NAVIGATING FINANCIAL TURBULENCE: HOW DISTRESS AFFECTS STOCK PRICES IN INFRASTRUCTURE, UTILITIES, AND TRANSPORTATION

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Abstract

This study investigates the impact of X-Score, Return on Assets (ROA), Debt to Assets Ratio (DAR), and Current Ratio (CR) on the stock prices of companies in the infrastructure, utilities, and transportation sectors listed on the Indonesia Stock Exchange. A quantitative approach with secondary data was employed, using multiple linear regression analysis. The Zmijewski Score model was utilized to assess the likelihood of company survival. The findings reveal that X-Score, ROA, DAR, and CR positively influence stock prices. The analysis demonstrates that ROA significantly impacts stock prices, suggesting that company profitability is a key determinant. Furthermore, effective debt management, as indicated by DAR, enhances market value. However, CR shows no significant relationship with stock prices, indicating that liquidity ratios do not necessarily correlate with market performance.

Keywords: X-Score, Return on Assets (ROA), Debt to Assets Ratio (DAR), Current Ratio, Stock Price

Abstrak

Penelitian ini mengkaji pengaruh X-Score, Return on Assets (ROA), Debt to Assets Ratio (DAR), dan Current Ratio (CR) terhadap harga saham perusahaan di sektor infrastruktur, utilitas, dan transportasi yang terdaftar di Bursa Efek Indonesia. Pendekatan kuantitatif dengan data sekunder digunakan, dengan analisis regresi linier berganda. Model Zmijewski Score digunakan untuk menilai kemungkinan keberlangsungan hidup perusahaan. Temuan menunjukkan bahwa X-Score, ROA, DAR, dan CR berpengaruh positif terhadap harga saham. Analisis menunjukkan bahwa ROA memiliki dampak signifikan terhadap harga saham, menunjukkan bahwa profitabilitas perusahaan adalah faktor penentu utama. Selain itu, manajemen utang yang efektif, yang diindikasikan oleh DAR, meningkatkan nilai pasar. Namun, CR tidak menunjukkan hubungan signifikan dengan harga saham, yang mengindikasikan bahwa rasio likuiditas tidak selalu berkorelasi dengan kinerja pasar.

Kata Kunci: *X-Score, Return on Assets (ROA), Debt to Assets Ratio (DAR), Current Ratio (ROA),* Harga Saham

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BACKGROUND

The global economic instability and various external factors, such as fluctuations in exchange rates, interest rates, and government policies, significantly affect the financial performance of companies across various sectors. The infrastructure, utilities, and transportation industries, which are crucial for economic development, are no exception. In the face of these uncertainties, companies must manage their finances effectively to remain competitive in a highly contested market(Muslimin dkk., 2015).

Financial distress refers to a situation where a company faces significant financial difficulties, often characterized by an inability to meet short-term and long-term obligations. This condition may arise from ineffective financial management, sustained losses, and severe capital deficiencies. In extreme cases, financial distress can lead to corporate bankruptcy, particularly when a company's liabilities far exceed its assets (Putra et al., 2024).

In this context, stock prices serve as a vital indicator of a company's performance and financial stability. High stock prices typically reflect investor confidence in a company's ability to generate profits and manage risks effectively (Suparman & Muzakir, 2023). However, the infrastructure, utilities, and transportation sectors face unique challenges that can impact their stock prices.

The COVID-19 pandemic, for example, caused significant disruptions in business operations worldwide, including in Indonesia. The transportation and utilities sectors experienced a sharp decline in demand, while infrastructure projects were often delayed or canceled due to social restrictions and economic uncertainties (Lutfi et al., 2020). These conditions are reflected in the volatility of stock prices of companies in these sectors, indicating increased market uncertainty.
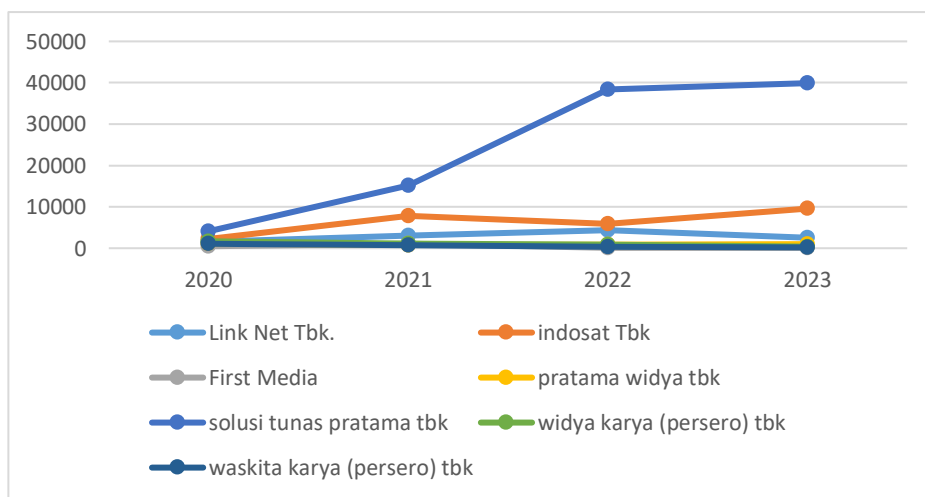
Source: idx.co.id, processed data 2024
Figure 1. Graph of Stock Price Trends in the Infrastructure, Utilities, and Transportation Sectors for the Period 2020-2023

