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The Effect of Capital Structure, Profitability, and Liquidity on Stock Returns, with Company Size as a Moderating Variable in Food and Beverage Companies Listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 Period

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ABSTRACT

The purpose of this research is to examine the impact of capital structure, profitability, and liquidity on stock returns, taking into account company size as a moderating factor, in food and beverage firms listed on the Indonesia Stock Exchange (BEI) between 2019 and 2023. Data from the Indonesia Stock Exchange served as the foundation for this research. The sampling technique employed was purposive sampling. This research included a sample of 11 companies from the food and beverage sub-sector listed on the Indonesia Stock Exchange between 2019 and 2023, with a total of 55 companies. Moderated Regression Analysis (MRA), secondary data, and panel data regression analysis were the methods used. According to the findings of this study, capital structure has a positive and considerable impact on share returns, liquidity has a positive and significant impact on share returns, and profitability has no effect on share returns. The impact of profitability on stock returns is not greatly moderated (strengthened) by firm size.

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1. INTRODUCTION

The ever-evolving global economy is driving increasingly fierce competition among companies in Indonesia, which is intensifying daily. As the number of new companies increases, it is increasingly difficult for established companies to maintain their competitive advantage. One approach to achieving this is through stock investments to generate profits. The returns investors receive from their stock investments are referred to as stock returns [1].

Stock returns, or income from shares, are a key indicator for evaluating investment returns in the capital market. Recently, the Indonesian stock market has experienced rapid expansion, attracting the attention of both local and foreign investors. In addition to reflecting company performance, stock

returns are also influenced by several internal and external factors, including market liquidity, government policies, and overall economic conditions.

One key metric for assessing investment performance in the capital market is the stock return. A company's stock return shows how the value of its shares has changed over time, and these changes are influenced by the company's financial performance as well as market and macroeconomic factors. Stock return, which reflects the gain or loss experienced by investors from changes in stock prices and dividend payments over a specific period, is a metric used to assess investment effectiveness. Furthermore, the company's future and the overall market conditions are reflected in stock returns [3].

High stock returns typically indicate enthusiasm for a company's potential, meaning investors believe in its strong financial performance, growth plans, and competitive advantage. High returns often mean a company has performed better than expected or has significant future growth potential. Conversely, low stock returns typically indicate investors are concerned or have a negative outlook on the company's potential. This may be due to financial performance issues, loss of market share, operational difficulties, or problems keeping pace with market changes. External factors such as an economic slowdown, new regulations, and increased competition in the industry can also contribute to low stock returns.

With one of the largest populations in the world [3], Indonesia has enormous market potential, particularly in the food and beverage industry. Demand for these consumer goods continues to increase due to rapid population growth. Significant changes in spending patterns are occurring with the growth of the middle class, with consumers increasingly favoring high-quality goods. This has impacted the stock market and the food and beverage industry, as companies in this sector have begun to attract investor interest.

Indonesian food and beverage companies have emerged as a highly sought-after sector for investors due to their significant growth potential. As demand increases, businesses that can adapt and meet consumer needs are more likely to thrive in the stock market. Investments in the Indonesian food and beverage industry are influenced by broader economic factors such as inflation, interest rates, and overall economic growth. Economic growth increases consumer purchasing power, which in turn increases demand for food and beverages. To understand the potential returns from stocks in this sector, investors need to focus on these indicators. Therefore, for investors looking to make informed choices in the Indonesian capital market, it is important to conduct a comprehensive examination of market behavior and the factors that influence stock returns.

In 2019, the food and beverage industry experienced 7.78% growth compared to 2018. From 2020 to 2021, the Indonesian food and beverage industry grew by 2.54%, reaching a total of IDR 775.1 trillion [6]. Production in the food and beverage industry is expected to continue to increase due to rapid investment in this sector. The rapid influx of capital into food and beverage companies is expected to significantly increase output in this industry. This increased cash flow allows businesses to expand their production capabilities, improve operational efficiency by adopting new technologies, and strengthen their distribution networks.

