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**PROFITABILITY, LEVERAGE, ACTIVITY, AND LIQUIDITY AS DETERMINANTS  
OF FINANCIAL DISTRESS IN PROPERTY AND REAL ESTATE COMPANIES  
LISTED ON THE IDX**

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**Abstract**

The continuity of a company's operations depends on maintaining a stable financial condition. One of the critical risks that may disrupt business sustainability is financial distress, a situation in which a company experiences severe financial pressure that may lead to bankruptcy. The potential occurrence of financial distress can be identified through financial statements, where financial ratios are used to evaluate the company's ability to generate profits, meet obligations, and manage its assets and liabilities. This study aims to examine the effect of profitability, leverage, activity, and liquidity on financial distress in property and real estate companies listed on the Indonesian Stock Exchange (IDX) during the 2021-2024 period. Financial distress is measured using the Altman Z-Score model. The sample was selected using a purposive sampling method based on predetermined criteria, resulting in 170 financial statement observations. Data processing and analysis were performed using multiple linear regression through SPSS software. The results show that profitability and liquidity have significant effects in reducing financial distress, while leverage has a significant positive effect on financial distress. Meanwhile, activity does not have a significant effect on financial distress. These findings highlight that managing profitability and liquidity is crucial for minimizing financial distress risk, whereas excessive debt levels may worsen a company's financial condition.

**Keywords:** Profitability, Leverage, Activity, Liquidity, Financial Distress



## INTRODUCTION

Sustaining operations requires a company to remain in a stable financial condition. Economic uncertainty, market volatility, and internal financial pressure may weaken this condition and push firms toward financial distress, a stage in which a company becomes unable to meet financial obligations and potentially moves toward insolvency. Early recognition of distress signals is important because proactive intervention helps prevent further deterioration. Financial statements, particularly through financial ratio analysis, allow stakeholders to assess a firm's ability to generate earnings, manage assets, fulfil liabilities, and maintain adequate liquidity. In support of this approach, Altman (1968) introduced the Z-score model, which predicts the probability of corporate bankruptcy by combining several key financial ratios into a single measurement, allowing early detection of financial distress.

The property and real estate sector are considered a capital-intensive industry with high dependence on external financing. During periods of economic disruption, such as the post-pandemic recovery, companies in this industry often face declining sales performance and delayed project development, leading to reduced cash inflows and increasing risks of distress (Purwaningsih & Pernamasari, 2024). When revenue decline, firms experience weakening liquidity and growing financial pressure from outstanding debt (Kudus & Meidiyustiani, 2022). Supporting this view, Nisa et al. (2025) found that property and real estate firms with high leverage and low profitability are more prone to financial distress.

Financial ratios serve as a diagnostic tool frequently used to anticipate distress situations. Profitability, leverage, activity, and liquidity ratios are commonly applied to evaluate whether a company can withstand financial pressure (Laksmiwati et al., 2021). Profitability and liquidity reflect a company's ability to generate profits and maintain short-term financial stability, whereas leverage indicates the extent of debt burden that may heighten financial vulnerability. Activity ratios illustrate how efficiently assets are utilized to generate revenue. Empirical studies, however, show different results. Some find profitability and liquidity able to reduce distress, while others conclude leverage and risk exposure increase distress probability.

Furthermore, Shi & Li (2021) documented that firms with higher leverage face a greater likelihood of financial distress, while higher profitability helps reduce bankruptcy risk (Kebede et al., 2024). In addition, Laksmiwati et al. (2021) found that liquidity and activity ratios can influence distress prediction,



indicating that firms with higher liquidity and more efficient asset utilization tend to avoid distress. However, Purwaningsih & Pernamasari (2024) reported contrasting results, where liquidity and profitability significantly affected financial distress while leverage showed no effect. Even more contrasting, Kebede et al. (2024) found that profitability does not significantly affect financial distress. These inconsistent empirical findings across studies demonstrate that the determinants of financial distress vary across industries and economic conditions.

