INTERNATIONAL JOURNAL OF SOCIAL SCIENCE, EDUCATIONAL, ECONOMICS, AGRICULTURE RESEARCH AND TECHNOLOGY (IJSET) | ISSN (E): 2827-766X
Website: https://ijset.org/ | Volumes 5 No. 5 (2026)

THE EFFECT OF COMMODITY PRICES, PROFITABILITY, AND LEVERAGE ON STOCK PRICES IN PALM OIL INDUSTRY COMPANIES

Nur Afni Yunita*[1], Rany Gesta Putri Rais[2], Indrayani[3], Mursidah[4], Anisa Zulhikmah[5]
Universitas Malikussaleh, Aceh, Indonesia
E-mail: nurafni.yunita@unimal.ac.id

Received: 05/03/2026 | **Revised**: 15/03/2026 | **Accepted:** 06/04/2026 | **Published**: 26/04/2026

Abstract

This study analyzes the effect of commodity prices, profitability, and leverage on stock prices. The sample of this study consists of 21 palm oil plantation companies listed on the Indonesia Stock Exchange during the 2022–2024 period, selected using the purposive sampling method. The analytical method employed is panel data regression. The results show that commodity prices do not have a significant effect on stock prices, while profitability and leverage have a positive and significant effect on stock prices.

Keywords: Commodity Prices, Profitability, Leverage, Stock Prices, Palm Oil Plantation Companies.

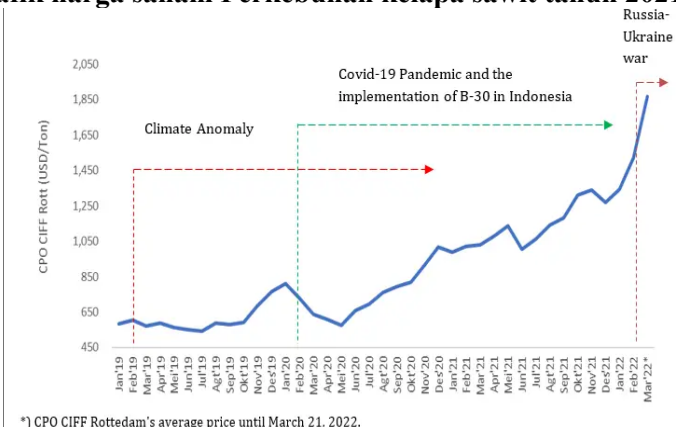
INTRODUCTION

Companies listed on the Indonesia Stock Exchange (IDX) operate in a variety of business sectors that influence stock price movements in the capital market, one of which is companies engaged in oil palm plantations. Oil palm plantations, as a major commodity sector in Indonesia, are greatly influenced by the price of palm oil commodities, the profitability of companies, and the leverage ratio used by these companies in their operations. These three factors are closely related to the movement of company stock prices, which in turn influence the investment decisions of shareholders and potential investors. (Suryanto, 2020).Stocks are one of the instruments used to describe the value of a company in the capital market. In general, stocks are securities that indicate an individual's or legal entity's ownership of a company. In this context, stock prices are an important indicator in evaluating a company's performance. A good stock price reflects positive performance and bright future prospects, while a low stock price may indicate the opposite. Therefore, understanding the factors that influence stock prices is very important, both for the company itself, investors, and other related parties. (Hadi & Sudarmanto, 2021).

One way to measure stock performance is by looking at the stock price itself. This indicator is often used to measure a company's performance in the short and long term. A high stock price is often interpreted as an indication of good company performance, although this is not always the case. Several factors that affect stock prices include global economic conditions, commodity price fluctuations, company profitability, and the leverage used by the company. Therefore, palm oil plantation companies listed on the IDX are greatly affected by fluctuations in world palm oil prices, which can affect the company's revenue and profitability. (Dewi & Suryadi,2022). The price of palm oil, one of Indonesia's leading commodities, has a significant impact on the share prices of companies engaged in the palm oil plantation sector. High palm oil prices will drive an increase in company revenues, which in turn can increase share prices. Conversely, a drastic decline in palm oil prices can cause a decline in company revenues and result in a decline in stock prices. Therefore, it is important to understand how fluctuations in the price of this commodity affect the stock price performance of palm oil companies. (Rizki,2023)

In addition, company profitability also plays an important role in determining stock prices. Company profitability can be measured using financial ratios such as Return on Assets (ROA), which shows how effectively a company generates profits from its assets. Companies with high profitability tend to be more attractive to investors, which causes the company's stock price to rise. Conversely, less profitable companies will show poor stock price performance. (Wahyuni, 2022).

Grafik harga saham Perkebunan kelapa sawit tahun 2021-2022



*) CPO CIFF Rottedam's average price until March 21, 2022.

Sumber: Edit Penulis, 2023

Based on Figure, we can see the phenomenon of crude palm oil (CPO) price movements in the international market fluctuating significantly from 2019 to early 2020. These price changes were greatly influenced by various global events such as climate anomalies, the Covid-19 pandemic, the implementation of the B-30 policy in Indonesia, and the outbreak of the Russia-Ukraine war. Meanwhile, in 2021-2022, the increase in CPO prices had a direct impact on the profitability of palm oil plantation companies listed on the Indonesia Stock Exchange (IDX). With high commodity prices, these companies recorded an increase in net profit, which was reflected in an increase in profitability ratios such as Return on Assets (ROA) and Return on Equity (ROE).

In addition, high profitability improves the company's financial structure. Many palm oil companies were able to reduce their leverage, such as the Debt Equity Ratio (DER), because increased internal cash reduced the need for external financing. This condition increased investor confidence, which ultimately drove up the share prices of these companies on the IDX, especially from 2021 to mid-2022. Against this backdrop, the phenomenon of rising CPO prices, as reflected in the graph, is one of the key factors explaining the increase in the share prices of Indonesian palm oil companies during this period. The occurrence of the phenomenon of rising CPO commodity prices, which was not always followed by an increase in stock prices for all palm oil plantation companies, indicates an imbalance between financial performance and market perception of company value. This shows that not all companies are able to manage the momentum of rising commodity prices to optimally increase company value.