Analyzing the impact of financial distress on stock prices in these sectors is crucial for understanding how companies respond to and manage financial risks. This analysis is relevant not only for corporate management but also for investors considering investment decisions in the stock market.

This study aims to examine the impact of financial distress on the stock prices of companies in the infrastructure, utilities, and transportation sectors listed on the Indonesia Stock Exchange (IDX) during the period 2020-2023. The study will use various financial indicators to measure the level of financial distress, including profitability ratios, liquidity ratios, and leverage ratios. Additionally, the study will evaluate the influence of financial distress on stock prices within these companies.

Based on the problem identification outlined, the research questions are: (1) Are the financial conditions of companies in the infrastructure, utilities, and transportation sectors, as analyzed using the Zmijewski method, categorized as healthy or bankrupt? (2) Is there a significant effect of Return on Assets (ROA), Debt to Assets Ratio (DAR), and Current Ratio (CR) simultaneously on the stock prices of companies in the infrastructure, utilities, and transportation sectors listed on the IDX during the 2020-2023 period? (3) How does the X-Score affect the stock prices of companies in these sectors? (4) How does ROA affect stock prices? (5) How does DAR affect stock prices? (6) How does CR affect stock prices?

This research aims to provide deeper insights into the impact of financial distress on stock prices and assist stakeholders in making more informed decisions.

LITERATURE REVIEW
Financial Statements

The primary objective of financial reporting is to provide relevant financial information to current and potential investors, creditors, and other stakeholders, facilitating informed decisions regarding resource allocation within a company (Indonesian Institute of Accountants, 2016). Financial statements serve as a comprehensive representation of a company's financial condition and performance. These statements are essential tools for understanding a company's financial health and operational results, helping users make well-informed economic decisions (Hidayat, 2018). Financial decision-making should incorporate not only mandatory financial information but also voluntary disclosures that can further assist users in making effective decisions (Rosita et al., 2020).

The usefulness of financial statements hinges on several key characteristics: relevance, which ensures that the information influences decisions; faithful representation, which guarantees that financial statements accurately reflect economic realities; comparability, allowing users to compare different investment options; verifiability, which enables independent parties to agree on the representation of financial conditions; timeliness, ensuring that information is available when needed for decision-making; and understandability, which ensures that the financial statements are clear and accessible to users with a reasonable understanding of business and economic concepts.

Financial Ratios

The use of financial ratio analysis is an invaluable tool for assessing a company's performance by elucidating various financial relationships and indicators (Tyas, 2020). Generally, only a few types of financial ratios are used to evaluate the financial and operational condition of a business. These ratios provide comprehensive data on a company's financial health and operational performance. Key ratios include profitability ratios, which measure a company's ability to generate profit relative to sales, assets, and equity. Specifically, Return on Assets (ROA) is utilized to evaluate how effectively a company is using its assets to produce earnings. Leverage ratios assess the extent to which a company relies on debt to finance its assets, with the Debt to Assets Ratio (DAR) being used to indicate the proportion of assets financed by debt. Liquidity ratios, such as the Current Ratio (CR), measure a company's short-term liquidity by comparing current assets to current liabilities, providing insights into its ability to meet short-term obligations.

Financial Distress

Financial distress refers to a situation where a company experiences severe financial difficulties or liquidity problems, characterized by its inability to meet financial obligations adequately (Januar et al., 2020). It often signals the potential for bankruptcy or business closure if not addressed through appropriate measures, such as financial restructuring or new business strategies (Lord et al., 2020). Financial distress indicates serious issues with a company's financial stability, often highlighted by continuous losses leading to capital deficiencies. Factors contributing to financial distress can be categorized into internal and external causes. Internal factors include management competency and decision-making errors, while external factors encompass economic conditions, intense market competition, declining demand, and fluctuating market prices (Thahir et al., 2018).

