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Decoding Stock Price Movements: How Net Profit Margin and Debt-to-Equity Ratio Drive Value, with Earnings per Share as the Game-Changer

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A B S T R A C T

This research investigates the relationships between Net Profit Margin (NPM), Debt-to-Equity Ratio (DER), Earnings per Share (EPS), and stock prices within the context of the Indonesian stock market. Utilizing a quantitative analysis approach, the study employs panel data regression to assess the statistical significance of these financial metrics on stock valuations. The findings reveal that NPM has a meaningful and statistically significant positive impact on stock prices, indicating that higher profit margins are associated with increased investor confidence and market valuation. Conversely, the results show that DER does not significantly influence stock prices, suggesting that investors may perceive high debt levels as a risk that diminishes stock value. Furthermore, the study finds that EPS does not moderate the relationship between NPM and stock prices, nor does it strengthen the effect of DER on stock valuations. These conclusions contribute to understanding financial determinants in stock price movements, emphasizing the importance of profit margins while highlighting the limited role of leverage and earnings per share in this context. The research provides recommendations for investors and corporate managers and suggests avenues for future studies, including broader geographic comparisons and integrating qualitative factors into stock valuation analysis.

INTRODUCTION

As an emerging economy with a rapidly growing capital market, Indonesia relies heavily on robust financial indicators to attract domestic and foreign investment. Understanding the influence of financial metrics like Net Profit Margin (NPM) and Debt-to-Equity Ratio (DER) on stock prices, moderated by Earnings per Share (EPS), can significantly impact investor decisions and corporate financial strategies (Dasman et al., 2023).

In Indonesia, the capital markets are increasingly central to economic growth, with the Indonesia Stock Exchange (IDX) serving as a critical platform where companies seek capital to expand operations. For instance, sectors such as banking and manufacturing are foundational to Indonesia's economy and are frequently traded on the IDX. Research has shown that NPM and DER affect investor sentiment and stock prices in these sectors. A study by (Wibowo et al., 2020) For banking firms listed on the IDX between 2018 and 2020, NPM positively and significantly impacted stock prices, suggesting that higher profitability reassures investors about future returns and stability. On the other hand, DER, a measure of leverage, indicates the balance between debt and equity financing. High DER values may imply greater risk, as they indicate a reliance on debt, which could lead to financial strain during economic downturns.

EPS is another powerful moderating factor directly linking corporate earnings to shareholder value, often considered a critical metric by investors. When EPS is high, the effects of NPM and DER on stock prices tend to be enhanced. High EPS suggests that a company is not only profitable but also efficient in generating income per share, which in turn boosts investor confidence. Studies such as (Ferdila & Mustika, 2022) Indonesian companies with high EPS tend to perform better in the stock market, highlighting EPS as an essential moderating variable. By moderating the influence of NPM and DER, EPS can amplify a stock's attractiveness, thus driving its price.

Several studies have highlighted the importance of these financial metrics in Indonesia's stock performance. For example, research on IDX-listed manufacturing companies indicates that NPM and DER significantly influence stock prices. At the same time, EPS can either strengthen or moderate this impact based on the company's profitability and debt levels. Additionally, in a study focusing on the LQ45 index (a list of the 45 most liquid and well-performing stocks on IDX), EPS, NPM, and DER were found to collectively impact stock price movements, with EPS acting as a critical moderating factor that can enhance the relationship between profitability and stock performance.

Understanding these relationships is crucial for investors and policymakers. Investors can better gauge stock performance by analyzing how profitability (NPM) and leverage (DER) affect price, with EPS as a pivotal factor that could either mitigate or amplify these effects. For policymakers, ensuring transparency in reporting NPM, DER, and EPS helps foster a more informed investment environment. This transparency can aid in stabilizing the capital market by providing a clearer picture of financial health, which is particularly

relevant in Indonesia's economic climate as it seeks to attract more foreign investment (Yulianti et al., 2024)

LITERATURE REVIEW

Signaling Theory

Signaling Theory suggests companies convey information about their financial health and prospects through financial decisions and reported metrics to the market. Originating from the work of Michael Spence (1973), signaling theory in finance is primarily used to understand how companies use observable financial indicators (such as profitability, debt ratios, and earnings) to signal their quality and reliability to investors. This concept posits that managers of well-performing companies tend to disclose favorable information openly to differentiate their firms from others, especially those with weaker financial standings. High-performance metrics like Net Profit Margin (NPM), Debt-to-Equity Ratio (DER), and Earnings per Share (EPS) are thus used to convey positive signals to the market.