Considering these gaps, this study examines the effect of profitability, leverage, activity, and liquidity on financial distress in property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the 2021-2024 period.

## LITERATURE REVIEW

Agency Theory, introduced by Jensen and Meckling (1976), describes how the relationship between shareholders as principals and managers as agents who are entrusted to operate the company on behalf of the owners. However, because managers may pursue personal interests that differ from those of shareholders, conflict of interest and information asymmetry can arise (Jensen & Meckling, 1976). These agency problems often lead to inefficient decisions, such as taking excessive debt or manipulating financial results to maintain a good image of performance. In periods of financial pressure, such behavior can increase company risk and potentially lead to financial distress.

Signalling Theory, proposed by Spence (1973), explains how companies communicate information to minimize the imbalance of information between management and external stakeholders. Managers have deeper knowledge of the company's true financial condition and convey this information through signals such as financial statements and financial ratios like profitability, leverage, activity, and liquidity (Spence, 1973). Positive signals such as strong profitability and adequate liquidity indicate financial stability and the ability to meet obligations, while negative signals, including excessive leverage or weak activity performance, suggest a higher likelihood of financial distress. Therefore, financial ratios function as credible signals that help investors and creditors interpret the company's actual financial health.

Profitability represents a company's ability to generate earnings from its total assets, commonly measured using the Return on Assets (ROA) ratio. A higher ROA indicates that a firm efficiently utilizes its assets to produce profit, which strengthens internal funding and reduces dependence on external debt. According to Signalling Theory (Spence, 1973), firms with high profitability send



positive signals of financial stability to investors and creditors, suggesting a lower likelihood of financial distress. Conversely, low profitability reflects weak operational performance and reduced ability to fulfil obligations, serving as a negative signal of potential distress. From the perspective of Agency Theory (Jensen & Meckling, 1976), when profitability declines, managers may take opportunistic actions such as increasing leverage or manipulating accounting data to maintain a favorable corporate image, which can worsen financial conditions. Empirical studies consistently show that profitability has a negative relationship with financial distress. Companies with higher profitability are more likely to remain solvent and financially stable, as supported by Sitompul et al. (2025), Pramudita & Fitriyani (2024), and Shi & Li (2021), who found that ROA significantly reduces the likelihood of financial distress. Therefore, firms with higher profitability tend to experience lower distress risk. H1: Profitability has a negative and significant effect on financial distress.

Leverage represents the extent to which a company relies on debt financing relative to its equity, and in this study, it is measured using the Debt to Equity Ratio (DER). A high leverage indicates that a company's operations are predominantly funded by debt, which increase financial risk and may lead to difficulties in meeting long-term obligations. According to Agency Theory (Jensen & Meckling, 1976), excessive leverage heightens the conflict between shareholders and managers, as managers might take opportunistic or high-risk decisions to maintain profitability and meet creditor expectations. Meanwhile, Signalling Theory (Spence, 1973) suggest that firms with low leverage provide positive signals, reflecting greater vulnerability to financial distress when cash flows decline. Empirical studies largely support a positive relationship between leverage and financial distress. Kebede (2024) revealed that firms with higher leverage ratios have a greater likelihood of bankruptcy. Similarly, Pane et al. (2023) and Laksmiwati et al. (2021) found that DER significantly increase the risk of financial distress among Indonesian listed firms. These findings indicate that higher leverage amplifies a company's exposure to financial difficulties, as excessive debt obligations can reduce liquidity, restrict operational flexibility, and increase insolvency risk. H2: Leverage has a positive and significant effect on financial distress.