Zmijewski Score Analysis

Mark Zmijewski developed the Zmijewski Score to assess a company's likelihood of financial distress. Introduced in 1984, this model enhances previous prediction models by employing multiple discriminant analysis (MDA) to estimate bankruptcy risk (Rudianto, 2013). The Zmijewski Score formula is expressed as:

$$Z = -4,3 - 4,5X_1 + 5,7X_2 - 0,004X_3$$

where:

Z : represents the bankruptcy index, indicating the likelihood of financial distress.

X1 : is the Return on Assets (ROA), a profitability ratio that measures how efficiently a company uses its assets to generate earnings. It is calculated by dividing net income by total assets.

X2 : is the Debt to Assets Ratio (DAR), which shows the proportion of a company's assets that are financed by debt. It is obtained by dividing total debt by total assets.

X3 : is the Current Ratio (CR), a liquidity ratio that measures a company's ability to pay short-term obligations. It is calculated by dividing current assets by current liabilities.

The constants -4.3, -4.5, 5.7, and -0.004 are weights determined by Mark Zmijewski, reflecting the relative importance of each variable in predicting bankruptcy.

The score produced by this formula helps to predict financial distress, with higher values indicating greater risk. If the Z value is greater than 0, the company is likely experiencing a decline in profitability, while a Z value less than 0 suggests a healthier financial state.

Capital Market

The capital market serves as a venue where investors and issuers engage in high-value trading. It is founded on the principles of providing excess funds to companies in need of financial resources (Kasim et al., 2022). The capital market plays a crucial role as an intermediary between surplus units, those with excess funds to invest, and deficit units, which are companies seeking capital (Setyawati et al., 2021). Companies must adopt competitive strategies and continuously monitor market competition to attract investors and expand their market (Suparman et al., 2023). A significant market potential can draw investors, leading to market development (Rombe & Hadi, 2022). According to Nasution (2015), the capital market can be defined as a marketplace for trading various long-term financial instruments, both debt and equity issued by private companies. An increase in capital aligns with a slowdown in credit growth, which reduces the growth of risk-weighted assets in banking (Kadang et al., 2018).

Stock Prices

Stock prices are a critical indicator of a company's management success. Rising stock prices attract investors seeking to invest in the company. Stocks are market instruments that provide funding for a company's operations and offer investment opportunities with the expectation of maximizing profit (Gunawan, 2020). Factors influencing stock prices are generally divided into internal and external categories (Tan & Syarif, 2014). Internal factors stem from within the company and are controllable, while external factors involve broader economic conditions. One method to measure stock prices is the Price Earnings Ratio (PER), calculated by dividing the stock price by earnings per share (EPS), providing insights into the valuation of the company's stock.
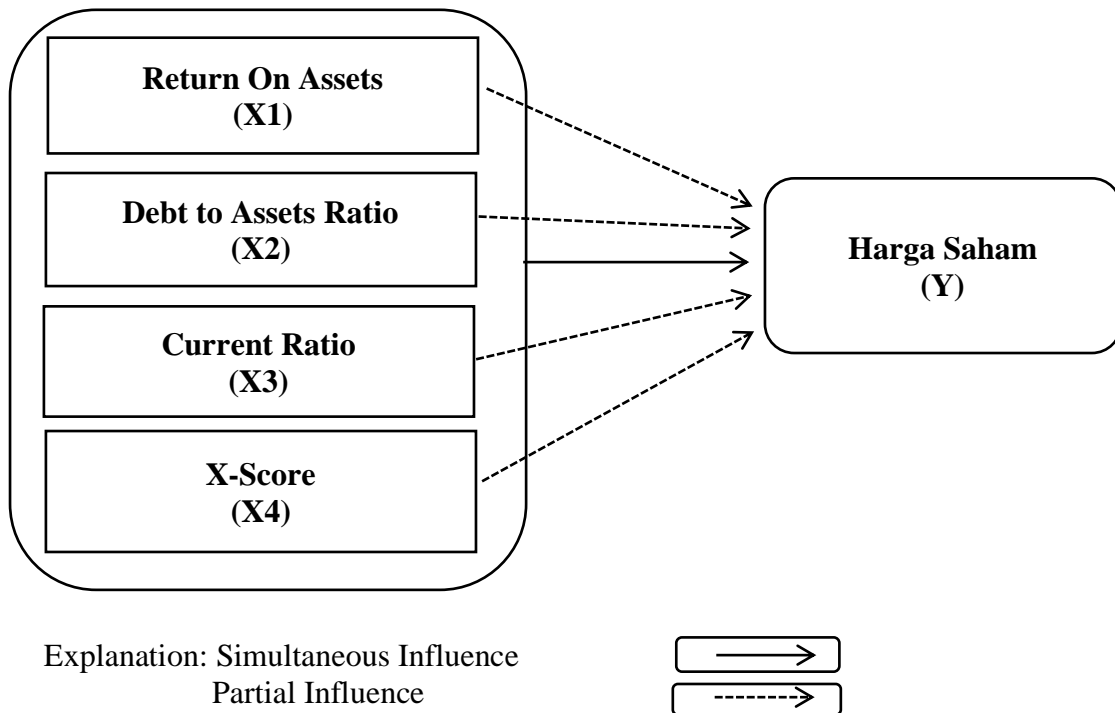
Conceptual Framework