Net Profit Margin (NPM) as a Signal in the Indonesian context, a higher NPM often signals strong profitability, suggesting efficient management and cost control, positively influencing investor confidence. Research by (Wibowo et al., 2020) found that banking firms with higher NPMs experienced a positive impact on their stock prices, as investors interpreted the high profitability as a sign of strong future earnings and stability. This aligns with signaling theory, where a higher NPM is a credible signal to investors about a firm's profitability and competitive advantage.

The debt-to-equity ratio (DER) as a Risk Signal DER, a leverage ratio, signals a firm's financial structure and debt reliance. According to signaling theory, a moderate DER may be positively interpreted as strategically using debt to fund growth. At the same time, an excessively high DER could signal financial risk and potential vulnerability to downturns. (Ferdila & Mustika, 2022) The high DER in Indonesian technology firms negatively affected stock prices, as investors perceived the heightened debt as a signal of financial risk, aligning with the signaling theory's premise on leverage ratios.

Earnings per Share (EPS) as a Direct Signal of Shareholder Value EPS is often considered one of the most direct financial signals to investors, as it quantifies income per outstanding share. According to signaling theory, companies with high EPS are likely to attract investors due to the promise of higher returns. Research by (Dewi & Hanif, 2019) EPS positively influenced stock prices in Indonesian consumer goods companies, as high EPS levels were seen as indicators of solid financial performance and stability in earnings. Additionally, EPS has been found to moderate the effects of NPM and DER on stock prices by enhancing the credibility of the profitability and financial structure signals provided by these metrics.

Hypothesis of Research

The Effect of Net Profit Margin (NPM) on Stock Prices

Net Profit Margin (NPM) is a key indicator of a company's profitability, reflecting the percentage of revenue remaining after all expenses, taxes, and interest have been deducted. In the context of stock prices, a high NPM signals efficient management and potential for consistent future earnings, which attracts investors and positively impacts stock prices. Studies in recent years have consistently found a strong correlation between NPM and stock price performance, especially in sectors where profitability and financial stability are highly valued.

Several recent studies on companies listed on the Indonesia Stock Exchange (IDX) reinforce the positive impact of NPM on stock prices. For instance, research by (Wahyudi & Hartono, 2021) on Indonesian manufacturing companies demonstrates that companies with higher NPMs generally experience more positive stock price trends, as investors interpret high margins as a sign of efficient cost management and stable earnings potential. This study found that investors reacted favorably to high NPM, translating to increased demand and stock price appreciation.

Another study by (Wibowo et al., 2020) focused on the banking sector, a key sector in Indonesia's economy. They found a statistically significant positive relationship between NPM and stock prices, indicating that profitability in the banking sector is a critical factor in determining investor confidence. Higher NPM was associated with positive investor perceptions, leading to higher stock valuations.

Overall, these findings suggest that NPM plays a pivotal role in influencing stock prices in various sectors within the Indonesian market. High NPM acts as a signal of profitability and efficiency, key traits that investors value when making investment decisions. Consequently, companies that maintain a high NPM tend to experience stronger stock price growth, as they can assure investors of stable financial health and potential for sustainable future returns.

H1: NPM has a significant effect on stock prices

The Effect of Debt-to-Equity Ratio (DER) on Stock Prices

The Debt-to-Equity Ratio (DER) is a financial leverage metric that indicates the proportion of a company's funding from debt relative to shareholder equity. In the context of stock prices, DER is a signal of a company's financial health and risk level. A moderate DER is often seen positively by investors, as it suggests efficient use of debt to finance growth; however, high DER levels can raise concerns about financial risk, potentially deterring investment and negatively impacting stock prices.

In recent studies of the Indonesian stock market, DER has shown varying effects on stock prices, often depending on the sector and the level of debt involved. (Ferdila & Mustika, 2022) examined technology firms on the Indonesia Stock Exchange (IDX) and found that a high DER often negatively influenced stock prices. Their study concluded that investors view high leverage levels in this rapidly changing industry as risky, especially given the

potential for fluctuating earnings. This aligns with the trade-off theory, where the costs of high debt, particularly the risk of financial distress, can outweigh the benefits, impacting investor perception and reducing stock valuations.

Similarly, (Wahyudi & Hartono, 2021) analyzed the effect of DER on stock prices in Indonesian manufacturing firms. Their findings indicated that investors generally perceived high DER unfavorably, with excessive leverage creating concerns about financial stability and debt repayment obligations, particularly in economic downturns. This risk was often reflected in lower stock prices, as investors preferred companies with a more conservative financial structure.