Activity ratio reflects a company's efficiency in managing its assets to generate revenue and profit. It is often measured using indicators such as Total Asset Turnover (TATO), which shows how effectively assets are utilized in supporting operational performance. A higher activity ratio indicates that the



firm is efficiently converting assets into sales, thereby maintaining sufficient cash flow to meet financial obligations and reducing the likelihood of distress. Conversely, a low activity ratio signals inefficiency and declining operational performance, which can lead to liquidity problems and financial distress. Based on Signalling Theory (Spence, 1973), strong activity performance sends a positive signal to investors and creditors, indicating that the company effectively manages its resources and has stable operational capacity, while weak activity performance serves as a negative signal of declining efficiency and potential financial trouble. Yoyo (2024) found that companies with higher activity ratios tend to experience lower distress risk because efficient asset management enhances operational resilience and financial stability. Similarly, Umam (2024) demonstrated that higher asset turnover strengthens financial stability by supporting liquidity and profitability. Kebede (2024) confirmed that firms with low activity ratios face a greater probability of bankruptcy, suggesting that operational inefficiency contributes significantly to financial distress. Thus, firms that manage their assets more efficiently are less likely to experience financial distress. H3: Activity has a negative and significant effect on financial distress.

Liquidity represents a firm's ability to fulfil its short-term obligations using current assets, typically measured by the Current Ratio (CR). A higher level of liquidity indicates that the company effectively manages its working capital and maintains sufficient cash flow to meet its liabilities on time. According to Signalling Theory (Spence, 1973), firms with strong liquidity positions send positive signals to investors and creditors, showing their stability and low probability of distress. Conversely, low liquidity reflects poor cash management and financial instability, which may lead to difficulties in maintaining operations. Empirical research consistently supports the negative association between liquidity and financial distress. Hidayat et al. (2024) found that higher liquidity significantly reduces the probability of financial distress, as firms with sufficient current assets are better equipped to handle short-term obligations. Marsenne et al. (2023) demonstrated that firms with higher current ratios are less likely to experience financial distress, as sufficient liquidity enhances their capacity to meet obligations and sustain business operations. Similarly, Dirman (2020) confirmed that strong liquidity reduces bankruptcy risk by improving firms' ability to respond to financial shocks. These findings indicate that maintaining adequate liquidity is crucial for corporate financial stability. H4: Liquidity has a negative and significant effect on financial distress.

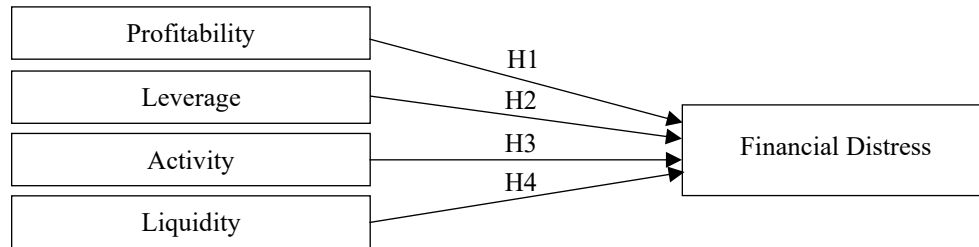


Figure 1. Research Model

Source: Compiled by Author

RESEARCH METHOD

Samples

This study used secondary data obtained from the official website of Indonesia Stock Exchange (IDX). The research population consists of 92 property and real estate companies that were listed on the IDX during the 2021-2024 period. The sampling process was conducted using a purposive sampling technique, which allows the researcher to select samples based on specific inclusion criteria. The selection criteria were as follows: (1) property and real estate companies that remained listed on the IDX during 2021-2024; (2) property and real estate companies that conducted their Initial Public Offering (IPO) before 2021; (3) property and real estate companies that consistently published audited annual financial statements during 2021-2024; (4) property and real estate companies that were not delisted during 2021-2024; and (5) property and real estate companies that presented their financial statements in Indonesian Rupiah. Companies that did not meet these criteria were excluded from the sample. Based on these requirements, the final dataset used for analysis consisted of 170 firm-year observations.

Measurement

The variables used in this study, along with their measurement methods, sources, and scales, are summarized in the following table.

