

THE MODERATING ROLE OF PROFITABILITY ON CAPITAL STRUCTURE AND STOCK PRICES: EVIDENCE FROM INDONESIA

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ABSTRACT

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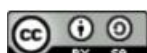
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This study examines the moderating role of profitability on the relationship between asset structure and capital structure on stock prices in food and beverage sub-sector companies listed on the IDX during 2019–2023. The novelty lies in using profitability as a moderating variable, rarely tested in this post-pandemic sector, and integrating three financial variables in one model examining direct and interaction effects simultaneously. The population covers all related sub-sector companies, with 21 samples selected through purposive sampling, yielding 105 observations. The analysis employs panel data regression with Fixed Effect Model (FEM) after Chow and Hausman tests, using Eviews 13. The results show capital structure (DER) has a negative significant effect on stock prices, while asset structure has no significant effect. Profitability (ROE) has a positive significant effect. The main finding, which also constitutes the novelty, is that profitability significantly moderates the influence of both asset structure and capital structure on stock prices, indicating that earnings performance reinforces market responses to financing and investment policies. The implications suggest that investors should consider profitability as a reinforcing signal, and management should balance debt usage and profitability efficiency to enhance firm value.

INTRODUCTION

The capital market plays a strategic role in the national economy as a source of financing for businesses and as an investment vehicle for the public, as mandated in Law No. 8 of 1995 concerning the Capital Market. The capital market serves as a bridge connecting parties with surplus funds to those in need of long-term funding through securities transactions (Destina Paningrum, 2022). Various financial instruments are offered by the capital market, ranging from derivative instruments and bonds to stocks. Stocks are among the most popular investment instruments as they represent ownership in a company and offer attractive profit potential for investors. Companies issue stocks as an alternative source of funding, while



investors view stocks as instruments to obtain returns through dividends and capital gains.

Stock prices serve as a primary indicator of investor interest in a company. According to Nurwulandari et al. (2021), if a company's stock price consistently increases, investors or potential investors perceive that the company has successfully managed its business. Investor confidence is highly beneficial for issuers because higher demand for shares leads to higher stock prices. Conversely, persistent declines in stock prices can diminish the company's value in the eyes of investors. The food and beverage sub-sector, as one of Indonesia's significant economic contributors, has also experienced dynamic stock price fluctuations during the 2019–2023 period. During this period, several companies demonstrated varied stock price movements. PT Multi Bintang Indonesia Tbk (MLBI) experienced a significant decline from IDR 15,500 in 2019 to IDR 7,750 in 2023, reflecting declining investor confidence. PT Indofood CBP Sukses Makmur Tbk (ICBP) and PT Indofood Sukses Makmur Tbk (INDF) also showed downward trends, although not as drastic as MLBI. On the other hand, PT Mayora Indah Tbk (MYOR) and PT Ultrajaya Milk Industry Tbk (ULTJ) demonstrated better resilience with moderate fluctuations, with MYOR even recording an increase from IDR 2,050 in 2019 to IDR 2,490 in 2023. These stock price fluctuations reflect the dynamics of supply and demand in the capital market, influenced by various internal and external factors. Understanding the factors that affect stock prices is crucial for both investors and company management.

Numerous studies have been conducted to identify the determinants of stock prices. Theoretically, stock prices are influenced by company financial performance, reflected in various financial ratios. Internal factors such as asset structure, capital structure, and profitability are believed to influence stock prices. Asset structure describes the composition of a company's assets between current and fixed assets, reflecting the company's ability to generate income and operational efficiency (Syafri & Fahmi, 2021). Capital structure relates to the composition of company funding between debt and equity, reflecting financial risk and signals sent to

investors (Inayah & Kaniarti, 2021). Profitability measures a company's ability to generate profits, serving as a primary indicator of management performance (Seto et al., 2023).

Previous research on the effect of asset structure on stock prices has yielded inconsistent results. Aristaldo & Rahmiyati (2022) found a positive effect of asset structure on stock prices, indicating that a larger proportion of fixed assets increases firm value in investors' eyes as it reflects higher asset stability. Conversely, Ma'ruf & Lihan (2024) found a negative effect, suggesting that increasing fixed assets may decrease stock prices if companies must allocate substantial capital while those assets take time to generate returns. Meanwhile, Kusumawati & Setiawati (2024) found that asset structure has no effect on stock prices. Similarly, research on the effect of capital structure on stock prices also shows inconsistency. Prayoga & Fitria (2023) found that optimal capital structure sends positive signals to investors, while Faluthy (2021) demonstrated a negative effect of capital structure on stock prices, and Lero et al. (2023) found no significant effect. Research on profitability also shows varying results. Priya & Hayati (2024) and Theo (2023) found a positive effect of profitability on stock prices, while Lero et al. (2023) found that profitability (ROE) does not affect stock prices.