Furthermore, investment also encourages more diverse product innovation to meet evolving consumer preferences [5]. This development not only strengthens the competitiveness of the food and beverage industry in the domestic market but also opens up opportunities for global market penetration through exports. Thus, the food and beverage sector has strategic potential as a key driver of national economic growth.

In investment analysis, comparing a company's financial performance with stock returns is a crucial step. A clear picture of a company's financial health can be obtained by evaluating its financial performance, which can be assessed using various financial ratios, including capital structure, profitability, and liquidity. A company's capacity to generate stable revenue and utilize its resources effectively is often reflected in its financial performance. This reassures investors that the business has

the capacity to generate stable and profitable returns in the future. In other words, investors can estimate the extent to which a company can generate profits from its shares using financial performance metrics.

Penulis menyimpulkan bahwa laporan keuangan dapat digunakan untuk mengukur kinerja keuangan, dan dengan menggunakan berbagai jenis rasio keuangan, bisa dilihat apakah kinerja perusahaan dalam kondisi baik secara finansial atau tidak [2]. By linking several items in the income statement and balance sheet, these ratios enable stakeholders such as investors, creditors, and management to evaluate various aspects of a company's performance.

Because it can impact the cost of capital and the financial risks involved, capital structure is an important consideration when making corporate investments. By choosing the right mix of debt and equity, businesses can benefit from the tax advantages of debt interest, which reduces the overall cost of capital. However, too high a debt ratio can increase the likelihood of bankruptcy, which can undermine investor confidence and drive up borrowing rates. Consequently, a sound capital structure is necessary to strike a balance between risk and reward.

Furthermore, a healthy capital structure provides financial freedom for businesses [7]. Companies with sufficient equity reserves are better positioned to meet urgent funding needs, such as those related to growth or new investments, without jeopardizing their financial stability. Furthermore, it sends a favorable message to lenders and investors about the company's financial health, which can lead to better access to financing options in the future. Consequently, having a solid capital structure is crucial for driving long-term growth and maintaining a company's market position. Al Zou'bi et al. [7] found that capital structure affects stock performance, which is consistent with this claim. Chandra et al. (2019) present a different perspective, claiming that there is no correlation between capital structure and stock returns.

Liu et al. [8] explain that a company's profit reflects its ability to generate cash through sales. Stock returns are the profits or income investors receive when a company's stock price fluctuates, including dividends paid. Strong profitability indicates that a business can reliably generate revenue, which often boosts investor confidence, as high earnings indicate strong performance. Profitable companies typically have the potential to deliver better stock returns. Investors tend to buy shares in successful companies, which can lead to significant increases in stock prices and earnings. While profitability is an important factor, additional elements such as market trends, economic conditions, and corporate strategy also influence stock returns.

Every business will operate as efficiently as possible to achieve maximum profit levels because this indicates the business can generate profits with the available funds [9]. With good profitability, a company can attract investors because they tend to seek investments that offer high profit potential.

This study was inspired by conflicting findings from previous studies. Some studies show that profitability helps increase stock returns, while others show that profitability has no impact at all [9].

Investors typically prefer easily traded stocks because they believe they can quickly buy and sell them whenever they want. Consequently, when investors become comfortable with these easily traded stocks, demand increases, which can lead to higher stock prices and better returns [10]. On the other hand, stocks that are difficult to trade often experience more unpredictable value fluctuations and are more difficult to buy and sell, which can lead to less reliable or lower returns. Therefore, the ease of trading a stock is an important factor influencing investment returns. This finding aligns with the study by Huang and Ho [14], which showed that higher liquidity leads to better stock returns. However, Silver et al. [11] offer a different perspective, stating that liquidity has no impact on stock returns.

Stock returns are strongly influenced by company size. Large companies are typically in the mature stage of their business cycle, as indicated by their high asset values. More stable operations are a sign of this level of maturity, making it easier to forecast future earnings performance. This improved predictability provides investors with a solid basis for their investment decisions, which in turn positively influences stock price fluctuations. To maximize potential investment returns, investors

strategically consider the company's total assets [12].

Company size is a moderating factor in this study, potentially strengthening or weakening the correlation between the independent variables and stock returns. This is based on the fact that larger companies typically have more potential sustainability initiatives, which attract more investors [13].