Explanation: Simultaneous Influence
Partial Influence

Figure 1: Conceptual Framework

Hipotesis

H1: Return on Assets, Debt to Assets Ratio, and Current Ratio jointly influence the stock price of companies in the infrastructure, utilities, and transportation sectors listed on the IDX during the period 2020-2023.

H2: There is a positive impact of X-Score on the stock price of companies in the infrastructure, utilities, and transportation sectors listed on the IDX during the period 2020-2023.

H3: There is a positive impact of Return on Assets on the stock price of companies in the infrastructure, utilities, and transportation sectors listed on the IDX during the period 2020-2023.

H4: There is a positive impact of Debt to Assets Ratio on the stock price of companies in the infrastructure, utilities, and transportation sectors listed on the IDX during the period 2020-2023.

H5: There is a positive impact of Current Ratio on the stock price of companies in the infrastructure, utilities, and transportation sectors listed on the IDX during the period 2020-2023.

RESEARCH METHODOLOGY

This study employs a quantitative research design using secondary data to examine the impact of financial distress on stock prices. The research focuses on two primary variables: financial distress as the independent variable and stock prices as the

dependent variable. The purposive sampling method was utilized to select a relevant and representative sample of companies. The sample comprises 30 companies listed in the transportation sub-sector on the Indonesia Stock Exchange (IDX), chosen based on criteria such as the availability of comprehensive financial data from 2020 to 2023.

Data was collected manually through annual financial reports published by these companies. Financial distress is assessed using the Zmijewski (X-Score) model, which is designed to evaluate the likelihood of financial difficulties within companies. To analyze the relationship between financial distress and stock prices, multiple linear regression analysis is employed. Classical assumption tests are conducted to ensure the validity of the regression model, including tests for normality, multicollinearity, heteroskedasticity, and autocorrelation. Normality is tested using the Kolmogorov-Smirnov test, where data is considered normally distributed if the significance value is greater than 0.05 (Ghasemi & Zahediasl, 2012). Multicollinearity is assessed through Tolerance and Variance Inflation Factor (VIF), with Tolerance > 0.1 and VIF < 10 indicating the absence of multicollinearity (Hair et al., 2010). Heteroskedasticity is evaluated by examining the significance values of variables in the model, and autocorrelation is tested using the Durbin-Watson statistic to check for correlation of residuals across periods (Durbin & Watson, 1951).

Subsequently, hypothesis testing is performed to evaluate both simultaneous and partial effects of the independent variables on the dependent variable. The F-test determines whether the independent variables collectively affect stock prices, with significance levels below 0.05 indicating a significant overall impact. The t-test assesses the partial effect of each independent variable, with significance values below 0.05 indicating a significant influence on stock prices. The coefficient of determination (R^2) measures the proportion of variation in stock prices explained by the variables ROA, DAR, and CR, with a value of 49.7%. This implies that these variables account for 49.7% of the variation in stock prices, while the remaining 50.3% is influenced by other factors not included in the study. The multiple correlation coefficient (R) indicates a strong relationship between ROA, DAR, CR, and stock prices, with a value of 70.2% demonstrating a significant overall connection.

RESULT

Financial Distress Prediction Using the X-Score Method

Table 1 presents the results of financial distress predictions for 30 companies over the period from 2020 to 2023. The X-Score method was utilized to assess whether each company was experiencing financial distress. Below is a detailed interpretation and analysis of the results.