Table 1. Variables and Measurement

Variable	Measurement	Source	Scale
Financial Distress	$Z'' = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$ Where $X_1 = \text{Working Capital/Total Assets}$ , $X_2 = \text{Retained Earnings/Total Assets}$ , $X_3 =$	Altman (2013)	Ratio



EBIT/Total Assets,  $X_4$  = Book Value of Equity/Total Liabilities

Profitability	$ROA = \frac{Net\ Income}{Total\ Assets}$	Sitompul et al. (2025)	Ratio
Leverage	$DER = \frac{Total\ Liabilities}{Total\ Equity}$	Laksmiwati et al. (2021)	Ratio
Activity	$TATO = \frac{Net\ Sales}{Total\ Assets}$	Yoyo (2024)	Ratio
Liquidity	$CR = \frac{Current\ Assets}{Current\ Liabilities}$	Marsenne et al. (2023)	Ratio

Source: Compiled by Author

### Data Collection and Analysis

This study collected 170 data observations, which were finalized as valid samples for further analysis. The data was processed using IBM SPSS Statistics version 31. The analytical procedures included descriptive statistics, classical assumption tests, and multiple linear regression to evaluate the relationship between profitability, leverage, activity, and liquidity with financial distress.

### RESULTS AND DISCUSSION

The regression analysis in this study was conducted using the Ordinary Least Squares (OLS) method with SPSS version 31. To ensure the reliability of the model, several classical assumption tests were performed, including normality, multicollinearity, autocorrelation, and heteroscedasticity tests. The normality test was conducted using the Kolmogorov-Smirnov method. The test result showed a significance value of 0.200, which is greater than 0.05, indicating that the residuals are normally distributed. Therefore, the data in this study meet the normality assumption required for regression analysis.

The multicollinearity test was conducted using the Tolerance and Variance Inflation Factor (VIF) values generated from the regression output. The results show that all independent variables have tolerance values above 0.10, ranging from 0.876 to 0.936, and VIF values below 10, ranging from 1.068 to 1.142. These results indicate that none of the independent variables suffer from multicollinearity, meaning the regression model is free from multicollinearity



issues and suitable for further analysis. The autocorrelation test was performed using the Durbin-Watson (DW) statistic. The regression output shows a Durbin-Watson value of 0.991, which falls within the acceptable range between -2 and +2. This indicates that the regression model does not exhibit autocorrelation and therefore meets the assumption required for multiple regression analysis. The heteroscedasticity test was carried out using the Glejser method. The results showed that all independent variables had significance values greater than 0.05, indicating that the residuals are homoscedastic. Therefore, no heteroscedasticity problem is present in the regression model, and the model meets the assumption of constant variance.

**Table 2.**  
**F-Test Result**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	591.358359	4	147.839590	99.415867	<0.001 <sup>b</sup>
	Residual	245.368601	165	1.487082		
	Total	836.726961	169			

Source: Compiled by Author

The F-test was conducted to determine whether all independent variables simultaneously influence financial distress. The results show an F-statistic value of 99.416 with a significance level of 0.000 (< 0.05), indicating that profitability, leverage, activity, and liquidity jointly have a significant effect on financial distress.

**Table 3.**  
**Result of the Coefficient of Determination Test (Adjusted R<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	Std. Error
1	0.841 <sup>a</sup>	0.706752	0.699642	1.219459

Source: Compiled by Author

The adjusted R<sup>2</sup> value is 0.700. This means that 70.0% of the variation in financial distress can be explained by the four independent variables included in the model, while the remaining 30.0% is influenced by other factors not examined in this study.