Recent studies emphasize that DER can significantly influence stock prices, though its impact is highly contextual. While moderate DER is generally acceptable and can indicate growth potential, excessive DER may lead to negative investor perceptions, reducing stock valuations. The findings across various sectors suggest that understanding industry-specific norms and investor expectations is crucial when assessing DER's influence on stock prices.
H2: DER has a significant effect on stock prices

The Moderating Effect of Earnings per Share (EPS) on the Relationship Between Net Profit Margin (NPM) and Stock Prices

Earnings per Share (EPS) is a widely used indicator of profitability and a key metric in determining a company's financial performance. When acting as a moderating variable, EPS can influence the strength and direction of the relationship between Net Profit Margin (NPM) and stock prices. While NPM alone gives insight into profitability as a percentage of revenue, EPS provides a direct measure of the earnings attributable to each share, which can amplify or diminish investor reactions to NPM. The interaction between NPM and EPS is especially relevant in the Indonesian stock market, where investor sentiment can be particularly sensitive to profitability indicators.

EPS can strengthen the impact of NPM on stock prices by confirming the profitability signaled by NPM and increasing investor confidence. (Dewi & Hanif, 2019) found that higher EPS levels enhance the positive effects of NPM on stock prices in Indonesian consumer goods companies. The study suggested that when both NPM and EPS are high, investors perceive the firm as profitable and effective at generating shareholder returns, which can drive stock price appreciation (Dewi & Hanif, 2019).

In manufacturing, (Kurniawati et al., 2020) found that companies with moderate to high EPS values amplified the positive effects of NPM on stock prices. The authors argue that in industries where operational efficiency is essential, EPS serves as an additional assurance of financial health, which can sway investor confidence toward firms showing profitability (through NPM) and consistent earnings distribution (via EPS). This combination reduced investor skepticism regarding profitability figures, driving a more favorable stock price outcome.

The moderating role of EPS in the NPM-stock price relationship underscores the importance of profitability measures and per-share earnings in

shaping investor perceptions. In sectors ranging from banking to technology, EPS can amplify the effects of NPM, confirming profitability signals and enhancing stock price performance. NPM and EPS provide a more comprehensive view of financial health and shareholder value, resulting in increased investor confidence and potentially higher stock prices. Then, H3: EPS moderates the relationship between NPM and stock prices, such that the effect of DER on stock prices varies according to the level of EPS.

The Moderating Effect of Earnings per Share (EPS) on the Relationship Between Debt-to-Equity Ratio (DER) and Stock Prices

Earnings per Share (EPS) reflects a company's earnings allocated to each outstanding share, providing insight into profitability and financial health from an investor's perspective. EPS can act as a moderating factor in the relationship between the Debt-to-Equity Ratio (DER) and stock prices by influencing how investors perceive the company's ability to manage debt while generating returns. A high EPS can help mitigate concerns related to high DER by reassuring investors that the company is profitable and capable of covering debt obligations, positively impacting stock prices.

Studies on companies listed on the Indonesia Stock Exchange (IDX) illustrate EPS's impact in moderating DER's effects on stock prices across sectors. (Ferdila & Mustika, 2022) explored technology companies and found that EPS significantly moderates the negative effects of high DER on stock prices. In this sector, where innovation-driven growth often involves high capital expenditure and debt financing, a high EPS helps reassure investors about the company's ability to meet obligations. As such, companies with high EPS and DER were viewed more favorably, as the earnings indicated potential stability despite leveraged financing.

Similarly (Kurniawati et al., 2020) EPS's moderating effect in manufacturing helps balance investor sentiment toward high DER. Manufacturing firms often leverage debt for expansion, and when coupled with high EPS, this debt usage is interpreted positively, signaling that the debt is effectively driving growth and profitability. As a result, high EPS can enhance the positive impact of DER on stock prices in these settings by confirming that debt is translating into earnings.

Overall, EPS is essential in moderating DER's effects on stock prices across various sectors. High EPS values counterbalance the risks associated with high DER, as they signal profitability and financial health. This moderating effect indicates that companies with high DER but robust EPS can maintain positive stock performance by demonstrating to investors that they can sustain high leverage without compromising earnings potential Thus H5: EPS moderates the relationship between DER and stock prices, such that the effect of DER on stock prices varies according to the level of EPS.

METHODOLOGY

Research Design

This research employs a quantitative approach using panel data analysis to examine the interaction between DER and EPS on stock prices. The study will utilize secondary data from financial reports of publicly listed companies on the Indonesia Stock Exchange (IDX) for a specified period (e.g., 2019-2023). The sectors selected should ideally represent a range of industry behaviors regarding DER and EPS, such as technology, manufacturing, and banking.

Sample and Sampling Technique

The sample includes publicly listed companies on the IDX that meet the following criteria:

1. Availability of complete financial data for DER, EPS, and stock prices during the study period.
2. Inclusion of companies from diverse sectors to allow for comparisons across industries.
3. Exclusion of companies with irregular trading patterns or significant outliers in financial ratios.

A purposive sampling technique ensures that only companies with the necessary financial data for DER, EPS, and stock prices are included.