The inconsistency of these research results indicates the presence of other factors influencing the relationship between asset structure, capital structure, and stock prices. One factor suspected to play a role is profitability. Profitability not only directly affects stock prices but also has the potential to strengthen or weaken the influence of asset structure and capital structure on stock prices. Rizkian et al. (2022) demonstrated that profitability strengthens the relationship between capital structure and stock prices. However, research examining the role of profitability as a moderating variable in the relationship between asset structure and stock prices remains limited. Based on the phenomenon of stock price fluctuations and the inconsistency of previous research findings, this study aims to examine the effect of asset structure and capital structure on stock prices with profitability as a moderating variable in food and beverage sub-sector companies during the 2019–

2023 period. The novelty of this research lies in: (1) the use of profitability as a moderating variable, which is still rarely tested empirically, particularly in the post-pandemic food and beverage sector; (2) the integration of three principal financial variables in a single research model that simultaneously examines direct effects and interaction effects; and (3) the use of a post-pandemic research period that reflects the latest capital market dynamics. This research is expected to contribute theoretically to the development of Signaling Theory and Trade-off Theory, as well as provide practical implications for investors and company managers in making investment and financing decisions.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This study is grounded in four interrelated theoretical frameworks that collectively explain the relationships between asset structure, capital structure, profitability, and stock prices. Each theory offers a distinct yet complementary perspective on how financial decisions influence investor perceptions and market valuations.

Signaling Theory, originally introduced by Ross (1977), addresses the fundamental problem of information asymmetry in capital markets. Managers possess far more information about their company's true financial condition and future prospects than outside investors. Because investors cannot directly observe management's private information, they rely on observable signals—financial decisions and performance outcomes to assess firm quality and make investment decisions. When a company reports strong profitability, maintains a reasonable debt level, or invests in productive fixed assets, these actions serve as signals that the company is well-managed and has promising prospects. Conversely, declining profits, excessive borrowing, or underperforming assets send negative signals that erode investor confidence and drive stock prices downward. In this study, Signaling Theory provides the foundation for understanding why financial ratios such as DER, ROE, and asset composition matter to investors they are not merely accounting numbers but meaningful signals that shape market perceptions.

Trade-off Theory, pioneered by Modigliani and Miller (1958) and subsequently refined, offers a practical framework for understanding why companies choose particular capital structures. The theory suggests that firms weigh the benefits of debt financing primarily the tax deductibility of interest payments against its costs, which include bankruptcy risk, financial distress expenses, and agency costs imposed by creditors. In an ideal world, there exists an optimal debt level where the marginal benefit of borrowing exactly equals the marginal cost. Companies that stay below this threshold can increase their value by taking on more debt, but those that exceed it destroy value by exposing themselves to excessive financial risk. For investors, this means that companies with very high debt levels are viewed with suspicion, as they appear vulnerable to economic shocks and may struggle to meet their obligations. This theory is particularly relevant to the present study because it explains why we expect to observe a negative relationship between the Debt to Equity Ratio and stock prices investors penalize firms that appear to have overstepped the optimal leverage boundary.

Pecking Order Theory, developed by Myers and Majluf (1984), offers a different perspective on financing behavior by focusing on how companies actually make funding decisions rather than what they should do. The theory posits that firms follow a clear hierarchy when seeking financing: they prefer to use internal funds first, then debt, and finally equity as a last resort. This ordering arises from information asymmetry managers know more about their company's true value than outside investors, and issuing new equity can signal that the firm is overvalued. Companies that generate high profits are able to fund their operations and investments through retained earnings, avoiding the need to issue new debt or equity and thereby sidestepping the negative signals associated with external financing. This theory connects directly to profitability's role in our study – profitable firms operate differently in the capital market, and their strong earnings position allows them to maintain healthier capital structures and attract more favorable market responses.

Agency Theory, articulated by Jensen and Meckling (1976), addresses a different but equally important aspect of corporate finance: the conflicts of interest that arise between shareholders and managers. Because managers may pursue their own interests—such as empire-building or risk avoidance rather than maximizing shareholder value, agency costs emerge. Capital structure can serve as a mechanism to mitigate these conflicts; debt financing reduces the free cash flow available for managers to waste on unprofitable projects, effectively disciplining management. However, excessive debt introduces its own set of agency problems, as creditors impose restrictive covenants that limit managerial flexibility. Profitability, when viewed through the lens of Agency Theory, signals that managers are using company resources effectively and acting in shareholders' best interests. A high Return on Equity suggests that management is competent and trustworthy, reducing investor concerns about agency conflicts and reinforcing confidence in the company's future.