2. METHOD

2.1 Study Design

The study method used is quantitative. As stated by Sugiyono, a quantitative study approach relies on statistical methods and research instruments to gather information for analyzing a specific population or sample. This study examines how independent factors—capital structure, profitability, and liquidity—influence the dependent factor, namely stock returns, with company size acting as a moderating factor. Explanations of these factors are provided through numerical data collected from the study findings, which serve as the basis for describing the situation related to the variables studied.

2.2 Operational Definition of Variables

2.2.1 Dependent Variable

The dependent variable in this study is stock return, which is the actual profit or loss from a stock investment over a specific time period. Investors can make more informed investment choices if they have a better understanding of stock return. Stock return is calculated using the following formula:

$$Stock\ returns\ \frac{pt-(Pt-1)}{(Pt-1)}$$

Description:
P_t = annual closing price in period t
P_{t-1} = closing price in the previous year

2.2.2 Independent Variable

The factors examined in this research include liquidity, profitability, and capital structure.

1. Capital Structure

Capital structure refers to the various ways a company raises funds to support its operations and expansion. The balance between borrowed funds and ownership stakes within this structure can affect a company's risk level and its ability to generate profits. By managing this balance, a company can increase profits, enhance overall value, and manage financial risk. The choice of capital structure also influences how much a company pays out to its shareholders and its growth plans.

In this study, the Derivatives to Equity Ratio (DER) is used to determine the capital structure ratio. DER compares the total debt and equity of companies listed on the IDX. This ratio reveals how much owner's funds are available to repay debts to other parties. DER can be calculated using the formula below.

$$DER\ \frac{Total\ Debt}{Total\ Capital}\ x\ 100\%$$

2. Profitability

The ability of companies listed on the IDX to generate revenue from various channels and opportunities, such as sales operations, liquidity, capital, number of employees, and branch locations, is demonstrated through profitability ratios. An example of such a ratio is ROA, which assesses how effectively a company uses its assets to generate profits [8].

ROA is a metric that evaluates the efficiency of a company's assets in generating net income. Companies with a higher ROA are in better financial health, thus generating greater returns for

shareholders. ROA can be determined by taking total assets, multiplying it by 100 percent, and then comparing this amount to net income after tax. This can be expressed as:

$$DER\ \frac{Net\ Profit}{Total\ Assets}\ x\ 100\%$$

3. Liquidity

A company's liquidity indicates its ability to finance its operations and pay its bills on time. In this analysis, the liquidity ratio is represented by the liquidity ratio (CR). CR is the business's ability to use cash (and cash equivalents), such as checking accounts or other readily available bank deposits, to pay its short-term obligations. In this study, liquidity can be defined as follows:

$$DER\ \frac{Current\ asset}{Current\ Liabilities}\ x\ 100\%$$

4. Moderating Variables

The moderating variable in this study is firm size. "Firm size" is a term used to describe a method for categorizing a firm's size in various ways, including its market value or total assets. Another approach to determining firm size is to apply the natural logarithm of total assets. Firm size indicates its level of capability or capacity. Total assets represent the firm's size; the more assets it holds, the larger the firm is considered. The variable used to indicate firm size is SIZE.

2.3. Population, Sample, and Sampling Techniques

All food and beverage companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 are included in this study. The food and beverage sector was chosen because it plays a crucial role in driving the Indonesian economy. Furthermore, this industry is considered safe because demand for its products is relatively stable and often increases even when the economy faces challenges. This stability makes the food and beverage sector attractive to investors. As Indonesia's population grows, food and beverage consumption also increases, promising future industry growth. Therefore, the food and beverage sector from 2019 to 2023 forms the basis of this study. The sampling method used in this study is purposive sampling, which involves selecting samples based on specific predetermined criteria.

2.4 Study Instruments

The tools used in research projects are usually known as research instruments. Sugiyono defines research instruments as tools used to assess the phenomena being studied, whether natural or social. For this study, secondary data sources consisted of the financial reports of food and beverage companies listed on the Indonesia Stock Exchange (IDX). This data was then processed to identify financial ratios that would serve as the basis for decision-making. The research instruments used in this study were obtained from company financial ratios extracted from the financial reports of the food and beverage subsector available on the IDX for the years 2019 to 2023.

