinant of manufacturing firms' profitability in Indonesia, whereas firm-specific factors, such as operational efficiency and capital structure, play a more substantial role.

4.4.2 The Effect of Financial Leverage on Corporate Profitability (H2)

The hypothesis testing results demonstrate that financial leverage, measured by the Debt-to-Equity Ratio (DER), has a significant negative effect on Return on Assets (ROA), with a significance value of 0.022 (< 0.05) and a regression coefficient of -1.682 . Accordingly, H2, which states that financial leverage affects corporate profitability, is accepted. This finding indicates that higher reliance on debt financing tends to reduce the ability of Indonesian manufacturing firms to generate profits from their total assets. The sample firms recorded an average DER of 3.4646, suggesting a relatively high dependence on debt financing. Such a

high debt proportion increases interest expenses that must be borne by firms, thereby reducing net income available to shareholders. Moreover, excessive debt exposure elevates the risk of financial distress because firms are required to meet greater debt obligations, ultimately leading to lower profitability (Brigham & Houston, 2022).

These findings can be interpreted through the lenses of Pecking Order Theory (Myers & Majluf, 1984) and Agency Theory (Jensen & Meckling, 1976). From the perspective of Pecking Order Theory, firms prioritize internal financing before resorting to debt and finally equity issuance. Debt financing is generally employed only when retained earnings are insufficient to finance investment opportunities. However, excessive debt utilization increases interest expenses and bankruptcy risk, which eventually reduces profitability (Myers & Majluf, 1984; Sabakodi & Andreas, 2024). Agency Theory further explains that high leverage may intensify agency conflicts between managers and creditors. Managers may undertake riskier investment decisions to satisfy debt obligations, while creditors impose stricter monitoring mechanisms that reduce managerial flexibility in operational decision-making (Jensen & Meckling, 1976). Together, these theories explain why higher leverage tends to reduce corporate profitability, as the financial costs and risks associated with excessive debt outweigh the potential tax benefits derived from debt financing.

The findings are consistent with several previous studies reporting a significant negative relationship between leverage and manufacturing firms' profitability. Khalifaturrofi'ah and Setiawan (2024), based on a sample of 134 Indonesian manufacturing firms during 2018–2023, concluded that leverage had a statistically significant negative effect on corporate profitability. Similarly, Antoni and Jannah (2024), examining 60 manufacturing firms over the 2020–2024 period, found that the Debt-to-Equity Ratio negatively and significantly affected profitability, indicating that excessive reliance on debt financing suppresses corporate earnings. The negative effect of leverage on profitability is consistent with Jihadi et al. (2021), who found that leverage significantly affects firm value through its impact on corporate profitability in Indonesian manufacturing firms. Their study, which examined 22 LQ45 companies during the 2014–2019 period, confirmed that leverage and profitability are significant determinants of firm value. Similarly, Vilantika, Handayani, and Putri (2024) demonstrated that financial performance, including profitability and solvency, significantly influences bond ratings, further reinforcing the importance of financial performance in corporate assessments. Other studies on manufacturing firms listed on the Indonesia Stock Exchange have likewise confirmed that leverage exerts a significant negative influence on profitability, implying that higher debt relative to equity reduces firms' financial performance. Additional evidence from Indonesian manufacturing companies during the 2021–2023 period also demonstrates that increasing leverage deteriorates corporate profitability by increasing financing costs and financial risk. Overall, the findings strengthen empirical evidence that financial leverage is an important determinant of manufacturing firms' profitability in Indonesia, where excessive debt financing tends to reduce firms' ability to generate sustainable earnings.

4.4.3 The Moderating Role of Foreign Ownership in the Relationship between Exchange Rate and Corporate Profitability (H3)

The hypothesis testing results indicate that foreign ownership does not moderate the effect of the exchange rate on Return on Assets (ROA), as reflected by the significance value of the interaction term INT1 (Exchange Rate $\times$ Foreign Ownership) of 0.732 (> 0.05). Therefore, H3, which proposes that foreign ownership moderates the relationship between the exchange rate and corporate profitability, is rejected. This finding suggests that the presence of foreign investors in a firm's ownership structure is unable to strengthen or weaken the relationship between exchange rate fluctuations and the profitability of manufacturing firms. The insignificant moderating effect may be attributed to the fact that foreign ownership does not automatically enhance a firm's ability to manage exchange rate risk. This is evidenced by

the substantial variation in foreign ownership across firms, ranging from 0.01% to 92.52%, with a relatively high standard deviation (31.03838), indicating that the influence of foreign shareholders is not uniformly distributed across the sampled firms. Furthermore, foreign investors may not be directly involved in firms' day-to-day operational risk management, including short-term foreign exchange risk mitigation strategies (Syafrizal & Farabi, 2023).