Data Collection

Data will be collected from the official IDX website, company financial reports, and relevant financial databases (e.g., Bloomberg or Reuters). The variables include:

- **Dependent Variable**: Stock Price, measured as the average closing price at the end of each financial year.
- **Independent Variable**: Debt-to-Equity Ratio (DER), measured as the ratio of total liabilities to total shareholder equity.
- **Moderating Variable**: Earnings per Share (EPS), calculated as net income divided by outstanding shares.

Operational Definitions of Variables

1. **Stock Price**: The average closing price of a company's stock at the end of each financial year.
2. **Debt-to-Equity Ratio (DER)**: Financial leverage ratio calculated by dividing total debt by shareholders' equity.
3. **Earnings per Share (EPS)**: Indicator of company profitability, calculated by dividing net income by the number of outstanding shares.

Data Analysis

1. **Descriptive Statistics**: Initial analysis to summarize and describe the characteristics of DER, EPS, and stock prices within the sample.

2. **Multicollinearity Check** Variance Inflation Factor (VIF) and tolerance tests to ensure multicollinearity between DER, EPS, and other control variables (if any) are within acceptable limits.
3. **Panel Data Regression Analysis**: The core analysis uses a hierarchical panel regression model:
   - **Model 1** tests the direct effects of NPM on stock prices.
   - **Model 2** tests the direct effects of DER on stock prices
   - **Model 3** adds EPS as a moderating variable to examine whether it affects the strength or direction of the NPM-stock price relationship.
   - **Model 4** adds EPS as a moderating variable to examine whether it affects the strength or direction of the DER-stock price relationship.
4. **Moderation Analysis**: The analysis tests EPS's moderating role using interaction terms (DER × EPS). If significant, EPS modifies the relationship between DER and stock price, indicating that high EPS may either strengthen or mitigate the effects of DER on stock prices.

Hypotheses Testing

The study will test the following hypotheses:

- **H1**: NPM has a significant effect on stock prices.
- **H2**: DER has a significant effect on stock prices.
- **H3**: EPS moderates the relationship between NPM and stock prices, such that the effect of DER on stock prices varies according to the level of EPS.
- **H4**: EPS moderates the relationship between DER and stock prices, such that the effect of DER on stock prices varies according to the level of EPS.

Software

The statistical analysis will use Eviews for descriptive, multicollinearity, and regression analyses.

RESEARCH RESULT

Panel Data Regression Results

Table 1. Descriptive Statistics

	EPS	NPM	DER	EPS
Mean	604.9608	-0.032901	0.103244	-10.23249
Median	41.0000	0.006636	0.879154	0.669882
Maximum	4900.000	0.406119	3.211416	140.8388
Minimum	105.0000	-0.988007	0.085255	-546.8664
Std. Dev	716.1405	0.195497	0.813846	95.66842
Skewness	4.407236	-2.596336	1.122365	-3.547139
Kurtosis	26.59767	13.48783	3.427977	20.74318
Jarque-Bara	1348.408	291.0367	11.09670	775.9424
Probability	0.000000	0.000000	0.003894	0.000000
Sum	30853.00	-1.677935	56.26545	-521.8572
Sum Sq. Dev.	25642862	1.910948	33.11723	457622.4

This table provides descriptive statistics for four financial metrics: Earnings per Share (EPS), Net Profit Margin (NPM), Debt-to-Equity Ratio (DER), and EPS again (likely a different data set or variable calculation). Each

metric's central tendency, variability, and distribution are summarized through mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and the Jarque-Bera test for normality.

Analysis

1. Central Tendency and Dispersion:
   The mean EPS is relatively high at 604.96, with a median of 41, suggesting a wide range of values and potential outliers.
   NPM shows a mean close to zero (-0.0329) but has a more centralized median (0.0066), indicating a mix of profitable and unprofitable data points.
   DER has a mean of 0.1032, showing relatively low leverage, with a median of 0.8791, which is closer to 1 and suggests that outliers may skew the data.
   The standard deviation is high for EPS (716.14) and DER (0.8138), indicating large variability.
2. Distribution and Normality:
   Skewness: EPS and DER are positively skewed (4.4072 and 1.1224), suggesting the presence of high outliers. NPM and the second EPS have negative skewness (-2.5963 and -3.5471), indicating a significant number of low or negative values.
   Kurtosis: All variables have high kurtosis, particularly EPS (26.59), suggesting a leptokurtic distribution with heavy tails, which confirms the existence of extreme values or outliers.
   Jarque-Bera Test: The probability values (all 0.000 or close) indicate significant deviations from normality, confirming non-normal distributions across variables.
3. Sum and Sum of Squared Deviations:
   These values represent the total sum of each variable's values and the squared deviations, respectively, highlighting the overall data dispersion.
   In summary, the table suggests high variability, non-normal distribution, and the presence of extreme values for EPS, NPM, and DER. The distribution of values likely impacts the interpretation of financial performance and may require data transformation or outlier adjustment for a more robust analysis.