Validity and reliability checks are part of the research instrument testing process. To ensure that the findings are valid and practical, validity checks are concerned with reducing research errors. While reliability checks evaluate measurement consistency among respondents and ensure that statements are understandable without leading to different interpretations, validity checks indicate how relevant the statements are to the concepts being measured in the study.

2.5 Data Collection Technique

The approach used for the literature review in this study involved gathering details from various

sources related to the topic under study. To gather secondary information for this study, the team retrieved annual reports or examined financial statements from food and beverage companies listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023. Information for this study was found on the official IDX website, www.BEI.co.id.

2.6 Data Analysis Techniques

The data analysis method used was Eviews software. The analysis method used in this study is quantitative, namely converting study data into numbers to obtain the information needed for the investigation. The approach used in this study involves regression analysis utilizing panel data. The regression analysis method includes descriptive statistics, regression model estimation assessment, standard assumption evaluation, and hypothesis testing.

3. RESULTS AND DISCUSSION

3.1 Study Findings

3.1.1 Descriptive Statistical Analysis

Descriptive statistical analysis helps us study data features, such as the largest and smallest numbers, the average, and the extent of variation in values. Using descriptive statistics, we can understand the information in this study and capture its essence. The findings of this descriptive analysis can be seen in Table 1.

Table 1. Descriptive Study Findings

	Y	X_1	X_2	X_3	Z
Rata-rata	-0.029603	0.546716	0.582908	3.068336	29.64861
Median	-0.027950	0.379374	0.135937	2.328184	28.99692
Maksimum	1.111094	1.658416	6.822644	8.405044	32.98588
Minimum	-0.553846	0.105256	0.030621	0.210722	26.01964
Standar Deviasi	0.251545	0.413817	1.399154	2.136451	2.038189
Kecondongan	1.616915	0.777283	3.770879	0.722466	0.432801
Ukuran keruncingan	9.428586	2.563876	16.11076	2.417147	1.913892
Observasi	55	55	55	55	55

Based on Table 1 presented above, there are a total of 55 data observations collected using five different types of study instruments.

Where,

X1: used as a proxy for capital structure

X2: used as a proxy for profitability

X3: used as a proxy for liquidity

Z: used as a proxy for firm size

Y: used as a proxy for stock returns.

As seen in the table above, PT Multi Bintang Indonesia Tbk (MLBI) had the highest capital structure (X1) value, at 1.658, in 2021, while PT Sekar Laut Tbk (SKLT) had the lowest capital structure value, at 0.105, in 2023. The average capital structure value was 0.547. Furthermore, the standard deviation of the capital structure, at 0.414, was smaller than the mean. This indicates that the study data on company size did not vary in distribution.

1. The company in question, PT Siantar Top (STT), had the highest profitability value (X2) in 2020, at 6.823, while PT Sekar Bumi TBK (SKBM), the company in question, had the lowest profitability value in 2020, at 0.031. The average profit score was 0.583. Furthermore, the standard

deviation of profitability is 1.399, which is lower than the average profitability value. This indicates that the data used in the profitability distribution study does not vary.

2. It is known that in 2020, the company in question, PT Siantar Top Tbk (STTP), had the highest liquidity value at X3, namely 8.405. In 2023, PT Sekar Laut Tbk (SKLT) had the lowest liquidity value at 0.211. The average liquidity value, on the other hand, was 3.068. Furthermore, the standard deviation of liquidity was 2.136, which is smaller than the average profitability value. This indicates that the data used in the liquidity distribution analysis did not vary.
3. The largest measure of firm size (Z) was 32.986. This figure relates to PT Delta Djakarta Tbk (DLTA) in 2019. Conversely, the smallest firm size was 26,020, recorded for PT Delta Djakarta Tbk (DLTA) in 2023. The average firm size was 26,649. The standard deviation for firm size was recorded at 2.0382, which is smaller than the mean. This indicates that the data regarding firm size is quite uniform, showing no significant difference between the highest and lowest sizes.
4. The peak value for stock returns (Y) was identified as 1.111. This figure relates to PT Siantar Top TBK (STTP) in 2020, while the lowest stock return was -0.554, which belonged to PT Sekar Laut TBK (SKLT) in 2023. The average stock return was calculated at -0.030. Furthermore, the standard deviation for stock returns was recorded at 0.252, which exceeds the average stock return. This shows that stock return data varies across companies, showing a marked difference between the highest and lowest stock return figures."