The principle of corporate value emphasizes the importance of improving financial performance and financial statement transparency as a means of convincing investors of the company's prospects. If the financial statements presented are unable to reflect significant profitability growth, or leverage is not managed properly, then the share price has the potential to stagnate or even decline, even if external factors such as CPO prices are supportive. This case supports the view that the application of the principle of increasing corporate value is very important. Increasing value is not only done through increasing profits, but also through efficient management of assets and liabilities, improving corporate governance, and providing transparent information to the public. Thus, companies can optimize their profits and increase investor confidence, which is ultimately reflected in an increase in stock prices.

The price of crude palm oil (CPO) on the global market has fluctuated significantly in recent years. Based on Figure, it can be observed that CPO prices tended to be stable in early 2019, but began to experience a drastic increase since early 2020 due to various factors, such as climate anomalies, the Covid-19 pandemic, the implementation of the B-30 policy in Indonesia, and the outbreak of the Russia-Ukraine war. This increase in CPO prices has implications for the financial performance of palm oil plantation companies listed on the Indonesia Stock Exchange (IDX). The increase in commodity prices has had a positive impact on company profitability. Many companies recorded increases in Return on Assets (ROA) and Return on Equity (ROE) during the 2021 to 2022 period. In addition, the increase in profits has encouraged companies to reduce their leverage, as reflected in the decline in the Debt to Equity (DER) ratio, resulting in a healthier capital structure. This condition sends a positive signal to the market and increases the attractiveness of shares in companies in the plantation sector.

However, not all companies have succeeded in converting the momentum of rising commodity prices into optimal increases in company value. Cases where company share prices have not experienced significant increases despite being supported by external factors indicate problems in internal management, particularly in the presentation of financial reports and strategies for increasing company value. This phenomenon indicates that the principle of company value must be implemented consistently to maintain investor confidence. Transparent financial reports and

improved financial performance are key to improving market perception of the company. If the financial reports presented do not reflect achievements in line with external potential, the company's share price will tend to stagnate or even decline, even if external conditions are supportive.

This case supports the view that the application of the principle of increasing company value is very important. By optimizing profits, managing leverage well, and implementing good corporate governance practices, companies can increase investor confidence. This will ultimately lead to an increase in share value in the capital market. In recent years, the dynamics of palm oil plantation companies' share prices on the Indonesia Stock Exchange have shown significant fluctuations. This is a concern given that many fundamental factors are believed to influence share prices, such as profitability, liquidity, and leverage. However, previous research results show interesting differences in findings.

Nurdiyanti and Suprihhadi (2022) found that profitability has a positive and significant effect on the stock prices of palm oil companies. On the other hand, findings in Lucky (2024) reveal that the price of CPO commodities also plays an important role in determining stock prices, albeit with a different measurement approach. Meanwhile, research by Avivi (2021) shows that factors such as capital intensity ratio and solvency ratio do not always have a significant effect on stock returns, while (Ramadhan & Santoso, 2020) highlight that the effect of liquidity and leverage on company value tends to be inconsistent.

The differences in the results of this study create a significant research gap, particularly in the context of the 2021–2023 period. Dynamic market conditions, commodity price fluctuations, and changes in global economic conditions require a more in-depth analysis to understand the extent to which these financial variables affect the share prices of palm oil plantation companies. Therefore, this study will simultaneously examine the effects of commodity prices, profitability, and leverage on the stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange, in order to fill the existing research gap and provide a more comprehensive understanding of the factors that determine stock prices in this sector.

Based on the above description, this study will analysis The Effect of Commodity Prices, Profitability, and Leverage on Stock Prices in Palm Oil Plantation Companies Listed on the Indonesia Stock Exchange from 2022 to 2024.” This research is important to provide a clearer picture of the factors that influence the stock prices of companies in the palm oil plantation sector, which can be taken into consideration by investors and company management in making investment and financial policy decisions.

LITERATURE REVIEW

Signal theory, introduced by (Spence, 1973), explains that parties with more information, such as company management, can send signals to investors to reduce information asymmetry through various observable indicators, such as financial reports, dividends, investment decisions, and external conditions. In the context of palm oil plantation companies, the price of Crude Palm Oil (CPO) is an important external signal; investors interpret an increase in the price of CPO as an indication of increased global demand or limited supply, which has the potential to increase company revenue and performance, thereby driving up stock prices. In addition, profitability acts as a strong internal signal because it shows the effectiveness of resource management and business prospects, while leverage structure also contains signal meaning: excessive leverage can be perceived negatively because it increases financial risk, but leverage that is optimally managed for productive financing can be a positive signal regarding the company's courage and measured expansion strategy.

Agency theory, developed by Jensen & Meckling (1976) explains the relationship between principals (shareholders) and agents (management) that has the potential to cause conflicts of interest due to information asymmetry and moral hazard, because managers have broader access to information and can make decisions that are not always in line with the objectives of capital owners. In practice, investors expect management to maximize company value, so indicators are needed to assess agent performance, such as profitability ratios that reflect the effectiveness and efficiency of resource management; high profitability indicates alignment of interests between agents and principals and can reduce agency conflicts. In addition, leverage structure also has implications for agency relationships, as high debt levels can be a disciplinary mechanism that encourages managers to work more efficiently due to interest and principal payment obligations, although on the other hand it can increase risk if the company's income is unstable.