These findings can be explained through the perspectives of Agency Theory (Jensen & Meckling, 1976) and Resource Dependence Theory (Pfeffer & Salancik, 1978). According to Agency Theory, foreign shareholders are expected to improve managerial monitoring through stronger corporate governance mechanisms. However, enhanced monitoring does not necessarily translate into improved exchange rate risk management, as decisions related to hedging and financial risk management are primarily technical and operational in nature and generally fall outside the routine oversight responsibilities of foreign investors (Jensen & Meckling, 1976). Meanwhile, Resource Dependence Theory suggests that firms acquire strategic resources through relationships with external stakeholders, including access to international networks, capital, and advanced technologies (Pfeffer & Salancik, 1978). Nevertheless, access to these strategic resources does not automatically increase a firm's ability to respond effectively to exchange rate fluctuations because the benefits of foreign ownership—such as technology transfer and managerial expertise—are typically long-term and structural rather than tactical responses to short-term currency volatility. Collectively, these theoretical perspectives explain why foreign ownership does not significantly moderate the relationship between exchange rate movements and corporate profitability, as foreign investors primarily contribute to long-term corporate governance and strategic development rather than short-term exchange rate risk management.

The present findings are consistent with several previous studies reporting that foreign ownership does not play a significant moderating role in the relationship between exchange rates and corporate financial performance. Syafrizal and Farabi (2023), examining manufacturing companies listed on the Indonesia Stock Exchange during the 2017–2021 period, found that foreign ownership and exchange rates had no significant effect on transfer pricing decisions, suggesting that foreign ownership does not substantially influence firms' responses to exchange rate fluctuations. Similarly, Olugbenga, Ekwe, and Nwobu (2025), studying listed industrial goods firms in Nigeria, reported that the interaction between foreign ownership and exchange rate fluctuations did not consistently influence ROA. Their findings indicated that exchange rate volatility weakened the positive effect of managerial ownership on profitability, implying that the moderating role of foreign ownership is not consistently significant. Furthermore, another study on Indonesian manufacturing firms reported that foreign ownership failed to moderate the effect of the Rupiah exchange rate on stock prices, indicating that macroeconomic variables and ownership structure do not necessarily exert a direct influence on corporate financial performance (Cita & Apriliani, 2025). Overall, the findings strengthen empirical evidence that foreign ownership is not a significant moderating variable in the relationship between exchange rate fluctuations and the profitability of Indonesian manufacturing firms, and that the effectiveness of foreign ownership largely depends on firm-specific characteristics and industry conditions.

4.4.4 The Moderating Role of Foreign Ownership in the Relationship between Financial Leverage and Corporate Profitability (H4)

The hypothesis testing results indicate that foreign ownership does not moderate the effect of financial leverage on Return on Assets (ROA), as indicated by the significance value of the interaction term INT2 ($\text{LN_DER} \times \text{Foreign Ownership}$) of 0.334 (> 0.05). Accordingly, H4, which proposes that foreign ownership moderates the relationship between financial leverage and corporate profitability, is rejected. This finding suggests that the presence of foreign investors within a firm's ownership structure is unable to strengthen or weaken the

relationship between debt financing and a firm's ability to generate profits. The insignificant moderating effect may be explained by the limited involvement of foreign investors in firms' day-to-day financing decisions, resulting in a relatively weak influence on the leverage–profitability relationship. In addition, the considerable variation in foreign ownership across firms, ranging from 0.01% to 92.52%, indicates that the influence of foreign shareholders is highly heterogeneous, making the moderating effect statistically inconsistent across the sample.

These findings can be interpreted through the perspectives of Agency Theory (Jensen & Meckling, 1976) and Resource Dependence Theory (Pfeffer & Salancik, 1978). From the standpoint of Agency Theory, foreign shareholders are expected to improve managerial oversight through stronger corporate governance mechanisms, thereby encouraging more efficient financing decisions. However, improved monitoring does not necessarily translate into an enhanced ability to moderate the relationship between leverage and profitability because capital structure decisions are largely influenced by firm-specific factors, including investment opportunities, cash flow availability, and capital market conditions (Setiawan & Kurniawati, 2023). Meanwhile, Resource Dependence Theory argues that firms obtain strategic resources through relationships with external stakeholders, including access to capital, international business networks, and advanced managerial capabilities (Pfeffer & Salancik, 1978). Nevertheless, these strategic resources do not directly alter the manner in which leverage affects profitability because the benefits associated with foreign ownership, such as technology transfer and managerial expertise, are primarily structural and long-term rather than directly related to short-term debt management. Together, these theoretical perspectives explain why foreign ownership does not significantly moderate the relationship between financial leverage and profitability, as the role of foreign investors is primarily associated with overall corporate governance and long-term strategic development rather than operational financing decisions.