3.1.2 Model Specification Testing

CEM, FEM, and REM are three types of models used in panel data regression estimation. The Hausman test and the Chow test are performed before selecting a model for panel data regression. The Chow test is used to determine which model, CEM or FEM, is most appropriate for panel data regression. The Chow test is performed in Eviews software by analyzing the probability values of the data output findings. The basis of the decision-making process is that CEM is more appropriate if the probability value is greater than 0.05. FEM is more appropriate if the probability value is less than 0.05.

1. CEM

The findings of data analysis through CEM regression are as follows:

Table 2. CEM Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.363995	0.048998	-7.428801	0.0000
X1	0.160642	0.047219	3.402076	0.0013
X2	1.458395	0.834687	1.747237	0.0867
X3	0.058129	0.010575	5.497012	0.0000
X2Z	-0.042222	0.025518	-1.654633	0.1043

2. Fixed Effect Model (FEM)

The following are the findings of data analysis using FEM regression.

Table 3. Fixed Effect Panel Data Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.360465	0.054969	-6.557669	0.0000
X1	0.161928	0.052503	3.084173	0.0037
X2	1.906308	0.903314	2.110350	0.0411
X3	0.053299	0.015754	3.383191	0.0016
X2Z	-0.055749	0.027553	-2.023314	0.0498

2. Random Effect Model (REM)

Further findings were obtained from data analysis using REM regression.

Table 4. Regresi Data Panel Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.364799	0.050701	-7.195084	0.0000
X1	0.160567	0.048009	3.344510	0.0016
X2	1.560404	0.839942	1.857751	0.0691
X3	0.057672	0.011255	5.123930	0.0000
X2Z	-0.045312	0.025670	-1.765186	0.0836

Comparison of the regression findings from each model, based on the three findings from the CEM, FEM, and REM regression models, can be seen as follows:

Table 5. Comparison of Regression Model Findings

Peubah	*CEM*		*Fixed Effect Model*		*Random Effect Model*	
	Coefficient	**Prob.**	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**
C	-0.363995	0.0000	-0.360465	0.0000	-0.364799	0.0000
X1	0.160642	0.0013	0.161928	0.0037	0.160567	0.0016
X2	1.458395	0.0867	1.906308	0.0411	1.560404	0.0691
X3	0.058129	0.0000	0.053299	0.0016	0.057672	0.0000
X2Z	-0.042222	0.1043	-0.055749	0.0498	-0.045312	0.0836

Based on the data in Table 5, the CEM shows that the significant variables are X1 (Prob. 0.0013) and X3 (Prob. 0.0000), while variables X2 (Prob. 0.0867) and X2Z (Prob. 0.1043) are insignificant.
In the FEM, the significant factors consist of X1 (0.0037), X2 (0.0411), X3 (0.0016), and X2Z (0.0498).

This indicates that the FEM identifies differences between companies, resulting in a larger number of significant variables. Meanwhile, in the Random Effects Model (REM), the significant variables are X1 (0.0016) and X3 (0.0000). Meanwhile, X2 (0.0691) and X2Z (0.0836) are insignificant at the 5% α level. The significant variation in findings between these models stems from differences in how they are calculated. CEM looks at panel data as a whole and does not account for the unique characteristics of each company. FEM gives each company its own starting point, allowing for consideration of individual factors not directly observable. REM assumes that differences between companies are random and unrelated to the independent variables.

3.1.3 Data Analysis Stages

The selection of a panel regression model depends on the assumptions made by the researcher and adherence to the principles of statistical data analysis to ensure the scientific validity of the study's findings. To identify the most appropriate model, several tests must be performed, specifically the Chow Test, the Hausman Test, and the LM Check. By performing these three tests, the most appropriate estimation model for application in this study can be determined. The following section presents the findings of the tests conducted for model selection.