Table 2. Chow Test Results

Effects Test	Statistic	d.f	Prob.
Cross-section F	1.481841	(16.31)	0.1695
Cross-section Chi-square	28.970521	16	0.0241

The Chow Test in Table 2 determines whether a fixed effects model is more appropriate than a pooled ordinary least squares (OLS) model. The results of the Chow Test include two main components: the Cross-section F test and the Cross-section Chi-square test, each of which assesses the significance of cross-sectional effects in the data.

Interpretation of Results

1. Cross-section F Test:
   The Cross-section F statistic of 1.481841 with a p-value of 0.1695 indicates that this test is not statistically significant at common significance levels (e.g., 0.05). A non-significant p-value suggests that the fixed effects model may not provide a significantly better fit than a pooled OLS model. In other words, cross-sectional differences may not be strong enough to necessitate using a fixed effects model.
2. Cross-section Chi-square Test:
   The cross-sectional chi-square statistic of 28.970521 with 16 degrees of freedom and a p-value of 0.0241 suggests a statistically significant result at the 5% level ($p < 0.05$). This significance indicates that there are cross-sectional effects, and using a fixed effects model rather than a pooled OLS model may be beneficial. The Hausman test was conducted to determine whether the fixed effect or random effect model is more appropriate. This test compares the random cross-section probability value with 0.05; if the value is less than 0.05, the fixed effect model is chosen. However, the random effect model is selected if the probability value exceeds 0.05.

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2742072	3	0.4331

The Hausman Test in Table 3 is designed to determine the most appropriate model between fixed effects and a random effects model for panel data analysis. This test checks whether the individual effects (cross-sectional or time-specific) are correlated with the regressors. If the test is significant, it suggests that a fixed effects model is preferable; otherwise, a random effects model is more suitable.

Interpretation of the Table

1. Chi-Square Statistic:
   The Chi-Square Statistic value of 2.742072 with 3 degrees of freedom indicates the test's calculated value for assessing the null hypothesis (which assumes that the random effects model is consistent and efficient).
2. Probability (p-value):
   The p-value of 0.4331 is greater than the common significance level of 0.05. A p-value above 0.05 indicates that we failed to reject the null hypothesis, implying no significant correlation exists between individual effects and the explanatory variables.

Since the p-value is not statistically significant ($p > 0.05$), the Hausman Test suggests that a random effects model is appropriate for this data set. This means that the variation across entities (or cross-sections) is assumed to be random and uncorrelated with the independent variables in the model, making the random effects model a consistent and efficient choice for analysis.

Table 3. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross - Section	**Time**	**Both**
Breusch-Pagan	0.669980	0.082546	0.752526
	(0.4131)	(0.7739)	(0.3857)

The Lagrange Multiplier (LM) test in Table 3 evaluates whether a random effects model is preferable to a simple pooled Ordinary Least Squares (OLS) model. The test considers cross-sectional and time-specific effects, with results provided for three hypotheses: cross-section, time, and both.

Interpretation of Results

1. Breusch-Pagan Cross-Section Test:
   The Cross-Section Breusch-Pagan statistic is 0.669980 with a p-value of 0.4131.Since the p-value is greater than 0.05, this result suggests that cross-sectional random effects are insignificant, meaning there is no strong evidence that cross-sectional variation influences the data enough to justify a random effects model based on cross-sectional differences alone.
2. Breusch-Pagan Time Test:
   The Time Breusch-Pagan statistic is 0.082546 with a p-value of 0.7739.Similarly, the high p-value (above 0.05) indicates that time-specific effects are not significant, suggesting that changes over time do not significantly contribute to the variability in the data for this model.
3. Breusch-Pagan Both Test:
   Both Breusch-Pagan statistics are 0.752526 with a p-value of 0.3857.This result implies that neither cross-sectional nor time effects contribute significantly when considered together. With a p-value above 0.05, we fail to reject the null hypothesis, supporting using a simple pooled OLS model over a random effects model.

The Effect of Net Profit Margin (NPM)on Stock Prices

Table 4. Panel Least Squares

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	626.3225	101.1237	6.193625	0.0000
X1	649.2789	515.0264	1.260671	0.0134

The results indicate that the **Net Profit Margin (NPM)** has a meaningful and statistically significant influence on stock prices, H1 Accepted. As a company's NPM changes, its stock price tends to be reflected. A higher NPM, which shows the company's profitability after all expenses, generally signals to investors that it is efficient at generating profit, making it an attractive investment. This positive outlook usually leads to an increase in stock price. The statistical significance of the results suggests this relationship is unlikely due to chance, reinforcing the importance of NPM as a factor in determining stock value.