The findings are consistent with previous empirical studies reporting that foreign ownership does not play a significant moderating role in the relationship between leverage and corporate financial performance. Setiadi and Lestari (2022), examining Indonesian manufacturing firms, found that foreign ownership had a positive effect on ROA but failed to moderate the relationship between leverage and profitability, suggesting that foreign ownership functions more effectively as an independent variable than as a moderating variable. Likewise, Nurshalihah, Imronudin, Sholahuddin, Wiyadi, and Haryanto (2023), investigating Sharia-compliant manufacturing firms during the 2016–2021 period, found that leverage significantly mediated the relationship between foreign ownership and financial performance. However, their study did not provide evidence that foreign ownership directly moderated the leverage–profitability relationship, implying that the influence of foreign ownership on financial performance is more likely to occur indirectly through leverage rather than through a moderating mechanism. Similarly, studies examining ownership structure and leverage in Indonesian manufacturing firms reported that although foreign ownership and leverage individually influence profitability, no evidence was found that foreign ownership moderates the relationship between leverage and profitability (Setiawan & Kurniawati, 2023). Overall, the present findings reinforce empirical evidence that foreign ownership is not a significant moderating variable in the relationship between financial leverage and the profitability of Indonesian manufacturing firms. Instead, its contribution to corporate financial performance appears to be more direct than contingent upon leverage-related interactions.

4.4.5 Direct Effect of Foreign Ownership on Corporate Profitability

Although not originally hypothesized, the results indicate that foreign ownership has a positive and statistically significant effect on Return on Assets (ROA), with a significance value of 0.018 (< 0.05) and a regression coefficient of 0.060. This finding supports the studies of Setiadi and Lestari (2022), who reported that foreign ownership positively affects ROA

among Indonesian manufacturing firms, and Perkasa and Kurniawan (2025), who argued that the presence of foreign investors enhances corporate profitability through improvements in corporate governance quality.

This positive and significant relationship can be explained by Resource Dependence Theory (Pfeffer & Salancik, 1978), which posits that firms acquire valuable strategic resources through relationships with external stakeholders, including foreign investors. Foreign ownership provides companies with access to financial capital, advanced technology, international business networks, and superior managerial practices. These advantages facilitate knowledge transfer, improve governance mechanisms, and strengthen firms' access to global resources, ultimately enhancing corporate profitability (Setiadi & Lestari, 2022).

However, this finding contrasts with Setiawan and Kurniawati (2023), who reported that foreign ownership does not significantly influence the financial performance of manufacturing firms. The inconsistency may be attributed to differences in research periods, sample characteristics, and industrial contexts.

4.4.6 Model Limitations

The R Square value of 0.111 indicates that exchange rates, financial leverage, foreign ownership, and their interaction terms explain 11.1% of the variation in corporate profitability, measured by Return on Assets (ROA), while the remaining 88.9% is explained by factors outside the research model. After accounting for the number of independent variables and the sample size, the Adjusted R Square decreases to 0.053, indicating that the model effectively explains 5.3% of the variation in profitability.

A relatively low coefficient of determination does not necessarily imply that the regression model is inadequate. In corporate finance and social science research, models with relatively low R Square values are still considered acceptable when the independent variables demonstrate statistically significant relationships consistent with theoretical expectations and when the primary objective is hypothesis testing rather than predictive accuracy (Ozili, 2023). In this study, financial leverage was found to have a significant effect on profitability, indicating that the model successfully fulfills its primary objective despite its limited explanatory power.

The relatively low Adjusted R Square further suggests that corporate profitability is influenced by numerous additional determinants that were not incorporated into the present model. Corporate finance literature identifies firm size, liquidity, sales growth, asset utilization efficiency, asset structure, corporate governance, industry characteristics, inflation, interest rates, and broader macroeconomic conditions as important determinants of ROA (Wooldridge, 2016; Madura, 2023). Such findings are common in empirical corporate finance research because firm performance results from the interaction of multiple internal and external factors that cannot all be captured within a single regression model.

Therefore, the R Square of 11.1% and Adjusted R Square of 5.3% are considered acceptable for examining the relationships among the variables investigated. The unexplained variation represents an opportunity for future studies to incorporate additional relevant variables in order to develop a more comprehensive explanation of corporate profitability.