Table 6. Model Selection Check

Pengpemeriksaanan	*Chi-Square*	Prob.	Kesimpulan
Chow Test	0.1923	0.3707	*CEM*
Hausman Test	2.05895	0.7249	*Random Effect Model*
Lagrange Multiplier	0.01219	0.9121	*CEM*

The probability value in the Chow Test is 0.3707, which is higher than the 0.05 significance level (0.3707 > 0.05), according to Table 6. For this reason, the CEM is the best model to use, rather than the Fixed Effects Model. Furthermore, the Hausman Test yields a probability value of 0.7249, which is also higher than 0.05 (0.7249 > 0.05), so the REM is chosen over the Fixed Effects Model. However, the Hausman Test finding was not a major factor in selecting the final model because the FEM had previously been rejected in the Chow Test.

Furthermore, the probability value in the LM Check is 0.9121, which is greater than 0.05 (0.9121 > 0.05), indicating that the REM is inferior to the CEM. Based on these three tests, the CEM is the most appropriate panel regression model for this study.

3.1.4 Classical Assumption Check

1. Normality Check

The purpose of conducting a normality test is to assess whether the dependent and independent variables in a regression analysis follow a normal distribution. In this study, normality was checked using the Jarque-Bera test, also known as the J-B test. If the probability value exceeds 0.05, it indicates that the residual data in this study conforms to a normal distribution.

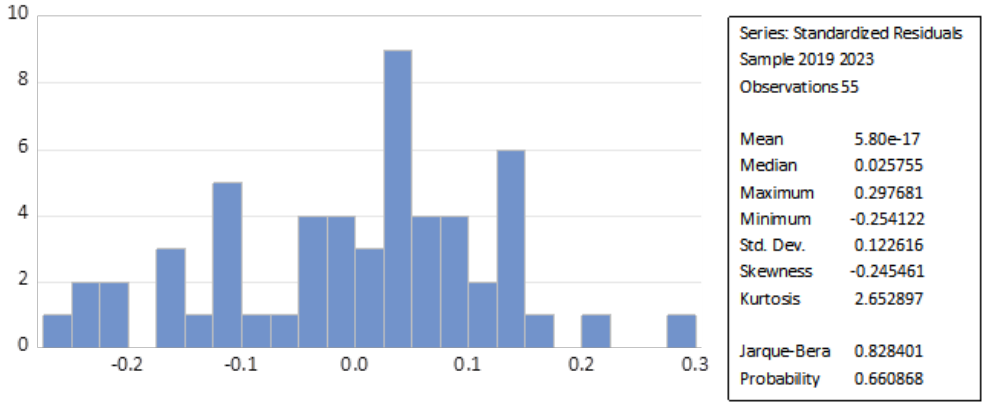

Figure 1. Normality Examination Findings

According to Figure 1, the normality assessment for the equation model shows that the Jarque-Bera statistic is recorded at 0.828, which exceeds 0.05, meaning 82.8% higher than 5%. Thus, we can conclude that the remaining data in the equation model conforms to a normal distribution.

2. Autocorrelation Check

The purpose of the autocorrelation test is to assess whether there is a relationship between the error term at time period t and the error term at time period t-1 in a linear regression model. This test is performed using a regression method that takes into account the DW statistic. Further findings determined by the equation model are as follows.

Table 7. Autocorrelation Examination Findings

dU	DW	4-dU
1.72	1.7368	2.2632

With N (sample size) = 11 companies and x = 3 variables, the DW value is 1.7368, according to Table 5.7. Given the number of samples and variables used in the study, the upper limit of the DW (dU) is 1.72, while the value of 4 – dU is 2.2632.

The standard for decision-making regarding the Durbin-Watson test states that when the DW value is between dU and 4 minus dU, it can be concluded that the regression model is free from autocorrelation, either positive or negative.