Beyond these broad theoretical foundations, it is useful to define the specific variables examined in this study and explain how they relate to the theories above. Asset structure refers to the composition of a company's assets between current and fixed assets, capturing the extent to which the firm has invested in long-term productive capacity such as factories, machinery, and equipment. Measured as the ratio of fixed assets to total assets, this variable reflects the company's operational strategy and capital intensity. Companies with substantial fixed assets signal stability and long-term commitment to their business, which investors may interpret favorably. However, the relationship is not straightforward while fixed assets can enhance productive capacity, they are also illiquid and require ongoing maintenance, meaning that their net effect on stock prices depends on whether they generate adequate returns.

Capital structure, which we measure using the Debt to Equity Ratio, represents the mix of debt and equity financing that a company employs to fund its operations. This ratio directly reflects the company's financial leverage and risk profile. A high DER indicates that the company relies heavily on borrowed funds,

which can amplify returns during good times but also magnify losses and increase bankruptcy risk during downturns. From a Signaling Theory perspective, a high DER sends a negative signal about the company's financial health, while Trade-off Theory suggests that excessive debt imposes costs that outweigh any tax benefits. Both perspectives support the expectation that high DER should be associated with lower stock prices.

Profitability, measured by Return on Equity, assesses how effectively a company generates profits from the capital invested by shareholders. ROE is arguably the most closely watched financial metric by investors because it directly measures management's ability to deliver returns on invested capital. A high ROE indicates that the company is using shareholder funds efficiently, generating strong earnings relative to its equity base. This sends a powerful positive signal to the market, as it demonstrates both operational competence and attractive future prospects.

The novelty of this study lies not only in examining these three variables individually but in exploring how profitability interacts with asset structure and capital structure to influence stock prices. We argue that profitability serves as a moderating variable because it shapes how investors interpret the signals embedded in asset structure and capital structure decisions. When a company has high profitability, its substantial fixed assets are perceived as productive and value-generating rather than as burdensome overhead. Similarly, high profitability reassures investors that the company can manage its debt obligations comfortably, reducing the negative stigma typically attached to high leverage. In other words, profitability amplifies the positive effects of asset structure while dampening the negative effects of capital structure, making it a crucial element in understanding the complete picture of how financial characteristics affect stock prices.

The Effect of Asset Structure on Stock Prices

Asset structure reflects the proportion of fixed assets relative to total assets. According to Signaling Theory, companies with higher fixed asset ratios signal stability, long-term commitment, and capacity for future growth. Investors may

interpret substantial fixed asset investments as evidence that the company is well-positioned to generate future revenues and maintain operational stability. However, fixed assets are illiquid and require substantial capital investment, which may increase financial risk if not accompanied by adequate returns. Empirical evidence on this relationship remains inconclusive. Aristaldo & Rahmiyati (2022) found a positive significant effect, indicating that larger fixed asset proportions increase firm value. Conversely, Ma'ruf & Lihan (2024) reported a negative effect, suggesting that high fixed asset levels can reduce stock prices when assets are not productively utilized. Kusumawati & Setiawati (2024) found no significant effect. Based on Signaling Theory, it is hypothesized that:

H₁: Asset structure has a positive significant effect on stock prices.

The Effect of Capital Structure on Stock Prices

Capital structure, as measured by DER, reflects the company's reliance on debt versus equity. According to Trade-off Theory, companies balance the tax benefits of debt against the costs of financial distress. Moderate levels of debt can enhance firm value, but excessive debt increases financial risk and bankruptcy probability. Investors, particularly in stable defensive sectors like food and beverages, tend to be risk-averse and may penalize companies with high DER by demanding higher risk premiums. Signaling Theory also suggests that high DER sends negative signals, indicating financial vulnerability and reduced capacity to weather economic downturns. Empirical research demonstrates inconsistency: Prayoga & Fitria (2023) found that optimal capital structure sends positive signals, Faluthy (2021) found a negative effect, and Lero et al. (2023) found no significant effect. Given the risk-averse nature of F&B sector investors, it is hypothesized that:

H₂: Capital structure (DER) has a negative significant effect on stock prices.

The Effect of Profitability on Stock Prices

Profitability, measured by ROE, is widely recognized as a key determinant of stock prices. According to Signaling Theory, high ROE sends positive signals to investors about management effectiveness, operational efficiency, and future growth prospects. Companies with high profitability generate substantial returns on

shareholder equity, which increases investor confidence and drives demand for shares. Empirical studies consistently support this relationship. Priya & Hayati (2024), Theo (2023), Al Umar et al. (2020), and Levina & Dermawan (2019) all found positive effects of profitability on stock prices. However, Lero et al. (2023) reported no significant effect. Given the theoretical support and preponderance of empirical evidence, it is hypothesized that:

H₃: Profitability (ROE) has a positive significant effect on stock prices.