Stock prices are a key indicator in the capital market, formed through the mechanism of supply and demand and reflecting the fundamental conditions of the company, investor expectations, and the influence of macro and microeconomic factors. According to Lawrence J. Gitman (2018), stock prices are dynamic market values because they are formed from the interaction of supply and demand, while Eugene F. Brigham and Houston (2019) state that

stock prices reflect the present value of future cash flows expected by investors. This view is in line with (Tandelilin, 2010),who asserts that stock prices are formed in the secondary market and are influenced by fundamental conditions and market sentiment, as well as (Ross et al., 2016),who refer to it as the result of an agreement between buyers and sellers on the economic value of a company at a given time. In this study, annual closing prices are used because they are more stable and reflect long-term market perceptions. For investors, stock prices are the basis for investment decisions and, in the perspective of signal theory, are seen as signals of internal company information, while for companies, stock prices reflect public value and are a tool for controlling management performance, as explained in agency theory by (Jensen & Meckling, 1976). For palm oil plantation companies listed on the IDX during the 2020–2024 period, stock prices are greatly influenced by fluctuations in global Crude Palm Oil (CPO) prices, export-import policies, environmental regulations, and internal performance such as profitability, capital structure, and risk management, thus reflecting the complex interaction between external and internal factors in determining the value and prospects of the company.

According to the Indonesia Stock Exchange, stock prices are formed through the mechanism of supply and demand in daily trading, which causes prices to rise or fall. Stock prices are measured using a ratio scale, which is an interval scale with a fixed base value that does not change, as explained by Ghozali (2018). Therefore, stock prices can be calculated using a specific formula to accurately reflect market value.

$$\text{PBV} = \frac{\text{Share Price per Share}}{\text{Book Value Per Share}}$$

The Price to Book Value (PBV) ratio measures how the market values a company's shares relative to its book value, helping investors identify whether a stock is undervalued, fairly valued, or overvalued, while also reflecting management's efficiency in creating shareholder value. PBV is chosen in this study due to the capital-intensive nature of the palm oil plantation industry, where large fixed assets make book value a key financial indicator. Moreover, PBV is relatively more stable than ratios such as the Price Earnings Ratio (PER), which is sensitive to earnings fluctuations. Thus, this study uses PBV to assess whether the stock prices of palm oil companies listed on the Indonesia Stock Exchange in 2022–2024 reflect their fundamental value more objectively amid market uncertainty.

Commodity prices are the exchange value of raw materials or primary products traded on domestic and international markets, which are formed through the interaction of supply and demand. Commodities such as oil, gold, and agricultural products have dynamic prices and are influenced by various external factors, including geopolitical conditions, weather, government policies, currency exchange rates, and the global economic situation. Commodity prices also reflect the economic value of natural resources used to meet the needs of industry and consumers.

In the context of this study, the price of Crude Palm Oil (CPO) is an important factor that affects the performance and stock value of palm oil plantation companies listed on the Indonesia Stock Exchange. An increase in CPO prices generally increases company revenue and profits, sending a positive signal to investors, while a decline in prices can have a negative impact on market perception. CPO price data was obtained from the Investing.com website on a daily or monthly basis, then averaged into quarterly data to suit the research analysis requirements.

Profitability is a measure of a company's ability to generate profits from its operational activities and is a key indicator of financial performance. Experts such as Kasmir, Brigham and Houston, Weston and Brigham, Gibson, Atrill and McLaney, and Fahmi emphasize that profitability not only reflects the amount of profit, but also the effectiveness of the company in utilizing sales, assets, and capital to create sustainable profits. Profitability ratios are used to assess management efficiency by comparing components in the balance sheet and income statement over several periods, thereby revealing developments in company performance, both increases and decreases, while also serving as a basis for evaluating and planning future profits. In the context of palm oil plantation companies listed on the Indonesia Stock Exchange, profitability in the 2020–2024 period is an important indicator for investors because this sector is highly influenced by fluctuations in the price of Crude Palm Oil (CPO). Companies with high profitability are considered more capable of coping with cost pressures, commodity price changes, and regulations, and therefore tend to have more stable and attractive share prices. The relationship between profitability and stock prices is also evident in the perception of risk and the long-term prospects of companies, where increased profits boost market confidence, while decreased profits can put pressure on stock prices.

Profitability is measured by comparing financial statement components (balance sheet and income statement) over several periods to assess the company's performance. The goal is to evaluate whether management has worked effectively in achieving profit targets. The results can be used for future profit planning and strategic decision-making, including management replacement if necessary. Thus, profitability is measured by:

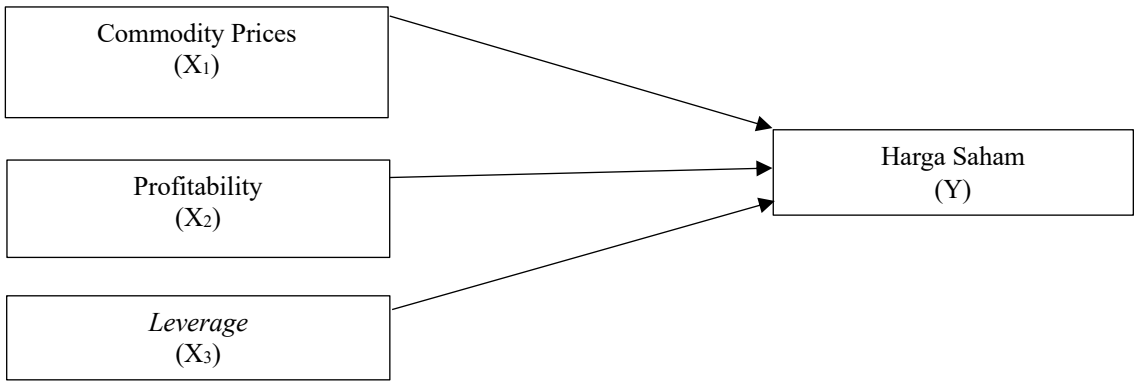
$$\text{ROA} = \frac{\text{NET PROFIT}}{\text{ASSET}} \text{ X } 100\%$$

The selection of Return on Assets (ROA) as a measure of profitability in this study is based on its ability to assess the effectiveness of management in utilizing all assets to generate profits. A positive ROA indicates that the company's assets are able to generate profits, while a negative ROA indicates losses from the use of these assets (Zaki et al. in (Roza & Lestari, 2020)As a ratio that measures the ability of assets to generate profits, ROA is an important indicator for investors to assess the performance and attractiveness of palm oil plantation companies listed on the Indonesia Stock Exchange during the period 2022–2024.