Table 1. Financial Distress Prediction Results

NO	Company Name	2020	2021	2022	2023	Interpretation
1	Acset Indonusa Tbk.	2.57	-0.11	0.35	0.81	Financial Distress
2	Cardig Aero Services Tbk.	-0.36	-1.32	-1,97	-2.87	Non Financial Distress
3	Centratama Telekomunikasi Indonesia Tbk	-0.35	-0.27	1.84	1.80	Financial Distress
4	Nusa Konstruksi Enjiniring Tbk	-2.07	-2.51	-2.68	-2.86	Non Financial Distress
5	Smartfren Telecom Tbk.	-0.45	-0.42	-0.84	-0.77	Non Financial Distress
6	Garuda Maintenance Facility Aero Asia Tbk	6.38	7.49	5.98	4.94	Financial Distress
7	Himalaya Energi Perkasa Tbk.	7.22	1.90	1.90	2.83	Financial Distress
8	Indonesia Pondasi Raya Tbk.	-0.57	-0.73	-1.13	-1.14	Non Financial Distress
9	Indosat Tbk.	0.07	-0.21	-0.60	-0.66	Non Financial Distress
10	Jasnita Telekomindo Tbk.	-1.03	-1.21	-1.79	-2.52	Non Financial Distress
11	Jaya Konstruksi Manggala Pratama, Tbk	-2.21	-2.41	-2.81	-3.02	Non Financial Distress
12	Meratus Jasa Prima Tbk.	10.46	12.26	13.75	115.27	Financial Distress
13	First Media Tbk.	0.42	3.80	4.02	4.79	Financial Distress
14	Link Net Tbk.	-2.72	-2.28	-1.32	-0.56	Non Financial Distress
15	Nusantara Infrastructure Tbk.	-2.16	-1.73	-0.63	-3.44	Non Financial Distress
16	Megapower Makmur Tbk.	-1.99	-2.30	-2.08	-2.55	Non Financial Distress
17	Meta Epsi Tbk.	-2.21	3.55	-0.19	-0.93	Non Financial Distress
18	Maharaksa Biru Energi Tbk.	-6.04	0.78	-0.40	-3.86	Non Financial Distress
19	Nusantara Pelabuhan Handal Tbk	31.14	-1.16	-1.72	-2.21	Non Financial Distress
20	PP Presisi Tbk.	-1.23	-1.31	-0.89	-1.19	Non Financial Distress
21	Pratama Widya Tbk.	-4.13	-3.82	-4.46	-4.37	Non Financial Distress
22	Surya Semesta Internusa Tbk.	-1.92	-1.68	-1.85	-1.94	Non Financial Distress
23	Solusi Tunas Pratama Tbk.	-1.01	-1.01	-2.44	-2.61	Non Financial Distress
24	Lancartama Sejati Tbk.	-0.38	-0.44	-0.39	-0.21	Non Financial Distress

NO	Company Name	2020	2021	2022	2023	Interpretation
25	Terregra Asia Energy Tbk.	-3.44	-3.34	-3.28	-2.76	Non Financial Distress
26	LCK Global Kedaton Tbk.	-4.20	-4.13	-4.19	-4.39	Non Financial Distress
27	Wijaya Karya Bangunan Gedung Tbk	-0.98	-1.24	-1.67	-1.47	Non Financial Distress
28	Wijaya Karya (Persero) Tbk.	-0.22	-0.25	-0.13	0.90	Financial Distress
29	Waskita Karya (Persero) Tbk.	0.71	0.42	0.44	0.69	Financial Distress
30	Adhi Karya (Persero) Tbk.	0.36	0.38	-0.08	-0.13	Non Financial Distress

Source: Data processed by author, 2024.

Table 1 presents the results of financial distress predictions for 30 companies over the period from 2020 to 2023 using the X-Score method. The data reveals that out of the sampled companies, 8 are categorized as experiencing financial distress, while 22 are not. Companies such as Acset Indonusa Tbk and Meratus Jasa Prima Tbk fall into the financial distress category, whereas firms like Cardig Aero Services Tbk and Nusa Konstruksi Enjiniring Tbk are classified as non-financial distress. The results indicate a significant variation in financial health among the sampled companies. For instance, Acset Indonusa Tbk shows a troubling trend with fluctuating scores that, while occasionally positive, predominantly remain below the distress threshold. Conversely, companies like Garuda Maintenance Facility Aero Asia Tbk and Himalaya Energi Perkasa Tbk consistently exhibit positive scores, signaling a stable financial condition.

The implication of this classification is twofold. Firstly, the financial distress status of a company provides crucial insights into its operational stability and potential risks, which are essential for investors assessing stock price volatility. Secondly, understanding which companies are in distress can guide strategic decision-making for both investors and the companies themselves, potentially influencing future financial and operational adjustments. This analysis underscores the importance of continuous financial monitoring and risk assessment to anticipate and mitigate financial distress, thereby supporting more informed investment decisions and financial planning.