3. Multicollinearity Examination

In this study, signs of multicollinearity were observed by observing the VIF value. A VIF value greater than 10 indicates multicollinearity. The findings of the multicollinearity analysis are presented in Table 8.

Table 8. Multicollinearity Examination Findings

Variable	Centered VIF	Variable	Centered VIF
X1	1.365719	X1	1.365719
X2	1.863740	X2	1.863740
X3	1.805011	X3	1.805011
Z	1.380214	Z	1.380214

Based on Table 8, the findings of the multicollinearity analysis indicate that there are no symptoms of multicollinearity among the independent variables. This is due to the uncentered VIF values for variables X1, X2, and X3 being less than 10.

4. Heteroscedasticity Test

The purpose of the heteroscedasticity test is to assess whether there is variation in the residual variability among observations in the regression model or whether the residuals exhibit uniform (homogeneous) variation. Profitability coefficients should be compared at a significance level set at 5% (α=0.05). The heteroscedasticity test findings are shown in Table 9.

Table 9. Heteroscedasticity Examination Findings

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.108630	0.023290	4.664270	0.0000
X1	-0.025981	0.022444	-1.157568	0.2525
X2	-0.154301	0.396745	-0.388917	0.6990
X3	-0.004448	0.005026	-0.884983	0.3804
X2Z	0.005797	0.012129	0.477976	0.6348

The findings of the heteroscedasticity check, as shown in Table 9, reveal that the probability value is higher than the probability value of 0.05, which indicates that the regression model meets the heteroscedasticity check, which means that the residual variance is homoscedastic (constant) and that the model is in accordance with the classical assumptions.

3.1.5 Regression Analysis

Based on the model setup analysis, the regression model for panel data presented here is identified as CEM. The estimation findings of the regression model using panel data are detailed below**.**

Table 10. Equation Regression Findings

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.363995	0.048998	-7.428801	0.0000
X1	0.160642	0.047219	3.402076	0.0013
X2	1.458395	0.834687	1.747237	0.0867
X3	0.058129	0.010575	5.497012	0.0000
X2Z	-0.042222	0.025518	-1.654633	0.1043

Root MSE	0.121496	R-squared	0.762392
Mean dependent var	-0.029603	Adjusted R-squared	0.743383
S.D. dependent var	0.251545	S.E. of regression	0.127426
Akaike info criterion	-1.196053	Sum squared resid	0.811870
Schwarz criterion	-1.013569	Log likelihood	37.89147
Hannan-Quinn criter.	-1.125485	F-statistic	40.10766
DW stat	1.736808	Prob(F-statistic)	0.000000

Based on the regression findings shown in table 10, we can create the following regression formula:

$$Y = -0.364 + 0.161\ X_{1it} + 1.458\ X_{2it} + 0.058\ X_{3it} - 0.042\ X_{2it}Z + \varepsilon$$

1. The formula above can be interpreted as follows.
2. A consistent value of -0.364 implies that if all independent variables—namely, X1, X2, X3, and the interaction variable X2Z—are zero, the predicted value of Y (stock return) is -0.364. Assuming all other factors remain constant, this value indicates the baseline level of stock returns when the variables under consideration have no impact.
3. The regression coefficient for variable X1 is 0.161. This means that, assuming all other independent factors remain the same, a 1% increase in capital structure (X1) will result in a 0.161% increase in stock returns (Y).
4. The regression coefficient for variable X2 (profitability) is 1.458, indicating that a 1% increase in profitability will lead to a 1.458 increase in stock returns, assuming other factors remain unchanged.
5. The regression coefficient for variable X3 (liquidity) is 0.058. This means that if liquidity increases by 1%, stock returns will increase by 0.058, assuming all other factors remain the same.