Leverage is the use of debt in a company's capital structure to finance operations and investments with the aim of increasing the potential profits of shareholders (Gitman, 2018);Brigham & Houston, 2019).gitman This strategy allows companies to accelerate growth without relying entirely on their own capital, but it also increases risk due to interest expenses and potential financial difficulties if debt is not managed properly. Based on the pecking order theory, companies tend to prioritize internal financing because high debt levels can increase the risk of bankruptcy and reduce investor confidence. Therefore, leverage is often found to have a negative and significant effect on stock prices, as investors view high debt as a signal of increased company risk. Measuring leverage is very important in analyzing a company's capital structure and financial risk The formula for DAR is:

$$\text{DAR} = \frac{\text{DEBT}}{\text{ASSET}} \text{X} 100$$

Formulation of research hypotheses regarding the effect of commodity prices, profitability, and leverage on stock prices in palm oil plantation companies listed on the Indonesia Stock Exchange:



METHOD

This study aims to analysis the relationship between the variables used to explain the relationship between two variables. This study aims to examine the effect of the independent variables Commodity Price (X1), Profitability (X2), and Leverage (X3) on the dependent variable Stock Price (Y). Based on its type, this study is a quantitative study where the data used are numbers. The population in this study is palm oil companies listed on the Indonesia Stock Exchange in 2022-2024.

The population used in this study consisted of 30 palm oil plantation companies listed on the Indonesia Stock Exchange (IDX), and the share prices of palm oil companies were obtained from the official IDX website www.idx.co.id. The following are the names of palm oil plantation companies listed on the IDX from 2020 to 2024.

The sample in this study was conducted using a purposive sampling approach, which is the determination of samples based on the suitability of criteria and characteristics in the study.

- Palm Oil Plantation Companies Listed on the Indonesia Stock Exchange for the Period 2020-2024.
- Palm Oil Plantation Companies Not Listed on the Indonesia Stock Exchange for Three Consecutive Years.

- Palm Oil Plantation Companies That Did Not Consistently Publish Annual Reports for the Period 2020-2024.

Based on the above population criteria, the number of companies that meet the criteria as samples in this study is 22 companies.

The data used in this study is quantitative data. Quantitative research methods are approaches that focus on collecting and analyzing data in the form of numbers. The data sources in this study are secondary data, which are data obtained indirectly from other parties through officially published documents. Profitability, leverage, and stock prices were obtained from the financial reports of palm oil plantation companies listed on the Indonesia Stock Exchange (IDX) through the official website www.idx.co. The data was then presented in quarterly form so that the time period between variables would be consistent with commodity price data. The price of crude palm oil (CPO) was obtained from the website www.investing.com. The data on this website is presented in daily/monthly form, so in this study it was converted into quarterly data by calculating the average price per quarter during the 2022-2024 period.

According to Priyatno (2022), regression estimation explains that there are three approaches to estimating panel data. The first is the common effect least squares approach, the second is the fixed effect approach, and the third is the random effect approach. The Common Effect Method is the simplest panel data regression estimation technique because it does not distinguish between individual and time dimensions. This model assumes that the behaviours of each individual is the same across periods, so that cross-section and time-series data are combined as a single unit without considering differences between individuals and time (Priyatno, 2022). According to Priyatno (2022), the Fixed Effect Model is a panel data regression model that has different intercepts for each subject (cross section), but the slope remains the same over time. This model assumes that differences between individuals are reflected in differences in intercepts and are estimated using dummy variables to capture these differences.

According to (Priyatno, 2022), the Chow test is a test conducted to select the best model between the fixed effect model (FEM) and the common effect model (CEM). The Chow test assumes that there is no structural change in the restricted residual sum square and unrestricted residual sum square equations. The decision-making technique in the Chow test is as follows:

- If the Cross-section Chi-square Probability value > 0.05, then the common effect model is selected.
- If the Cross-section Chi-square Probability value < 0.05, then the fixed effect model is selected.

Next, the researcher continued to perform panel data regression using the Hausman test method. According to Priyatno (2022), the Hausman test is a test to determine the Fixed Effect or Random Effect model. In this study, the researcher used a significance level of 10% ($\alpha = 0.10$). The decision-making technique for the Chow test is as follows:

- If the Cross-section Random Probability value is > 0.05, then the appropriate research model is the Random Effect model.
- If the Cross-section Random Probability value is < 0.05, then the appropriate research model is the Fixed Effect model.

The LM test serves to determine the best estimate, whether to use Random Effect or Common Effect. This test is used to confirm which model to use, based on the results of the Fixed Effect and Random Effect tests being inconsistent. For example, in the Chow test, the appropriate model is Fixed Effect, but when the Hausman test is performed, the appropriate model is Random Effect. Therefore, to decide which model is best, the Lagrange Multiplier test is performed (Priyatno, 2022) based on the following hypotheses:

- If the Cross section Breusch-Pagan value is > 0.05, then the model used is the common effect model.
- If the Cross section Breusch-Pagan value is < 0.05, then the model used is the random effect model.

The data processing used in this study is multiple linear regression analysis assisted by program/software tools. Based on the research hypothesis, the data analysis method used is quantitative analysis to calculate or quantitatively assess several factors on the dependent variable, both individually and collectively. Multiple linear regression can be used to determine how one dependent variable and independent variables are functionally related. The regression analysis in this study uses two models. First, the regression model is used to test the effect of independent variables on dependent variables. Second, the regression model is used to test all variables with moderation.