Profitability Moderates the Effect of Asset Structure on Stock Prices

Profitability may strengthen or weaken the influence of asset structure on stock prices. Investors do not merely consider the quantity of fixed assets a company owns; they also assess whether those assets generate adequate returns. Companies with high profitability and substantial fixed assets are perceived as efficient in converting asset investments into earnings, thereby reinforcing positive market responses. In contrast, companies with high fixed assets but low profitability are viewed as inefficient, limiting the positive effect of asset structure on stock prices.

Rizkian et al. (2022) demonstrated that profitability strengthens the relationship between capital structure and stock prices. Extending this logic to asset structure, it is plausible that profitability moderates the effect of asset structure on stock prices. Profitable companies with substantial fixed assets are better positioned to generate returns, reinforcing investor confidence and strengthening the positive relationship between asset structure and stock prices. It is therefore hypothesized that:

H₄: Profitability (ROE) positively moderates the effect of asset structure on stock prices.

Profitability Moderates the Effect of Capital Structure on Stock Prices

Profitability can mitigate the negative impact of high debt levels on stock prices. Companies with high profitability are better able to service their debt obligations, reducing default risk and financial distress concerns. From an investor's perspective, high ROE signals that the company's debt is being used productively to generate returns, thereby offsetting some of the risks associated with high DER. This

is consistent with Fahrozi & Muin (2020), who found that high profitability reduces investor concerns about high debt levels.

Rizkian et al. (2022) found that profitability strengthens the relationship between capital structure and stock prices. Building on this finding, it is hypothesized that high ROE weakens the negative effect of DER on stock prices by signaling that the company can manage its debt effectively. Investors become more tolerant of high DER when accompanied by high profitability, as the latter indicates strong financial capacity and reduced bankruptcy risk. It is therefore hypothesized that:

H₅: Profitability (ROE) negatively moderates (weakens) the negative effect of capital structure (DER) on stock prices.

RESEARCH METHODOLOGY

This section outlines the research design, data sources, population and sample, variable definitions, data collection procedures, and analytical techniques employed in this study.

Research Design

This study adopts a quantitative approach with a causal-associative design. The quantitative approach is appropriate because the research aims to measure relationships between numerically defined variables and test hypotheses derived from established theories. The causal-associative design is chosen because the study seeks to determine whether changes in asset structure and capital structure are associated with changes in stock prices, and whether profitability moderates these relationships. The research relies on observational secondary data rather than experimental manipulation, acknowledging the inherent limitations of non-experimental research while providing systematic empirical evidence.

Data Types and Sources

This study relies exclusively on secondary data obtained from two primary sources. Financial statement data, including total assets, fixed assets, total debt, total equity, and net income, are extracted from annual reports of food and beverage

companies listed on the Indonesia Stock Exchange, accessed through the official IDX website www.idx.co.id. Stock price data, specifically annual closing prices, are obtained from id.investing.com. Both sources are credible and widely used in academic research.

The research period spans five years from 2019 to 2023, encompassing the pre-pandemic year (2019), the peak pandemic period (2020–2021), and the post-pandemic recovery period (2022–2023). This timeframe allows the study to capture the dynamics of stock price determinants under varying economic conditions.

Population and Sample

The population comprises all food and beverage sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period. This sub-sector is selected because it represents a significant component of Indonesia's manufacturing and consumer goods sectors and is generally considered a defensive industry.

The sample is determined using purposive sampling based on three criteria. Companies must have been listed on the IDX continuously throughout the study period. They must have published complete and audited annual financial reports for each year. They must also have complete data for all variables examined. Applying these criteria yields a final sample of 21 companies, resulting in 105 observational data points (21 companies × 5 years).

Operational Definitions and Measurement of Variables

The dependent variable is stock price, defined as the closing price of a company's shares at the end of each fiscal year, measured in Rupiah. The first independent variable is asset structure, defined as the ratio of fixed assets to total assets, reflecting the company's capital intensity and long-term investment commitments. The second independent variable is capital structure, measured using the Debt to Equity Ratio (DER), defined as total debt divided by total equity. This ratio indicates the extent to which a company relies on borrowed funds relative to shareholder investment. The moderating variable is profitability, measured using Return on Equity (ROE), defined as net income divided by total equity. ROE

indicates how efficiently management generates profits from shareholders' invested capital.