3.1.6 Hypothesis Testing

1. Partial Test (t)

The t-test is used to investigate the effect of independent variables on the dependent variable individually. A partial test, also known as a t-test, is a statistical method used to determine whether a hypothesis should be accepted or rejected in a study. The findings of the preliminary analysis (t-test) conducted in this study are presented below:

Table 11. Partial Examination Findings (t)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.363995	0.048998	-7.428801	0.0000
X1	0.160642	0.047219	3.402076	0.0013
X2	1.458395	0.834687	1.747237	0.0867
X3	0.058129	0.010575	5.497012	0.0000
X2Z	-0.042222	0.025518	-1.654633	0.1043

From Table 11, we can see that:

1. According to the regression table findings, the regression coefficient for variable X1 is 0.160642, with a probability value of 0.0013 and a t-statistic of 3.402076. Because this probability value is less than the generally accepted significance level (0.0013 < 0.05), we can conclude that capital structure (X1) has a significant and beneficial impact on stock returns. Therefore, H1 is valid. In other words, a company's stock returns typically increase as its capital structure improves. Consequently, Hypothesis 1 is supported.
2. Based on the regression table findings, the regression coefficient for variable X2 is 1.458395, with a t-statistic of 1.747237 and a probability of 0.0867. Because this probability value is higher than the significance level (0.0867 > 0.05), we can conclude that stock returns are not significantly affected by profitability (X2). Consequently, H2 is rejected.
3. The regression coefficient for variable X3, which represents liquidity, is 0.058129, with a t-statistic of 5.497012 and a probability of 0.0000, according to the findings of the regression table. Since this probability value is less than the significance level (0.0000 < 0.05), we can conclude that liquidity (X3) has a positive and substantial impact on stock returns. Therefore, H3 is approved. This implies that higher liquidity will result in greater returns on stocks. Therefore, hypothesis 3 is accepted in this case.

2. Simultaneous Test (F)

The F test assesses the extent to which all independent variables collectively influence the dependent variable. The findings of the simultaneous test (F) in this study are described below.

Table 12. Simultaneous Examination Findings (F)

Root MSE	0.121496	R-squared	0.762392
Mean dependent var	-0.029603	Adjusted R-squared	0.743383
S.D. dependent var	0.251545	S.E. of regression	0.127426
Akaike info criterion	-1.196053	Sum squared resid	0.811870
Schwarz criterion	-1.013569	Log likelihood	37.89147
Hannan-Quinn criter.	-1.125485	F-statistic	40.10766
DW stat	1.736808	Prob(F-statistic)	0.000000

Based on Table 12, the F-test findings can be seen in the F-statistic in the table above, which has a positive value of 40.107 and a probability value (F-statistic) of 0.000 < 0.05. Therefore, it can be concluded that capital structure (X1), profitability (X2), and liquidity (X3) all have a significant positive impact on stock returns (Y).

3. Examination of the Coefficient of Determination (R2)

The coefficient of determination primarily evaluates how well a model explains variation in the dependent variable. Its value ranges between 0 and 1. The findings of the coefficient of determination (R2) analysis are presented in Table 5.12 above.

In this table, the Adjusted R-squared value is 0.7434. This indicates that capital structure (X1), profitability (X2), and liquidity (X3) together account for 74.34% of stock returns (Y), leaving 25.66% influenced by other factors not discussed in this study.

3.1.7 Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) helps us determine whether certain variables can influence how independent and dependent variables relate to each other. The following are the findings from evaluating a regression model for panel data.

Table 13. Moderated Regression Analysis (MRA) Findings

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.363995	0.048998	-7.428801	0.0000
X1	0.160642	0.047219	3.402076	0.0013
X2	1.458395	0.834687	1.747237	0.0867
X3	0.058129	0.010575	5.497012	0.0000
X2Z	-0.042222	0.025518	-1.654633	0.1043

According to Table 13, the MRA study findings indicate that:

1. The probability value is 0.1043, which is greater than the 0.05 significance level. This indicates that the variable representing firm size (Z) does not significantly influence the impact of profitability (X2) on stock returns (Y). Consequently, Hypothesis 4 is rejected.

4. CONCLUSION

Capital structure has a positive and significant effect on stock returns for food and beverage companies listed on the IDX from 2019 to 2023. Profitability does not affect stock returns in food and beverage companies listed on the IDX during the period 2019 to 2023. Liquidity has a positive and significant effect on stock returns in food and beverage companies listed on the IDX throughout the period 2019–2023. Company size does not affect the relationship between profitability and stock returns for food and beverage companies on the IDX during the period 2019 to 2023.

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