Table 4.9 Summary of Hypothesis Testing Results

Hypothesis	Statement	Result	Conclusion
H1	Exchange rate affects corporate profitability.	Sig. = 0.427 > 0.05	Rejected
H2	Financial leverage affects corporate profitability.	Sig. = 0.022 < 0.05	Supported

H3	Foreign ownership moderates the relationship between exchange rate and corporate profitability.	Sig. = 0.732 > 0.05	Rejected
H4	Foreign ownership moderates the relationship between financial leverage and corporate profitability.	Sig. = 0.334 > 0.05	Rejected

Source: Authors' calculations based on SPSS output (2026).

5. Conclusion

5.1 Conclusion

This study aimed to examine the effects of exchange rates and financial leverage on the profitability of manufacturing firms in Indonesia and to investigate the moderating role of foreign ownership in these relationships. Based on the analysis of data from **34 manufacturing companies** during the 2023–2025 period, comprising 82 observations after outlier elimination, several conclusions can be drawn.

First, the exchange rate was found to have no significant effect on Return on Assets (ROA), with a significance value of 0.427 (> 0.05). Therefore, H1 was rejected. This finding supports the study by Kumowal and Lumapow (2022) and suggests that exchange rate fluctuations do not directly influence the profitability of manufacturing firms. This may be because firms have implemented hedging strategies or because not all manufacturing companies rely heavily on imported raw materials.

Second, financial leverage, measured by the Debt-to-Equity Ratio (DER), has a negative and statistically significant effect on ROA, with a significance value of 0.022 (< 0.05) and a regression coefficient of -1.682 . Accordingly, H2 was supported. This result is consistent with the findings of Saparuddin (2025) and supports Pecking Order Theory, indicating that higher debt levels increase interest expenses and financial risk, thereby reducing corporate profitability.

Third, foreign ownership does not moderate the relationship between exchange rates and ROA, as indicated by a significance value of 0.732 (> 0.05). Therefore, H3 was rejected. Fourth, foreign ownership also does not moderate the relationship between financial leverage and ROA, with a significance value of 0.334 (> 0.05). Thus, H4 was rejected. These findings indicate that the presence of foreign investors neither strengthens nor weakens the effects of exchange rates or financial leverage on corporate profitability.

In addition, the study found that foreign ownership has a positive and statistically significant direct effect on ROA, with a significance value of 0.018 (< 0.05) and a regression coefficient of 0.060. This finding supports Resource Dependence Theory, suggesting that foreign investors contribute valuable resources, including capital, technology, managerial expertise, and improved corporate governance, which ultimately enhance firm profitability.

5.2 Implications

5.2.1 Theoretical Implications

This study contributes to the corporate finance literature by integrating Pecking Order Theory, Agency Theory, and Resource Dependence Theory within a single conceptual framework. The findings demonstrate that foreign ownership functions more effectively as an independent variable directly influencing corporate profitability rather than as a moderating variable. This provides additional theoretical insight by suggesting that the benefits of foreign ownership arise primarily through direct mechanisms, such as technology transfer, enhanced corporate governance, and access to strategic resources, rather than through strengthening or weakening the relationships between exchange rates, financial leverage, and profitability.

5.2.2 Practical Implications

Manufacturing firms should maintain financial leverage at an optimal level by regularly evaluating their capital structure and reducing excessive reliance on debt financing to minimize interest expenses and the risk of financial distress. Firms should also consider increasing the proportion of foreign ownership as a strategic approach to improving profitability through access to advanced technology, international expertise, and better corporate governance practices.

For investors, foreign ownership may serve as an additional indicator when evaluating the financial performance and future prospects of manufacturing firms. For policymakers, these findings suggest that policies encouraging foreign investment in the manufacturing sector may contribute positively to corporate financial performance and strengthen the competitiveness of Indonesia's manufacturing industry.

5.3 Research Limitations

This study has several limitations. First, the observation period covers only three years (2023–2025), which is relatively short for capturing the long-term effects of exchange rate fluctuations on corporate profitability. Second, the study focuses exclusively on manufacturing firms, limiting the generalizability of the findings to other industrial sectors. Third, the relatively low Adjusted R^2 value (0.053) indicates that a substantial proportion of the variation in corporate profitability is explained by factors that were not included in the research model.

5.4 Recommendations for Future Research

Future studies are encouraged to extend the observation period to better capture the long-term effects of macroeconomic variables on corporate profitability. Researchers are also advised to incorporate additional control variables, such as firm size, sales growth, inflation, interest rates, liquidity, and corporate governance characteristics, to improve the explanatory power of the model. Furthermore, future research may employ more advanced analytical techniques, such as dynamic panel data analysis, and investigate firms from other industrial sectors to enable cross-sector comparisons and enhance the generalizability of the findings.

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