There are three classical assumption tests. The data normality test aims to test whether the regression model, user variables, or residuals have a normal distribution. As is known, the T and F tests assume that the residual values

follow a normal distribution. If this assumption is violated, the statistical test becomes invalid for small sample sizes. This study uses nonparametric statistical analysis with the Kolmogorov Smirnov test to determine the level of normality of the data distribution based on:

- A sig. or significance value < 0.05, then the data distribution is not normal.
- A sig. or significance value > 0.05, then the data distribution is normal.

The multicollinearity test aims to assess whether there is correlation or reciprocal relationship between independent variables in the regression model (Priyatno (2022). Multicollinearity can be evaluated by examining the correlation coefficient (r) when regressing independent variables, which include commodity prices, profitability, and leverage. A correlation coefficient value of less than 0.80 for independent variables indicates the absence of multicollinearity, while a value exceeding 0.80 indicates the presence of multicollinearity (Gujarati & Porter, 2012).

The T-test is used to determine whether the independent variable regression model partially affects the dependent variable (Priyatno, 2022). The t-test can be seen from the t-value or sig. value in the coefficient table. In this study, a significance level of 5% or 0.05 was used, so the basis for decision making is as follows:

- If the significance value is less than (<) 0.05 and the t-value is greater than (>) the table t-value, then the independent variable (X) has a significant effect on the dependent variable (Y);
- If the significance value is greater than (>) 0.05 and the t-value is less than (<) the table t-value, then the independent variable (X) does not significantly affect the dependent variable (Y).

According to Ghozali (2018, p. 97), the coefficient of determination (R^2) test is used to measure the extent to which the model can explain the variation in the dependent variable. The coefficient of determination value ranges from zero to one. A small R^2 value means that the ability of the independent variables to explain the variation in the dependent variable is very limited. The weakness of using the coefficient of determination is that it is biased towards the number of variables.

RESULTS AND DISCUSSION

Descriptive statistics are a method used to describe or explain collected data without making generalizations. In this study, descriptive statistics are used to provide an overview of the variables of stock prices, commodity prices, profitability, and leverage. The descriptive statistics results of this study are presented in the following table.

Statistic Description

Statistik	Y	Ln X1	X2	X3
Mean	1.444364	16.48159	0.026825	0.467266
Median	1.003577	16.43081	0.025294	0.458607
Maximum	5.661080	16.82508	0.226500	1.191535
Minimum	0.000473	16.28742	-0.926554	0.000277
Std. Dev.	1.325593	0.167082	0.085326	0.216168
Skewness	1.434606	1.096743	-5.673582	0.331986
Kurtosis	4.218139	2.775377	62.13653	2.956209
Jarque-Bera	106.8786	53.48018	39884.63	4.870533
Probability	0.000000	0.000000	0.000000	0.087574
Sum	381.3120	4351.140	7.081766	123.3582
Sum Sq. Dev.	462.1427	7.342014	1.914790	12.28962
Observations	264	264	264	264

1. The stock price variable proxied by PBV has an average of 1.444364, indicating that the market values the company's equity at 144% of its book value, reflecting investors' positive perception of the company's prospects and performance. The maximum value of 5.661080 occurred in Mahkota Group,Tbk in the second quarter of 2024, while the minimum value of 0.000473 occurred in London Sumatra Indonesia,Tbk in the second quarter of 2024. The standard deviation of 1.325593 from 264 observations (22 companies) indicates that there is a fairly high fluctuation in share prices between companies in the sample.

2. The commodity price variable (CPO) has an average of 16.48159 in natural log form or the equivalent of approximately IDR 14,597,029, indicating that during the 2022–2024 period, CPO prices were at a relatively high level. The maximum value of 16.82508 (±Rp20,278,748) occurred in the second quarter of 2022, while the minimum value of 16.28742 (±Rp11,845,046) occurred in the second quarter of 2023, reflecting fluctuating price movements. The standard deviation of 0.216168 from 264 observations (22 companies) indicates commodity price variation during the study period.
3. The profitability variable (ROA) has an average of 0.026825 or 2.68%, which indicates that the company's ability to generate profits from total assets is still relatively low during the 2022–2024 period. The maximum value of 0.2265 was achieved by Triputra Agro Persada Tbk in the fourth quarter of 2024, while the minimum value of -0.926554 occurred at Provident Investasi Bersama Tbk in the fourth quarter of 2023, reflecting significant losses. The standard deviation of 0.085326 from 264 observations (22 companies) indicates that there is variation in the level of profitability between companies in the sample.
4. The leverage variable has an average of 0.467266, indicating that approximately 47% of the company's assets are financed by debt. The maximum value of 1.191535 occurred at Andira Agra Tbk in the fourth quarter of 2024, indicating over-leverage (119%), while the minimum value of 0.000277 at Provident Investasi Bersama Tbk in the second quarter of 2022 indicates almost no use of debt. The standard deviation of 0.216168 from 264 observations (22 companies) reflects considerable variation in funding structures between companies.

Selection of panel data regression analysis models. In Priyatno (2022), Eviews has several tests that need to be carried out and will later help find the most appropriate and efficient method to use from the three test equation models carried out, namely the the Chow Test, the Hausman Test, and the Lagrange Multiplier (LM) Test. The Chow Test is a test conducted to determine which model is best between the Common Effect Model (CEM) and the Fixed Effect Model (FEM), where the basis for decision-making is as follows (Nasution, 2019): If the probability value obtained is greater than 0.05, this indicates that the Common Effect Model (CEM)is the appropriate model to use in the study. If the probability value obtained is smaller than the significance level used, which is 0.05, then this indicates that the Fixed Effect Model (FEM) is the appropriate model to use in the study. Based on the results of the Chow test, it was found that the Cross-section Chi-square probability value obtained is 0.0000 or smaller than the significance level used, which is 0.05 (0.0000 < 0.05). Therefore, it can be concluded that the Fixed Effect Model (FEM) is the appropriate model to use in this study.