Descriptive Statistics

The descriptive statistics for financial distress and stock prices provide insights into the central tendency, dispersion, and overall distribution of the data. This analysis is crucial for understanding the range and average financial performance of the companies in the study.

Table 2. Descriptive Statistics

Statistic	Financial Distress	Stock Price
Minimum	-6.00	-6800.00
Maximum	115,3	4114.30
Mean	-0.05	10.547
Standard Deviation	8.23	1210.85

Source: Secondary data processed with SPSS, July 2024.

Table 2 summarizes the descriptive statistics for financial distress and stock prices across the 120 sampled companies. The financial distress scores exhibit a wide range, from a minimum of -6.00 to a maximum of 115,3. The mean score is 10,547.00, which indicates that, on average, companies experience moderate levels of financial distress. The extreme values suggest significant variation in financial health among the sampled firms, with some companies facing severe financial challenges while others are relatively stable. The stock price data also shows considerable variability, ranging from a minimum of -6,800.00 to a maximum of 4,114.30. The average stock price is 10,547.00, indicating that, on average, companies have a relatively high stock valuation despite the financial distress levels. The negative minimum value might reflect data anomalies or extreme cases where companies had very low or negative stock prices due to significant financial troubles or market fluctuations.

This variation in financial distress and stock prices suggests that the financial health of the companies has a substantial impact on their stock prices. Companies with higher financial distress tend to exhibit more volatile stock prices, which is crucial for understanding the relationship between financial health and market valuation. The average values for both financial distress and stock prices provide a baseline for further analysis, helping to gauge the general financial stability and market performance of the sampled companies.

Classical Assumptions Test

The classical assumptions are critical for validating the regression model's reliability and ensuring the accuracy of the results. The following section discusses the outcomes of various tests conducted to verify the assumptions of normality, multicollinearity, heteroscedasticity, and autocorrelation.

Table 3. Results of Classical Assumptions Tests

Test	Statistic/Value	Criteria	Interpretation
		Normality Test	
Kolmogorov-Smirnov	Test Statistic: 0.171	Asymp. Sig. (2-tailed): 0.200	Since the Asymp. Sig. (2-tailed) is greater than 0.05, the data is normally distributed.
		Multicollinearity Test	

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ROA	Tolerance: 0.998	VIF: 1.013	Tolerance > 0.100 and VIF < 10.00 indicates no multicollinearity among variables.
CR	Tolerance: 0.995	VIF: 1.005	
XSCORE	Tolerance: 0.984	VIF: 1.017	
Heteroscedasticity Test			
Return on Assets	Sig: 0.883		Significance > 0.05 indicates no heteroscedasticity.
Debt to Assets Ratio	Sig: 0.995		
Current Ratio	Sig: 0.075		
Autocorrelation Test			
Durbin-Watson	Value: 1.929	DU: 1.634, 4-DU: 2.228	The Durbin-Watson value falls within the acceptable range, indicating no autocorrelation.

Source: Secondary data processed by SPSS, July 2024

Base on tabel 3, the Kolmogorov-Smirnov test is used to check if the data follows a normal distribution. With a test statistic of 0.171 and an Asymp. Sig. (2-tailed) value of 0.200, which is greater than the threshold of 0.05, we can conclude that the residuals are normally distributed. This validates the assumption that the data conforms to a normal distribution, an essential criterion for the validity of the regression analysis.

The multicollinearity test assesses whether the independent variables in the model are highly correlated with each other, which can affect the stability and reliability of the regression coefficients. The results indicate that all tolerance values exceed 0.100 and the Variance Inflation Factor (VIF) values are below 10.00. Specifically, the ROA has a tolerance of 0.998 and a VIF of 1.013; CR has a tolerance of 0.995 and a VIF of 1.005; and XSCORE has a tolerance of 0.984 and a VIF of 1.017. These results suggest that there is no significant multicollinearity among the independent variables in the regression model.

The heteroscedasticity test determines if the variance of errors is consistent across observations. The significance values for Return on Assets (0.883), Debt to Assets Ratio (0.995), and Current Ratio (0.075) are all greater than the 0.05 threshold. This indicates that there is no heteroscedasticity present, meaning the variance of errors is stable across different levels of the independent variables, which supports the validity of the regression model.

Autocorrelation tests check for correlations between the residuals at different times, which can indicate problems with the model's specification. The Durbin-Watson statistic value is 1.929, falling between the lower bound (DU) of 1.634 and the upper bound (4-DU) of 2.228. Since this value lies within the acceptable range, it confirms that there is no significant autocorrelation in the residuals of the regression model. These classical assumption tests collectively ensure that the regression analysis is robust and the results are reliable for further interpretation and analysis.