**Table 4.**  
**t-Test Results**

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
(Constant)	3.257410	0.225869	—	14.421662	0.000000
ROA	14.711251	2.105565	0.304398	6.986843	0.000000
DER	-1.242891	0.138558	-0.404037	-8.970160	0.000000
TATO	0.792302	0.637681	0.054650	1.242474	0.215825
CR	0.605101	0.047129	0.563295	12.839244	0.000000

Source: Compiled by Author

The results of the t-test indicate that profitability, which is measured using ROA, has a significance value of 0.000 ( $< 0.05$ ) with a positive coefficient of 14.711. This finding shows that profitability has a significant positive effect on the Z-Score, meaning that firms with higher profitability tend to be further away from financial distress. Companies with strong earnings performance generally possess better internal funding capacity, greater operational stability, and improved ability to meet financial obligations. As a result, the first hypothesis is accepted. Leverage, which is measured using DER, also shows a significance value of 0.000 ( $< 0.05$ ) but with a negative coefficient of -1.243. This indicates that leverage significantly lowers the Z-Score, implying that firms with higher debt levels face greater financial distress risk. High leverage increases financial burden and interest expenses, which can weaken liquidity and constrain operating capacity, especially during periods of declining cash flows. Thus, the second hypothesis is accepted. Activity, measured by TATO, has a significance value of 0.216 ( $> 0.05$ ) and a positive coefficient of 0.792, showing that activity does not significantly influence financial distress. This suggests that efficient asset utilization alone is insufficient to reduce distress risk, particularly in industries with large fixed asset components such as property and real estate. Firms may have high activity ratios but still encounter financial difficulty if profitability and liquidity remain weak. Hence, the third hypothesis is rejected. Liquidity, measured using the Current Ratio, has a significance value of 0.000 ( $< 0.05$ ) with a positive coefficient of 0.605, demonstrating that liquidity significantly increases the Z-Score and reduces the likelihood of distress. Companies with greater liquid assets are more capable of covering short-term obligations, managing unexpected cash needs, and sustaining operational continuity. These results support the idea that adequate liquidity strengthens a firm's financial resilience. Therefore, the fourth hypothesis is accepted.



Based on the results of the multiple linear regression analysis, the regression model developed in this study is shown as follows:

$$Z\text{-Score} = 3.257 + 14.711(\text{ROA}) - 1.243(\text{DER}) + 0.792(\text{TATO}) + 0.605(\text{CR})$$

Table 5.

Hypothesis Test Results

Hypothesis	t-Statistic	Prob.	Result
Profitability has a negative and significant effect on financial distress.	6.986843	0.000000	Accepted
Leverage has a positive and significant effect on financial distress.	-8.970160	0.000000	Accepted
Activity has no significant effect on financial distress.	1.242474	0.215825	Rejected
Liquidity has a negative and significant effect on financial distress.	12.839244	0.000000	Accepted

*Note: The regression coefficients are presented using the Z-Score as the dependent variable; however, the interpretation of the hypotheses refers to financial distress. Since a higher Z-Score indicates a lower likelihood of financial distress, a positive coefficient reflects a negative effect on financial distress, while a negative coefficient reflects a positive effect on financial distress.*

Source: SPSS 31 Output

CONCLUSION

The results of this study reveal that profitability and liquidity significantly increase the Z-Score, indicating a lower likelihood of financial distress among property and real estate companies. In contrast, leverage shows a significant negative effect on the Z-Score, suggesting that higher debt levels increase the potential for financial distress. Meanwhile, the activity ratio does not show a meaningful influence on financial distress within this sector. These findings highlight the importance of maintaining strong profitability and liquidity positions, while carefully managing leverage to preserve financial stability. Firms are encouraged to strengthen their internal financial performance, manage debt prudently, and ensure sufficient liquidity to support operational needs and reduce vulnerability to financial distress.

This study is limited to four independent variables consisting of profitability, leverage, activity, and liquidity, without the inclusion of moderating variables or external macroeconomic factors. These research period also covers only four years (2021-2024) and focus solely on property and real estate



companies listed on the Indonesia Stock Exchange, which may limit the generalizability of the findings.

Future studies may incorporate additional financial or non-financial variables, such as cash flow, corporate governance, or macroeconomic indicators, to obtain a more comprehensive analysis of financial distress. Researchers may also use different distress prediction methods. Expanding the sector or extending the observation period may further enrich the understanding of financial distress determinants across industries

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