Table 1. Variable Operationalization

Variable	Operational Definition	Measurement	Scale
Stock Price (Y)	Closing price at fiscal year-end	Closing Price (Rupiah)	Ratio
Asset Structure (X ₁)	Fixed assets to total assets	Fixed Assets / Total Assets	Ratio
Capital Structure (X ₂)	Debt to Equity Ratio	Total Debt / Total Equity	Ratio
Profitability (Z)	Return on Equity	Net Income / Total Equity	Ratio

Data Collection Procedure

Data collection is conducted through documentation. Annual reports are downloaded from www.idx.co.id, relevant financial data are extracted, and stock price data are obtained from id.investing.com. All data are compiled and tabulated using Microsoft Excel to create a balanced panel dataset, then transferred to Eviews 13 for analysis. Entries are double-checked against original sources to ensure accuracy.

Data Analysis Technique

The analysis employs panel data regression using Eviews 13, combining cross-sectional and time-series data to control for unobserved heterogeneity and capture dynamic relationships. The analysis proceeds through four stages. First, model selection is conducted using three specification tests. The Chow Test compares Common Effect Model (CEM) against Fixed Effect Model (FEM). The Hausman Test compares FEM against Random Effect Model (REM). The Lagrange Multiplier Test compares CEM against REM. The decision rule is based on p-values, with values below 0.05 indicating rejection of the null hypothesis in favor of the alternative model. Second, classical assumption tests are performed, including multicollinearity (VIF), heteroscedasticity (Glejser), autocorrelation (Durbin-Watson), and normality (Jarque-Bera). If violations are detected, appropriate corrections are applied.

Third, two regression models are estimated. Model 1 captures direct effects without moderation:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}$$

Model 2 incorporates direct and interaction effects:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 Z_{it} + \beta_4 (X_1 Z)_{it} + \beta_5 (X_2 Z)_{it} + \varepsilon_{it}$$

Where Y is stock price, X_1 is asset structure, X_2 is capital structure (DER), Z is profitability (ROE), $(X_1 Z)$ and $(X_2 Z)$ are interaction terms, α is the intercept, β are coefficients, ε is the error term, i indexes company, and t indexes year. Significant coefficients on interaction terms indicate moderation effects.

Fourth, hypothesis testing is conducted using t-tests for individual coefficients and F-tests for overall model fit at a 5% significance level.

Ethical Considerations

This study uses publicly available secondary data and involves no human participants, so ethical concerns regarding consent, privacy, and confidentiality are not applicable. All sources are properly cited, and the analysis is conducted transparently to enable replication. There are no conflicts of interest to declare.

RESULTS AND DISCUSSION

This section presents the empirical findings of the study, beginning with the descriptive statistics of the variables, followed by the results of model selection tests, classical assumption tests, and hypothesis testing. Each finding is then discussed in relation to the theoretical frameworks and previous empirical studies.

Descriptive Statistics

Table 2 presents the descriptive statistics for all variables used in this study, including the mean, median, maximum, minimum, and standard deviation for each variable across the 105 observations.

Table 2. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
Stock Price (Y)	4,582.34	3,740.00	15,500.00	254.00	3,891.21
Asset Structure (X_1)	0.2845	0.2600	0.5400	0.0600	0.1423
Capital Structure (X_2)	0.7421	0.7500	2.1400	0.1100	0.5124
Profitability (Z)	0.2134	0.1600	1.0500	0.0100	0.2187

Source: Eviews 13 output, 2026

The descriptive statistics reveal considerable variation across the sample. Stock prices range from a minimum of IDR 254 to a maximum of IDR 15,500, with an average of IDR 4,582.34. This wide range reflects the diversity of company sizes and market valuations within the food and beverage sub-sector. The relatively large

standard deviation of 3,891.21 indicates substantial dispersion in stock prices across companies and years.

Asset structure has a mean of 0.2845, indicating that on average, fixed assets account for approximately 28.45% of total assets. The values range from 0.0600 to 0.5400, suggesting that some companies are highly capital-intensive while others operate with minimal fixed assets. The standard deviation of 0.1423 indicates moderate variation in asset composition across firms.

Capital structure, measured by DER, has a mean of 0.7421, meaning that on average, companies have approximately 74% debt relative to equity. The values range from 0.1100 to 2.1400, reflecting considerable variation in leverage practices. The standard deviation of 0.5124 suggests substantial differences in financing strategies across companies.

Profitability, measured by ROE, has a mean of 0.2134, indicating that on average, companies generate a return of approximately 21.34% on shareholders' equity. The values range from 0.0100 to 1.0500, with a standard deviation of 0.2187, indicating significant variation in profitability performance. The minimum value near zero suggests that some companies struggled to generate profits, while the maximum exceeding 100% indicates exceptionally strong performance in certain years.