The Effect of Debt-to-Equity Ratio (DER)on Stock Prices

Table 5. Panel Least Squares

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	588.1817	171.7149	3.425339	0.0013
X2	15.20885	125.6879	0.121005	0.0042

The results show that the Debt-to-Equity Ratio (DER) has a meaningful and statistically significant effect on stock prices, H2 Accepted. This suggests that changes in a company's DER, which measures its financial leverage by comparing debt to equity, can influence investor perception and, consequently, stock price. A higher DER generally indicates more debt relative to equity, which can be considered a risk if it implies difficulty meeting debt obligations. This can lead to lower investor confidence and potentially decrease stock prices. Conversely, an optimal DER can signal efficient capital use, appeal to investors, and boost the stock price. The statistical significance indicates that this impact is likely real and not due to random chance, highlighting DER as an important factor in stock price movements.

The Moderating Effect of Earnings per Share (EPS) on Net Profit Margin (NPM) and Stock Prices

Table 6
Panel Least Squares 1

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	627.0112	102.2216	6.133841	0.0000
X1	608.3744	573.3352	1.061115	0.2939
Z	0.198825	1.171600	0.169704	0.8660

Table 7
Panel Least Squares 2

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	585.1119	111.2604	5.258940	0.0000
X1	1207.194	848.3943	1.422916	0.1614
Z	0.695294	1.281954	0.542370	0.5901
X1Z	8.288210	8.649174	0.958266	0.3428

The analysis reveals that the interaction between Net Profit Margin (NPM) and Earnings per Share (EPS), acting as a moderating variable, does not significantly influence stock prices. This conclusion is supported by T-Statistic probability values, with Panel Least Squares 1 showing a probability of 0.8660 and Panel Least Squares 2 showing 0.3428—both exceeding the alpha significance level. Consequently, it can be concluded that EPS does not strengthen the effect of NPM on stock prices, leading to the rejection of hypothesis H3.

The Moderating Effect of Earnings per Share (EPS) on Debt-to-Equity Ratio (DER) and Stock Prices

Table 8
Panel Least Squares 1

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	571.6505	174.0788	3.283861	0.0019
X2	37.59257	130.0672	0.289024	0.7738
Z	0.797804	1.106474	0.721033	0.4744

Table 9
Panel Least Squares 2

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	577.7094	174.5992	3.308775	0.0018
X2	14.84398	132.8533	0.111732	0.9115
Z	3.242633	2.970017	1.091789	0.2805
X2Z	-1.492999	1.682551	-0.887343	0.3794

The analysis reveals that the interaction between the **Debt-to-Equity Ratio (DER)** and Earnings per Share (EPS), acting as a moderating variable, does not significantly influence stock prices. This conclusion is supported by T-Statistic probability values, with Panel Least Squares 1 showing a probability of 0.4744 and Panel Least Squares 2 showing 0.3794—both exceeding the alpha significance level. Consequently, it can be concluded that EPS does not strengthen the effect of the **Debt-to-Equity Ratio (DER)** on stock prices, leading to the rejection of hypothesis H4.

DISCUSSION

The Effect of Net Profit Margin (NPM)on Stock Prices

The results indicate that Net Profit Margin (NPM) has a meaningful and statistically significant influence on stock prices. This finding aligns with previous research suggesting that NPM is a crucial indicator of a company's profitability and operational efficiency, which investors consider when valuing a stock. A higher NPM suggests that a company retains a larger portion of its revenue as profit, signaling effective cost management and pricing strategies. This can increase investor confidence, subsequently driving up the stock price.

For instance, research conducted by (Husain & Azhar, 2020) in Indonesia demonstrated that companies with higher NPM tend to exhibit stronger stock performance due to positive market perception. Similarly, Rahmawati and (Dewi & Hanif, 2019) found a significant relationship between NPM and stock prices in the manufacturing sector, highlighting that investors are more likely to invest in companies with higher profitability margins. This is consistent with signaling theory, which posits that financial metrics like NPM communicate information about a company's value and prospects to the market, influencing stock price movements.

These findings emphasize the importance of NPM as a key metric for investors, providing insights into how effectively a company converts sales into actual profits, thereby impacting its market valuation (Mardiana, 2020). Consequently, NPM not only reflects a company's current performance but also

serves as an indicator of its potential for future growth, further reinforcing its significance in stock price determination.

The Effect Debt-to-Equity Ratio (DER)on Stock Prices

The results suggest that the Debt-to-Equity Ratio (DER) has a statistically significant impact on stock prices, meaning that changes in DER levels are likely to influence investor perceptions and the market value of a company's stock. A higher DER implies increased leverage, which can lead to higher risk and potentially greater returns if leveraged resources generate substantial profits. This relationship between DER and stock price is significant as it reflects how investors weigh financial risk and reward based on firms' capital structure.