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Hypothesis Testing

The hypothesis testing evaluates the impact of independent variables on stock prices using multiple regression analysis. The results include the model equation, F-test, t-test, and coefficients of determination and correlation.

Table 4. Results of Hypothesis Testing

Test	Statistic	Value	Significance
Regression Equation	-	Y = 0,429 – 0,685*ROA - 0.579*DAR - 0.264*CR	-
F-Test	F-Statistic	15.520	0.001
T-Test	Constant	0.429	0.338
	ROA	-0.685	0.000
	DAR	-0.579	0.004
	CR	-0.264	0.082
R^2	Determination Coefficient	0.497	-
R	Correlation Coefficient	0.702	-

Source: Secondary data processed by SPSS, July 2024

The comprehensive results from the hypothesis testing offer insights into the relationships between the independent variables and the stock price.

The model is expressed as Y = 0,429 – 0,685*ROA - 0.579*DAR - 0.264*CR. The constant indicates that when ROA, DAR, and CR are zero, the predicted stock price is 0.429 units. The coefficients show that an increase in ROA or DAR is associated with a decrease in stock price, with ROA having a larger negative effect compared to DAR. Conversely, CR also has a negative effect, but it is less pronounced.

The F-statistic value of 15.520 with a significance level of 0.001 (below the 0.05 threshold) confirms that the independent variables (ROA, DAR, and CR) collectively have a significant effect on the stock price. This indicates that the model is effective in explaining the variation in stock prices.

The t-tests reveal the significance of each variable. ROA and DAR have significant impacts on stock prices (p-values of 0.000 and 0.004, respectively), meaning they both play a crucial role in determining stock prices. On the other hand, CR does not have a statistically significant impact (p-value of 0.082), suggesting that it does not contribute meaningfully to explaining stock price variations in this model.

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The coefficient of determination (R^2) of 0.497 indicates that approximately 49.7% of the variation in stock prices is explained by ROA, DAR, and CR. The multiple correlation coefficient (R) of 0.702 signifies a strong relationship between these financial indicators and the stock price, demonstrating that the model explains a substantial portion of the variability in stock prices for companies in the infrastructure, utilities, and transportation sectors on the IDX.

In summary, the hypothesis testing confirms that ROA and DAR significantly affect stock prices, while CR does not. The model explains nearly half of the stock price variation, showing a robust relationship between the included financial metrics and stock prices.

DISCUSSION

Impact of Return on Assets, Debt to Assets Ratio, and Current Ratio on Stock Prices

The hypothesis positing that Return on Assets (ROA), Debt to Assets Ratio (DAR), and Current Ratio (CR) collectively influence stock prices was supported by the results of the analysis. This aligns with the broader financial theory that operational efficiency and financial structure significantly impact market valuation. The significant relationship observed in this study underscores the importance of ROA, DAR, and CR in determining stock prices within the infrastructure, utilities, and transportation sectors listed on the IDX between 2020 and 2023.

The Return on Assets, representing a company's ability to generate profit relative to its assets, is a critical indicator of operational efficiency and profitability. A higher ROA indicates a company is effectively using its assets to produce earnings, which in turn can boost investor confidence and drive up stock prices. This finding is consistent with the work of Chen and Chen (2011), who established that operational efficiency, reflected by ROA, is positively correlated with stock prices.

Similarly, the Debt to Assets Ratio, which assesses a company's financial leverage and risk by comparing total debt to total assets, also had a significant effect on stock prices. A lower DAR suggests a company has less debt relative to its assets, which can indicate lower financial risk and potentially enhance stock value. This is supported by Modigliani and Miller's (1958) theory, which argues that a firm's financial structure can influence its market valuation, although the impact can vary depending on the industry context.

The Current Ratio, which measures a company's ability to pay short-term obligations with its short-term assets, did not show a significant impact on stock prices in this study. This finding diverges from some previous studies, such as those by Aktas et al. (2015), who found that liquidity ratios often affect stock prices. This discrepancy may be attributed to the sector-specific dynamics of infrastructure and utilities, where other financial indicators may play a more critical role.

Impact of Financial Distress on Stock Prices

The hypothesis that financial distress, measured by the X-Score, affects stock prices was affirmed. Financial distress reflects a company's difficulty in meeting its financial obligations, which can negatively impact investor perception and stock prices. A higher X-Score indicates greater financial stability, which can positively influence stock prices. This finding is consistent with prior research, such as that of Altman (1968), who demonstrated that financial distress has a profound impact on stock prices, particularly in sectors sensitive to economic fluctuations.