The Hausman test is used to determine the best model between the Fixed Effect Model (FEM) and the Random Effect Model (REM). The basis for decision making is that if the probability value is > 0.05, then REM is chosen, while if the probability is < 0.05, then FEM is used (Nasution, 2019). Based on the results of the Hausman test, the Cross-section random probability value is 1.0000, which is greater than 0.05, so the most appropriate model to use in this study is the Random Effect Model (REM).

The Lagrange Multiplier (LM) test is used to determine the best model between the Common Effect Model (CEM) and the Random Effect Model (REM). The basis for decision making is that if the Cross-section Breusch-Pagan probability value is > 0.05, then CEM is selected, whereas if it is < 0.05, then REM is used (Nasution, 2019). Based on the test results, the probability value of 0.0000 is less than 0.05, so it can be concluded that the most appropriate model to use in this study is the Random Effect Model (REM).

Based on the results of the panel data regression model selection, the most appropriate model to use in this study is the Random Effect Model (REM). The results of the panel data regression test using the Random Effect Model (REM) are presented in the following table

Uji Regresi Data Panel Random Effect Model

Dependent Variable: Y
Method : Panel ELGS (Cross-section random effect)
Date : 11/22/25 Time : 22:00
Periods included: 12
Cross-sections included :22
Total panel (balanced) observations : 264

Variable	Coefficient	Std. Error	t-Statistik	Prob
C	1.836582	2.701272	0.679895	0.4972
HK	-0.100368	0.164708	-0.609368	0.5428
ROA	1.264698	0.464534	2.722512	0.0069
DAR	2.628215	0.361686	7.266569	0.0000

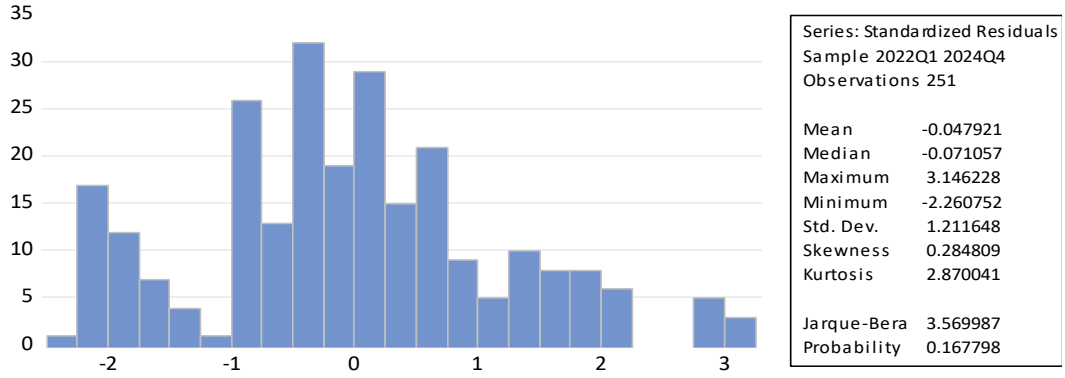
Based on the results of the Random Effect Model (REM) estimation test in Table 4.5 above, the results of the panel data regression model in this study are as follows:

$$Y = 1.836582 - 0.100368HK + 1.264698ROA + 2.628215DAR$$

Based on the results of the multiple linear regression equation above, the following results are obtained:

1. The constant value of 1.836582 means that if the independent variables, namely Commodity Price, Profitability, and Leverage, are zero, then the dependent variable, namely stock price, is 1.836582.
2. The regression coefficient value of the Commodity Price variable (X1) is negative, namely -0.100368, which indicates a negative effect on Stock Price. This means that every increase in Commodity Price by one unit can result in a decrease in Stock Price of 0.100368, assuming that the other independent variables in the regression model remain constant.
3. The regression coefficient value of the Profitability variable (X3) is positive, namely 1.264698, meaning that every increase in Profitability is followed by an increase in Stock Price of 1.264698, assuming that the other independent variables in the regression model remain constant.
4. The regression coefficient value of the Leverage variable (X3) is positive, namely 2.628215, meaning that every increase in Leverage is followed by an increase in Stock Price of 2.628215, assuming that the other independent variables in the regression model remain constant.

In classical assumption testing, there are three tests, namely normality testing, multicollinearity testing, and heteroscedasticity testing. Data normality testing aims to test whether in the regression model, both the dependent and independent variables have distributed data. normal or not, where a good regression model is data that has a normal distribution or is close to normal. The basis for deciding on data normality testing is that if the probability value is greater than the significance level used, which is 0.05, then this indicates that the data used is normally distributed. The results of the data normality test in this study are as shown in the following figure:



Sumber : Hasil Output Eviews 12

Gambar Hasil Uji Normalitas

In Figure 4.1, the results of the data normality test above show that the Profitability value is 0.167798 > 0.05. Therefore, it can be concluded that the model in this study is normally distributed The multicollinearity

test aims to assess whether there is a correlation or reciprocal relationship between the independent variables in the regression model (Priyatno (2022).

Multicollinearity can be evaluated by examining the correlation coefficient (r) when regressing the independent variables, which include commodity prices, profitability, and leverage. A correlation coefficient value of less than 0.80 for the independent variables indicates no multicollinearity, while a value exceeding 0.80 indicates multicollinearity (Gujarati & Porter, 2012) results of the multicollinearity test in this study are as shown in the following table:

Multikolinearitas Results

	Y	X1	X2	X3
Y	1.00000000	0.00909574	- 0.0864568	0.45703239
X1	0.00909574	1.0000000	0.11082814	0.02968868
X2	- 0.0864568	0.11082814	1,00000000	- 0.3142646
X3	0.45703239	0.02968868	- 0.3142646	1,00000000

Based on the results of the multicollinearity test, the correlation coefficient values between the independent variables (commodity prices, profitability, and leverage) are less than 0.80. This indicates that there is no multicollinearity problem, so it can be concluded that the data in this study is suitable for regression analysis.