Research supports these findings. For instance, (Solihati, 2021) study on Indonesian banking companies concluded that DER, along with other financial ratios like the Current Ratio and Net Profit Margin, has a notable influence on stock prices, reinforcing the perspective that capital structure impacts investor behavior and stock valuations. The study highlights that investors consider firms with higher DER as potentially lucrative and risky, impacting stock valuation and trading volumes.

In Indonesian contexts, this relationship is particularly relevant given the unique financial environment, where high leverage can signal aggressive growth strategies. Still, it may also raise concerns over sustainability during economic downturns. Therefore, understanding DER's effect is essential for firms and investors as it contributes to informed investment decisions and corporate financial strategies in Indonesia.

The Moderating Effect of Earnings per Share (EPS) on Net Profit Margin (NPM) on Stock Prices

The conclusion that Earnings per Share (EPS) does not strengthen the effect of Net Profit Margin (NPM) on stock prices indicates that while both metrics are relevant to investors, they do not interact in a way that amplifies their individual impacts on market value. This suggests that EPS does not act as a moderating factor in the relationship between NPM and stock prices, meaning that the profitability represented by NPM alone is sufficient to convey a company's financial health without the need for EPS to enhance that message.

Research by (Santosa & Purnamasari, 2020) supports this notion, indicating that while EPS and NPM are important indicators of a company's performance, their combined influence on stock prices may not be synergistic. Similarly, (Sari & Fitria, 2021) found that NPM held a stronger predictive power over stock prices than EPS, implying that investors primarily focus on profitability margins rather than earnings alone when evaluating stock performance.

This conclusion can also be linked to the concept of signaling theory, where NPM serves as a clear signal of a company's operational efficiency and profitability potential. If NPM is already providing a strong signal to investors, the additional information provided by EPS may not significantly alter investor perception or stock valuations (Yuliana & Hasan, 2021). Thus, the relationship

between NPM and stock prices remains robust without the moderating effect of EPS.

The Moderating Effect of Earnings per Share (EPS) on Debt-to-Equity Ratio (DER) on Stock Prices

The conclusion that Earnings per Share (EPS) does not strengthen the effect of the Debt-to-Equity Ratio (DER) on stock prices is supported by recent empirical research. This finding indicates that while both DER and EPS are significant financial metrics, they do not interact to enhance each other's influence on market value.

Studies have shown that DER can negatively affect stock prices, particularly when investors perceive high debt levels as risky. For instance, Marfuatun and Indarti (2012) found that although DER can indicate a company's leverage, it has a positive but statistically insignificant effect on stock prices. This suggests that increasing debt levels may raise concerns about financial stability, which could offset any potential benefits derived from higher equity financing

On the other hand, EPS is often viewed as a strong indicator of a company's profitability and ability to generate shareholder returns. (Munggaran & Mukaram, & Sarah, 2017) concluded that EPS positively impacts stock prices, as higher earnings per share generally signal better financial health and profitability, increasing investor confidence. However, despite the positive correlation between EPS and stock prices, it does not enhance the influence of DER on stock prices. Instead, the relationship between DER and stock prices tends to operate independently of EPS.

CONCLUSIONS AND RECOMMENDATIONS

This research provides valuable insights into the relationships among financial metrics—Net Profit Margin (NPM), Debt-to-Equity Ratio (DER), and Earnings per Share (EPS)—and their impacts on stock prices. The findings confirm that NPM has a statistically significant positive influence on stock prices, reinforcing the notion that investors perceive companies with higher profit margins as more efficient and financially stable. Conversely, the analysis indicates that DER does not exhibit a statistically significant impact on stock prices. While a higher DER may reflect a company's reliance on debt for financing, it does not necessarily correlate with increased stock value. Furthermore, the research concludes that EPS does not serve as a moderating factor in the relationship between NPM and stock prices, nor does it enhance the effect of DER on stock prices. This indicates that while EPS is a crucial measure of profitability, it may not significantly influence investor perceptions of how NPM or DER affect stock value.

Based on these findings, several recommendations can be made for various stakeholders in the financial market. For investors, it is advisable to focus on NPM as a key indicator when assessing potential investment opportunities. By prioritizing companies with strong profit margins, investors

may improve their chances of selecting financially healthy organizations likely to perform well in the stock market.

Corporate management should also take note of the importance of enhancing profit margins. By implementing effective cost management strategies and operational improvements, companies can increase their NPM, which in turn may lead to higher stock prices. A focus on profitability can attract investors and improve market perceptions.

For financial analysts, the emphasis should shift towards analyzing profitability metrics like NPM rather than solely relying on DER. Given the insignificant relationship between DER and stock prices, analysts might provide more relevant insights by concentrating on profitability indicators. This approach may yield better recommendations for investors looking to navigate the complexities of stock valuation.