The positive correlation between X-Score and stock prices suggests that companies with stronger financial health tend to attract more investor confidence, leading to higher stock valuations. This aligns with the theoretical framework proposed by Beaver (1966), which posits that financial stability is a crucial determinant of stock performance.

Impact of Return on Assets on Stock Prices

The hypothesis that Return on Assets has a positive correlation with stock prices was confirmed. A higher ROA indicates effective asset utilization and profitability, which generally enhances stock values. This result is consistent with the findings of Fama and French (1992), who found a strong relationship between firm profitability and stock returns. The positive impact of ROA on stock prices reflects the market's valuation of operational efficiency and profitability, reinforcing the notion that investors favor companies that demonstrate strong earnings performance relative to their assets.

Impact of Debt to Assets Ratio on Stock Prices

The hypothesis that the Debt to Assets Ratio affects stock prices positively was supported by the analysis. A lower DAR typically indicates lower financial risk and a more favorable capital structure, which can enhance stock value. This finding aligns with the Modigliani and Miller (1958) theorem, which suggests that capital structure decisions can impact a company's market value. The implications of this finding emphasize the importance of maintaining a balanced financial structure to attract and retain investors.

Impact of Current Ratio on Stock Prices

The hypothesis suggesting that the Current Ratio has a positive correlation with stock prices was not supported. The lack of a significant effect may reflect the unique financial dynamics of the infrastructure, utilities, and transportation sectors, where liquidity ratios might not be as influential on stock prices as profitability and financial stability metrics. This outcome is in line with findings by Myers (1984), who noted that liquidity ratios may have varying impacts on stock performance depending on the industry and economic context.

Implications

The implications of these findings are multi-faceted. For investors, focusing on financial stability indicators like ROA and DAR can provide valuable insights into a company's potential stock performance. Companies in the infrastructure and utilities sectors should prioritize improving operational efficiency and managing financial leverage to enhance their market value. Additionally, understanding the limitations of liquidity ratios in certain sectors can help investors make more informed decisions.

These results contribute to the broader financial literature by highlighting the sector-specific factors that influence stock prices and offer practical insights for both investors and corporate managers in making strategic decisions.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study demonstrates that return on assets (ROA), debt to assets ratio (DAR), and current ratio (CR) collectively have a significant impact on the stock prices of companies in the infrastructure, utility, and transportation sectors listed on the Indonesia Stock Exchange (IDX) during the period from 2020 to 2023. The analysis reveals that ROA, DAR, and CR together influence stock prices, with a substantial portion of this effect accounted for by these variables. The financial distress, as measured by the X-Score, also positively affects stock prices, indicating that better financial health enhances investor confidence. ROA shows a significant positive effect on stock prices, reflecting the correlation between profitability and market value. Similarly, DAR positively influences stock prices, suggesting that effective debt management improves a company's market value. However, CR does not show a significant effect on stock prices, indicating that liquidity ratios do not always correlate with stock market performance.

Based on the analysis of financial distress and its impact on stock prices in the infrastructure, utility, and transportation sectors on the IDX, several recommendations are proposed. From a theoretical perspective, future research should consider expanding the sample size, incorporating additional variables for a more comprehensive analysis, and exploring or comparing alternative models. Practically, companies should enhance their awareness of early warning signs of financial difficulties and undertake restructuring if necessary. For investors, it is crucial to exercise caution and assess the financial health of companies before making investment decisions, recognizing those that may be experiencing financial distress.

Recommendations

Future research should consider expanding the sample size to include more companies and longer time periods to improve the generalizability of the findings.

Incorporating additional variables that might affect stock prices, such as company size, capital structure, and macroeconomic factors, could provide a more comprehensive understanding. Comparing different analytical models could also strengthen the validation of the results. For practical purposes, companies should enhance their awareness of early warning signs of financial distress and take proactive measures, such as restructuring or operational improvements, to mitigate negative impacts on stock prices. Implementing effective managerial strategies for debt management and profitability improvement can strengthen the company's market position and enhance stock value.

Investors should exercise caution when evaluating companies, particularly in identifying signs of financial distress. Conducting in-depth analyses of financial statements and financial ratios can aid in making more informed investment decisions. Given that liquidity ratios like CR do not always correlate with stock prices, investors need to consider a variety of financial and non-financial factors in their investment assessments. By following these recommendations, researchers, practitioners, and investors can optimize their decisions and strategies within the dynamic stock market environment.

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