The heteroscedasticity test aims to determine whether there is a difference in residual variance between observations in the regression model. However, in this study, the heteroscedasticity test was not performed because the selected model was the Random Effect Model (REM). The REM model uses the Generalized Least Square (GLS) method in its estimation process, which automatically accommodates variance differences and autocorrelation in the data. Therefore, the problem of heteroscedasticity has been internally addressed by the GLS approach, so that additional testing is not necessary.

In this study, the t-test (partial test) is used to examine the individual effect of each independent variable on the dependent variable (Ghozali, 2021). The decision criteria are as follows: if the probability value < 0.05 and the calculated t-value (t-count) > t-table, then the independent variable has a significant effect on the dependent variable. Conversely, if the probability value > 0.05 and the calculated t-value < t-table, then the independent variable does not have a significant effect on the dependent variable. The results of the partial hypothesis testing in this study are presented in the following table.

The T-Test Results

Dependent Variable: Y
Method : Panel ELGS (Cross-section random effect)
Date : 11/22/25 Time : 22:00
Periods included: 12
Cross-sections included :22
Total panel (balanced) observations : 264

Variable	Coefficient	Std. Error	t-Statistik	Prob
C	1.836582	2.701272	0.679895	0.4972
HK	-0.100368	0.164708	-0.609368	0.5428
ROA	1.264698	0.464534	2.722512	0.0069
DAR	2.628215	0.361686	7.266569	0.0000

Based on the results of the partial hypothesis testing (t-test) in Table 4.7, the following findings were obtained. The commodity price variable has a probability value of 0.5428, which is greater than the significance level of 0.05 (0.5428 > 0.05), and a t-value of 0.609368, which is smaller than the t-table value of 1.96913 (0.609368 < 1.96913), with a coefficient of -0.100368. These results indicate that commodity prices do not have a significant effect on stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange during 2022–2024, meaning that H1 is rejected. The profitability variable shows a probability value of 0.0069, which is less than 0.05 (0.0069 < 0.05), and a t-value of 2.722512, which is greater than the t-table value of 1.96913 (2.722512 > 1.96913), with a coefficient of 1.264698. This indicates that profitability has a positive and significant effect on stock prices, meaning that H2 is accepted. The leverage variable has a probability value of

0.0000, which is less than 0.05 (0.0000 < 0.05), and a t-value of 7.266569, which is greater than the t-table value of 1.96913 (7.266569 > 1.96913), with a coefficient of 2.628215. These results show that leverage has a positive and significant effect on stock prices, meaning that H3 is accepted.

The Impact of Commodity Prices on Stock Price

Based on the research results, the commodity price variable (X1) obtained a coefficient value of 1.264698, with a t-value of 0.609368 < t-table 1.96913, and a significance value (Prob.) of 0.5428 > 0.05. These results indicate that commodity prices do not have a significant effect on the stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange during the 2022–2024 period.This finding suggests that fluctuations in global Crude Palm Oil (CPO) prices are not always directly reflected in the stock price movements of palm oil plantation companies in Indonesia. This condition may be caused by several factors. First, stock prices are influenced not only by CPO prices but also by internal factors such as operational performance, production efficiency, management strategy, and corporate financial policies. Second, investors tend to consider other macroeconomic factors, including inflation, interest rates, exchange rates, and global political and economic conditions, which also shape expectations toward commodity sector stocks. This result is consistent with the study by (Fauzan & Pertiwi, 2025), which found that CPO prices did not have a significant effect on stock prices in the palm oil plantation sub-sector companies listed on the BEI. They explained that changes in global commodity prices are more rapidly influenced by external macroeconomic factors rather than being directly reflected in stock prices. However, this finding differs from the study by Arief and Yani (2020), which stated that increases in commodity prices have a positive effect on stock prices because rising CPO prices can increase company revenues and profits, thereby strengthening investor confidence in the company's prospects.

The Impact Profitability on Stock Price

Based on the research findings, the profitability variable (X_2) has a coefficient value of 1.264698, with a t-value of 2.722512 > t-table 1.96913, and a significance value (Prob.) of 0.0069 < 0.05. These results indicate that profitability has a positive and significant effect on the stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange during the 2022–2024 period. This means that the higher the company's profitability, the higher its stock price. Companies that are able to manage their resources efficiently and generate high profits tend to receive positive responses from investors. In the capital market context, profitability ratios—particularly Return on Assets (ROA)—serve as key indicators in assessing management effectiveness in utilizing assets to generate earnings. A high ROA reflects that company assets are used productively to create profits, which in turn increases investor confidence and drives stock price growth. These findings are consistent with Nurdiyanti and Suprihhadi (2022), who found that profitability has a positive and significant effect on stock prices of palm oil companies listed on the BEI. Similarly, (Pattiruhu & Tanggulungan, 2024) reported that profitability measured by ROA significantly and positively influences stock prices, as it reflects the company's ability to maximize its assets to generate profits. Therefore, it can be concluded that profitability is the most dominant internal factor influencing stock price movements in the palm oil plantation sector, as investors perceive highly profitable companies as efficient and promising investment opportunities.

The Impact Leverage on Stock Price

Based on the research results, the leverage variable (X3) has a coefficient value of 2.628215, with a t-value of 7.266569 > t-table 1.96913 and a significance value (Prob.) of 0.0000 < 0.05. These findings indicate that leverage has a positive and significant effect on the stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange during the 2022–2024 period. This means that higher leverage is associated with higher stock prices. The results suggest that companies are able to utilize borrowed funds productively to increase profits. When debt is managed effectively, investors perceive the company as having strong growth prospects, as leverage can enhance earnings and accelerate business expansion. This finding is consistent with Nurdiyanti and Suprihhadi (2022), who reported that leverage has a positive and significant effect on stock prices of palm oil companies listed on the BEI. However, excessive use of debt should still be avoided, as it may increase financial risk and reduce investor confidence. According to Agency Theory, leverage can also function as a control mechanism that encourages management to operate more efficiently and focus on enhancing firm value.