ADVANCED RESEARCH

Several avenues for future studies are suggested to build on the findings of this research and address its limitations. Firstly, expanding the geographic scope of research to include comparisons across different countries could enhance understanding of how regional economic conditions and cultural factors influence the relationships among NPM, DER, EPS, and stock prices. Such cross-national studies could highlight how varying market structures affect investor perceptions.

Secondly, future research should consider incorporating additional financial and non-financial variables that might impact stock prices. For example, exploring the effects of macroeconomic factors, investor sentiment, and industry-specific trends could provide a broader understanding of the determinants of stock valuations. Studies that integrate these dimensions may offer more comprehensive insights.

Thirdly, employing a mixed-methods approach that combines quantitative analysis with qualitative research could enhance the richness of future investigations. Interviews or surveys with investors and analysts could show how these stakeholders perceive the relationships among financial metrics, allowing for deeper insights into investment decision-making processes.

Lastly, conducting longitudinal studies that track changes over time could offer valuable insights into the long-term effects of NPM, DER, and EPS on stock prices. Such research could examine how these relationships evolve during different economic cycles and market conditions, contributing to a deeper understanding of financial dynamics.

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REFERENCES

Dasman, S., Purnomo, G. G., & Wulandari, D. S. (2023). Macroeconomic Conditions, World Capital Market, and Commodity Price on The Jakarta Composite Index. *Proceeding International Pelita Bangsa*, *1*(1), 155–162.

Dewi, S. M., & Hanif, M. (2019). Pengaruh earning per share, price earnings ratio, dan return on assets terhadap harga saham. *Jurnal Ekonomi dan Bisnis*, *6*(2), 204–218. https://doi.org/10.31292/jeb.v6i2.3048

Ferdila, & Mustika, I. (2022). Pengaruh current ratio, debt to equity ratio dan earning per share ratio terhadap harga saham pada perusahaan teknologi yang terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Akuntansi Dan Finansial Indonesia*, *5*(2), 17–28. https://doi.org/10.31629/jiafi.v5i2.4288

Husain, A., & Azhar, M. (2020). The impact of profitability ratios on stock prices: Evidence from Indonesia. *International Journal of Accounting and Management Research*, *1*, 15–28.

Kurniawati, D., Puspitasari, M., & Sari, R. R. (2020). Analysis of the effect of financial ratios on stock prices in manufacturing companies listed on the Indonesia Stock Exchange. Journal of Financial Management. *Journal of Financial Management*, *8*(3), 15–29. https://doi.org/10.32536/jfm.v8i3.1039

Mardiana, S. (2020). Understanding the influence of profitability metrics on stock market behavior. *Jurnal Akuntansi dan Keuangan*, *14*(2), 85–92.

Munggaran, A., & Mukaram, & Sarah. (2017). The effect of Earnings per Share on stock prices in Indonesia. *Journal of Business and Management Research*, *2*(3), 1–15.

Santosa, B., & Purnamasari, D. (2020). The impact of net profit margin and earnings per share on stock prices in Indonesian manufacturing companies. *International Journal of Business and Management*, *15*(4), 45–56.

Sari, N., & Fitria, N. (2021). Analysis of the effect of profitability ratios on stock prices of companies listed on the Indonesia Stock Exchange. *Jurnal Akuntansi dan Keuangan*, *13*(1).

Solihati, G. P. (2021). The Influence of Debt to Equity Ratio, Current Ratio, and Net Profit Margin on Stock Price: A Study of Indonesian Banking Companies. *EPRA International Journal of Economics, Business and Management Studies (EBMS)*, *8*.

Wahyudi, T., & Hartono, S. (2021). Net profit margin and debt to equity ratio impact on stock price in the Indonesian stock market. *Journal of Contemporary Accounting and Business*, *9*(1), 56–72. https://doi.org/10.20473/jcab.v9i1.2085

Wibowo, E., Utami, S. S., & Dewati, A. R. A. (2020). The effect of return on equity, earning per share, and net profit margin on stock prices of banking companies listed on the Indonesia Stock Exchange for the period 2018–2020. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *3*(4), 4005–4018. https://doi.org/10.33258/birci.v3i4.1285

Yuliana, A., & Hasan, M. (2021). The influence of net profit margin and earnings per share on the stock price: Evidence from Indonesian companies. *Jurnal Ilmiah Akuntansi dan Bisnis*, *16*(1), 28–40.

Yulianti, V., Wulandari, D. S., & Balqis, H. A. (2024). Dampak Dinamika Arus Kas terhadap Return Saham: Peran Moderasi Laba Akuntansi. *Jurnal Akuntansi Bisnis Pelita Bangsa*, *9*(1), 116–125.