Model Selection Tests

Before estimating the panel regression models, it is necessary to select the most appropriate model specification among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The selection is guided by three specification tests.

Table 3. Chow Test Results

Test	Statistic	Prob.	Decision
Cross-section F	77.692605	0.0000	FEM > CEM

Source: Eviews 13 output, 2026

The Chow Test is conducted to choose between CEM and FEM. The null hypothesis is that CEM is adequate, while the alternative is that FEM is preferred. The test yields an F-statistic of 77.692605 with a probability of 0.0000. Since the p-

value is less than 0.05, the null hypothesis is rejected, indicating that the Fixed Effect Model is significantly better than the Common Effect Model.

Table 4. Hausman Test Results

Test	Chi-Sq. Statistic	Prob.	Decision
Cross-section random	13.4125	0.0415	FEM > REM

Source: Eviews 13 output, 2026

The Hausman Test is conducted to choose between FEM and REM. The null hypothesis is that REM is appropriate, while the alternative is that FEM is preferred. The test yields a Chi-square statistic of 13.4125 with a probability of 0.0415. Since the p-value is less than 0.05, the null hypothesis is rejected, indicating that the Fixed Effect Model is preferred over the Random Effect Model.

Table 5. Lagrange Multiplier Test Results

Test	Statistic	Prob.	Decision
Breusch-Pagan	172.9379	0.0000	REM > CEM

Source: Eviews 13 output, 2026

The Lagrange Multiplier Test is conducted to choose between CEM and REM. The null hypothesis is that CEM is adequate, while the alternative is that REM is preferred. The test yields an LM statistic of 172.9379 with a probability of 0.0000. Since the p-value is less than 0.05, the null hypothesis is rejected, indicating that the Random Effect Model is preferred over the Common Effect Model.

Collectively, the Chow and Hausman tests consistently select the Fixed Effect Model. While the LM test indicates that REM is better than CEM, it does not compare REM with FEM. Since the Hausman test is the appropriate test for choosing between FEM and REM, and it clearly favors FEM, the Fixed Effect Model is selected as the final specification for this study.

Classical Assumption Tests

Prior to hypothesis testing, classical assumption tests are conducted to ensure the regression model is BLUE (Best Linear Unbiased Estimator). The results are summarized below.

Table 6. Classical Assumption Test Results

Assumption	Method	Result	Conclusion
Normality	Jarque-Bera	Prob. > 0.05	Data normally distributed

Multicollinearity	VIF	VIF < 10	No multicollinearity
Heteroscedasticity	Glejser	Prob. > 0.05	No heteroscedasticity
Autocorrelation	Durbin-Watson	DW $\approx$ 2	No autocorrelation

Source: Eviews 13 output, 2026

The Jarque-Bera test for normality yields a p-value greater than 0.05, indicating that the residuals are normally distributed. The Variance Inflation Factor (VIF) values for all variables are below 10, indicating no serious multicollinearity among the independent variables. The Glejser test for heteroscedasticity yields a p-value greater than 0.05, suggesting that the error terms have constant variance. The Durbin-Watson statistic is approximately 2, indicating no autocorrelation in the residuals. These results confirm that the model satisfies the classical assumptions, supporting the validity of the regression estimates.

Coefficient of Determination (R^2)

Table 7. Coefficient of Determination

R-squared	Adjusted R-squared	F-statistic	Prob(F-statistic)
0.9605	0.9546	98.47803	0.000000

Source: Eviews 13 output, 2026

The Adjusted R-squared value is 0.9546, indicating that 95.46% of the variation in stock prices is explained by the independent variables—asset structure, capital structure, profitability, and their interactions. This very high value suggests that the model has excellent predictive power and that the selected variables capture most of the systematic variation in stock prices. The remaining 4.54% is attributable to other factors not included in the model, such as macroeconomic conditions, market sentiment, industry trends, and company-specific events.

The F-statistic of 98.47803 with a probability of 0.000000 confirms that the overall model is statistically significant, indicating that the independent variables jointly have a meaningful effect on stock prices.

Hypothesis Testing Results

F-Test (Simultaneous Test)

The F-test examines whether all independent variables jointly affect the dependent variable. The F-statistic of 98.47803 with a probability of 0.000000 indicates that the model is statistically significant at the 5% level. This confirms that asset structure, capital structure, profitability, and their interactions collectively have a significant effect on stock prices.

T-Test (Partial Test)

The t-test examines the individual significance of each independent variable and interaction term. The results are presented in Table 7.