CONCLUSION

Based on the results of the study examining the effects of commodity prices, profitability, and leverage on stock prices, the conclusions are as follows: Commodity prices do not have a significant effect on the stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange during the 2022–2024 period. Profitability has a positive and significant effect on stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange during the same period. Leverage also has a positive and significant effect on stock prices of palm oil plantation companies listed on the Indonesia Stock Exchange for the 2022–2024 period.

REFERENCES

Arief, R., & Yani, M. (2020). Pengaruh Harga Komoditas Terhadap Kinerja Saham Perusahaan Perkebunan Di Indonesia. Jurnal Ekonomi Dan Bisnis, 34(2), 157-175. Https://Doi.Org/10.1234/Jeb.2020.1345

Avivi, F. (2021). Pengaruh Rasio Profitabilitas, Capital Intensity Ratio Dan Rasio Solvabilitas Terhadap Return Saham Perusahaan Perkebunan Kelapa Sawit Yang Terdaftar Di Indonesia Stock Exchange Periode 2015-2019. Jurnal Kewirausahaan, Akuntansi, Dan Manajemen TRI BISNIS, Vol 3, No 1, 2021, 1-16.

Brigham, E. F., & Houston, J. F. (2019). Fundamentals Of Financial Management (15th Ed.). Boston, MA: Cengage Learning.

Dewi, M., & Suryadi, T. (2022). Harga Komoditas Dan Profitabilitas Perusahaan Dalam Pasar Saham. Jurnal Manajemen Keuangan, 16(3), 102-119. Https://Doi.Org/10.5678/Jmke.2022.302

Fauzan, N. H., & Pertiwi, T. K. (2025). The Effect Of Profitability, Leverage, CPO Prices And Exchange Rates On Stock Prices (Study On Palm Oil Plantation Industry Sub-Sector Companies In 2018-2023). East Asian Journal Of Multidisciplinary Research, 4(1), 79–92. Https://Doi.Org/10.55927/Eajmr.V4i1.12671

Ghozali. (2018) Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25 Edisi 9. Universitas Diponegoro.

Ghozali, I. (2021). Aplikasi Analisis Multivariate Dengan Program IBM SPSS 26 Edisi 10 (10th Ed.). Universitas Diponegoro.

Gitman, L. J. (2018). Principles Of Managerial Finance (15th Ed.). Pearson Education.

Gujarati, D. N., & Porter, D. C. (2012). Basic Econometrics (5th Ed.). Douglas Reiner.

Hadi, W., & Sudarmanto, B. (2021). Dampak Fluktuasi Harga Saham Dan Komoditas Terhadap Keputusan Investasi. Jurnal Ekonomi Perusahaan, 25(1), 45-58. Https://Doi.Org/10.2345/Jep.2021.2501

Jensen, M. C., & Meckling, W. H. (1976). Theory Of The Firm: Managerial Behavior, Agency Costs And Ownership Structure. Journal Of Financial Economics, 3(4), 305–360. Https://Doi.Org/10.1016/0304-405X(76)90026-X

LUCKY. (2024). Pengaruh Profitabilitas, Solvabilitas, Dan Harga Komoditas CPO Terhadap Harga Saham Subsektor Industri Perkebunan & Tanaman Pangan Tahun 2018-2022. Manajemen, 1-36.

Nasution, M. (2019). Ekonometrika Panel Dengan Eviews. Universitas Islam Negeri Sumatera Utara.

Nurdiyanti, E., & Suprihhadi, H. (2022). Pengaruh Profitabilitas, Leverage, Dan Likuiditas Terhadap Harga Saham Pada Perusahaan Perkebunan Kelapa Sawit Yang Terdaftar Di BEI. Jurnal Ilmu Dan Riset Manajemen, 11(4), 1–13.

Pattiruhu, D. C. S. H., & Tanggulungan, G. (2024). Kinerja Keuangan Perusahaan Tekstil Dan Garmen Sebelum Dan Selama Pandemi Covid-19. Jurnal Ilmiah Akuntansi Dan Keuangan (Jiaku), 3(3), 209–232. Https://Doi.Org/10.24034/Jiaku.V3i2.6801

Priyatno, D. (2022). Olah Data Sendiri Analisis Regresi Linear Dengan Spss & Analisis Regresi Data Panel Dengan Eviews. Cahaya Harapan.

Ramadhan, & Santoso. (2020). Pengaruh Likuiditas, Leverage, Dan Profitabilitas Terhadap Nilai Perusahaan. Jurnal Ilmu Dan Riset Manajemen (JIRM).

Rizki, F. (2023). Analisis Pergerakan Harga Saham Perusahaan Kelapa Sawit Di BEI. Jurnal Analisis Keuangan, 12(1), 71-85. Https://Doi.Org/10.3345/Jak.2023.1201

Ross, S. A., Westerfield, R. W., & Jaffe Jeffrey. (2016). Corporate Finance (11th Ed.). Mcgraw-Hill Education.

Roza, O. A., & Lestari, D. (2020). Faktor Penentu Harga Saham Sektor Otomotif: Peran Kebijakan Dividen, Profitabilitas, Ukuran Perusahaan Dan Growth Opportunity. AKURASI: Jurnal Riset Akuntansi Dan Keuangan, 2(1), 29–40. Https://Doi.Org/10.36407/Akurasi.V2i1.160

Spence, M. (1973). Job Market Signaling. The Quarterly Journal Of Economics, 87(3), 355. Https://Doi.Org/10.2307/1882010

Tandelilin, E. (2010). Portofolio Dan Investasi: Teori Dan Aplikasi. Kanisius.
Wahyuni, R. (2022). Leverage Dan Profitabilitas: Pengaruhnya Terhadap Harga Saham Perusahaan Kelapa Sawit. Jurnal Keuangan Dan Investasi, 18(4), 200–214. Https://Doi.Org/10.1234/Jki.2022.1804