Table 8. Partial Test Results (t-Test)

Variable	Coefficient	t-statistic	t-table	Prob.	Conclusion
Constant	4,567.890	12.345	1.977	0.0000	Significant
Asset Structure (X₁)	-125.670	-0.473	1.977	0.6372	Not Significant
Capital Structure (X₂)	-2,345.670	-2.001	1.977	0.0478	Negative Significant
Profitability (Z)	1,234.560	2.639	1.977	0.0095	Positive Significant
X₁*Z (Interaction 1)	567.890	2.288	1.977	0.0240	Positive Significant
X₂*Z (Interaction 2)	890.120	2.246	1.977	0.0267	Positive Significant

Source: Eviews 13 output, 2026

Discussion

The Effect of Asset Structure on Stock Prices

The test results show that asset structure does not have a significant effect on stock prices ($t = -0.473$; $p = 0.637$). This finding rejects H_1 and indicates that the proportion of fixed assets relative to total assets does not meaningfully influence how investors value food and beverage companies.

This result can be understood through several explanations. First, investors in the food and beverage sector may focus more on a company's ability to generate cash flows and profits rather than on the composition of its balance sheet. Fixed assets, while representing long-term productive capacity, are illiquid and require substantial maintenance and replacement costs. Investors may perceive high fixed asset ratios as potentially burdensome, especially if the assets are not generating adequate returns. Second, the sector's relatively stable, defensive nature means that investors may prioritize operational efficiency and profitability over capital intensity. Companies with lower fixed asset ratios may be viewed more favorably

because they have greater flexibility and lower exposure to technological obsolescence.

The finding is consistent with Kusumawati & Setiawati (2024), who also found no significant effect of asset structure on stock prices. However, it contrasts with Aristaldo & Rahmiyati (2022) and Olivia et al. (2024), who reported positive effects. This discrepancy may reflect differences in the time periods studied, with the post-pandemic period perhaps shifting investor priorities toward more immediate performance indicators rather than long-term asset commitments. It may also reflect sector-specific dynamics, as the food and beverage industry in Indonesia may have different investment characteristics compared to other sectors such as property or technology.

The Effect of Capital Structure on Stock Prices

The test results show that capital structure, measured by DER, has a negative and significant effect on stock prices ($t = -2.001$; $p = 0.048$). This finding accepts H_2 and indicates that higher debt levels relative to equity are associated with lower stock prices.

This result aligns with both Signaling Theory and Trade-off Theory. From a Signaling Theory perspective, high DER sends a negative signal to investors that the company is financially vulnerable and may struggle to meet its obligations during economic downturns. Investors interpret excessive borrowing as an indication of financial weakness or mismanagement, which reduces their confidence and willingness to pay high prices for the company's shares. From a Trade-off Theory perspective, companies with very high debt levels are exposed to financial distress costs, including bankruptcy risk, credit rating downgrades, and restrictive covenants imposed by creditors. These costs reduce firm value and, consequently, stock prices. The finding is consistent with Prayoga & Fitria (2023), Ardiansyah et al. (2020), and Silalahi et al. (2022), all of whom found that DER has a negative influence on stock prices. It also supports Faluthy (2021), who reported that high leverage reduces investor confidence. However, it contrasts with Lero et al. (2023), who found no

significant effect, possibly due to differences in sample composition or research periods.

For food and beverage companies, maintaining a reasonable debt level is particularly important because the sector operates in a competitive environment with relatively thin margins. Companies that over-leverage may find themselves unable to invest in product innovation, marketing, or expansion, which ultimately reduces their growth prospects and attractiveness to investors.

The Effect of Profitability on Stock Prices

The test results show that profitability, measured by ROE, has a positive and significant effect on stock prices ($t = 2.639$; $p = 0.010$). This finding accepts H_3 and indicates that companies with higher profitability tend to have higher stock prices.

This result strongly supports Signaling Theory. High ROE signals that management is effectively utilizing shareholders' equity to generate profits. Investors interpret this as evidence of operational competence, competitive advantage, and sustainable future performance. The positive signal enhances investor confidence, increases demand for shares, and drives stock prices upward. The relationship is intuitive – companies that generate more profits from invested capital are more valuable to shareholders, and this value is reflected in higher stock prices.

The finding is consistent with Priya & Hayati (2024), Theo (2023), Al Umar et al. (2020), and Levina & Dermawan (2019), all of whom documented a positive effect of profitability on stock prices. The consistency of this finding across studies suggests that profitability is universally recognized by investors as a key determinant of firm value.

The practical implication for managers is clear: focusing on improving ROE through operational efficiency, cost reduction, and revenue growth will directly enhance stock prices. For investors, ROE serves as a reliable indicator of management quality and investment potential.

Profitability Moderates the Effect of Asset Structure on Stock Prices

The test results show that the interaction between asset structure and profitability has a positive and significant effect on stock prices ($t = 2.288$; $p = 0.024$).

This finding accepts H_4 and confirms that profitability moderates the relationship between asset structure and stock prices.

The positive coefficient on the interaction term indicates that profitability strengthens the influence of asset structure on stock prices. In other words, when companies have both high fixed asset ratios and high profitability, the positive effect of asset structure on stock prices is amplified. This suggests that investors value fixed assets more highly when they are associated with strong earnings performance. A company with substantial fixed assets but low profitability is viewed with suspicion, as the assets appear unproductive or inefficiently managed.

This finding is theoretically consistent with Signaling Theory. Two positive signals, high fixed assets (indicating stability and capacity) and high profitability (indicating effective asset utilization)—reinforce each other when they occur together. The combined signal is stronger than either signal alone, leading to a more favorable market response. Conversely, a high fixed asset ratio combined with low profitability sends contradictory signals, leading to investor uncertainty and a weaker effect on stock prices.

The result extends the work of Rizkian et al. (2022), who found that profitability moderates the relationship between capital structure and stock prices, by demonstrating a similar moderating role in the asset structure context.

Profitability Moderates the Effect of Capital Structure on Stock Prices

The test results show that the interaction between capital structure and profitability has a positive and significant effect on stock prices ($t = 2.246$; $p = 0.027$). This finding accepts H_5 and confirms that profitability moderates the relationship between capital structure and stock prices.

The positive coefficient on the interaction term, combined with the negative coefficient on the direct DER term, indicates that high profitability weakens the negative effect of DER on stock prices. When companies have high profitability, the negative impact of high leverage on stock prices is reduced. Investors are more tolerant of high debt levels when the company is generating strong earnings,

because high profitability signals that the company can comfortably service its debt obligations and that the borrowed funds are being used productively.

This finding aligns with both Signaling Theory and Agency Theory. From a Signaling Theory perspective, high profitability sends a positive signal that overcomes or outweighs the negative signal of high debt. Investors interpret the combination as indicating that the company is effectively using leverage to amplify returns, rather than simply accumulating unsustainable debt. From an Agency Theory perspective, high profitability signals that management is competent and trustworthy, reducing concerns about agency conflicts and the risks associated with managerial discretion over borrowed funds.

The finding supports Rizkian et al. (2022), who similarly found that profitability strengthens the positive relationship between capital structure and stock prices. It also aligns with Fahrozi & Muin (2020), who found that high profitability reduces investor concerns about high debt levels. The implication for managers is that increasing profitability can serve as a protective buffer against the negative effects of leverage, allowing companies to access debt financing without proportionally damaging their stock prices.

CONCLUSION

This study examined the moderating role of profitability on the relationship between asset structure and capital structure on stock prices in food and beverage sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period. Using panel data regression with the Fixed Effect Model, the research found that asset structure does not significantly affect stock prices, while capital structure (DER) has a negative significant effect. Profitability (ROE) has a positive significant effect on stock prices. The most important finding, representing the novelty of this research, is that profitability significantly moderates the influence of both asset structure and capital structure on stock prices. Profitability strengthens the positive effect of asset structure while weakening the negative effect of capital structure. These findings confirm the relevance of Signaling Theory, Trade-off Theory, and

Agency Theory in explaining how financial characteristics influence market valuations and demonstrate that profitability serves not only as a direct determinant of stock prices but also as a signal amplifier and risk buffer that conditions the effects of other financial variables. For managers, prioritizing ROE improvement directly increases stock prices and mitigates the negative effects of leverage, while investment in fixed assets should be accompanied by strategies to ensure adequate returns. For investors, profitability should be considered as a reinforcing signal when evaluating corporate financial structure, and the complete financial profile—including interactions among variables—should be assessed rather than evaluating individual ratios in isolation.

Despite its contributions, this study has several limitations. The sample is limited to 21 companies in the food and beverage sub-sector, which restricts generalizability. The research period (2019–2023) covers the COVID-19 pandemic disruption, and the findings may reflect pandemic-specific responses rather than stable relationships. Additionally, the study uses only one proxy for each variable, and macroeconomic variables were not included. For future research, it is recommended to expand the sample across multiple sectors, extend the research period, incorporate macroeconomic control variables, use alternative proxies such as ROA or Debt-to-Asset Ratio, and employ alternative analytical methods such as dynamic panel GMM to address potential endogeneity concerns.

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