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The Effect of Liquidity and Leverage on Financial Distress with Profitability as a Moderating Variable

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Abstract

Financial distress risks among companies in Indonesia's capital-intensive industrial goods sub-sector highlight the importance of liquidity and leverage management, while profitability may moderate their effects on financial stability and business continuity. This study analyzes the impact of liquidity and leverage on financial distress, with profitability as a moderating variable. A quantitative approach was used, focusing on companies in the Industrial Goods sub-sector of the Industrials sector listed on the Indonesia Stock Exchange during 2020–2024. The sample was selected using purposive sampling, yielding 142 observations; however, 138 observations were used in the final analysis after excluding four that exhibited negative Altman Z-scores. Data analysis involved descriptive statistics, classical assumption testing, and Moderated Regression Analysis (MRA) using SPSS. The results indicate that liquidity has a significant positive effect on financial distress, whereas leverage has a significant negative effect. Profitability significantly moderates the relationship by weakening liquidity's impact on financial distress but does not moderate leverage's impact. The findings imply that companies should manage working capital efficiently, monitor debt exposure, and maintain sustainable profitability to strengthen financial stability and mitigate financial distress risks.

Keywords

Financial Distress, Leverage, Liquidity, Profitability.

1. Introduction

Companies must maintain financial stability alongside profitability to ensure business continuity. Ineffective financial management can lead to financial distress, an early stage of financial deterioration that may culminate in bankruptcy. Therefore, examining liquidity, leverage, and profitability is essential. Liquidity reflects the ability to meet short-term obligations, while leverage indicates dependence on debt financing. Profitability may moderate these relationships by influencing asset utilization, earnings generation, and financial capacity. These issues are particularly relevant to Indonesia's industrial goods sub-sector, where companies faced increasing financial pressure in 2024–2025 amid domestic and global economic challenges (Otoritas Jasa Keuangan, 2024). Capital-intensive operations require substantial investment in machinery, equipment, and capacity expansion. Meanwhile, exchange rate fluctuations and rising raw material, energy, and logistics costs may constrain liquidity and profitability, increasing financial distress risks, particularly for highly leveraged companies facing higher interest expenses (Bank Indonesia, 2024).

Indonesian companies face intensifying competition, technological developments, and economic fluctuations that affect financial performance and business continuity (Udzma & Waluyo, 2025; Syahdina et al., 2025). These challenges may lead to financial distress, a deterioration in financial health that can precede bankruptcy and threaten operational sustainability (Ilmiddaviq & Ainiyah, 2025). Financial distress occurs when companies struggle to meet debt obligations, finance operations, or fulfill employee compensation commitments (Sitorus et al., 2022; Permata & Aminah, 2023). Maintaining financial stability is therefore essential for sustainable business performance (Stepani & Nugroho, 2023). Liquidity and leverage influence financial distress, while profitability may moderate their effects by shaping a company's ability to generate earnings and meet financial obligations. Higher profitability can strengthen financial resilience, whereas excessive debt may increase repayment burdens and financial vulnerability. This study measures financial distress using the Altman Z-score, where lower scores indicate a higher risk of financial distress (Altman, 1968).

Liquidity and leverage represent important financial factors that may influence a company's financial distress, while profitability may determine the strength of these relationships. Liquidity reflects a company's capacity to meet short-term obligations, but its implications depend on how efficiently current assets are managed. Insufficient liquidity may constrain debt repayment, whereas excessive liquidity may indicate unproductive assets that weaken operational efficiency and profitability (Gitman & Zutter, 2015; Habib & Kayani, 2022). Meanwhile, leverage reflects the extent to which company assets are financed by debt. High leverage can increase financial pressure through interest expenses and repayment obligations, but well-managed debt can support productive investment and business growth (Prasetya & Hindasah, 2024). Profitability may moderate these relationships because earnings provide internal resources to meet obligations and manage financing costs. More profitable companies may use liquidity more effectively and maintain greater capacity to service debt, whereas lower profitability may limit these capabilities (Afriyani & Nurhayati, 2023). Therefore, profitability is expected to influence how liquidity and leverage relate to financial distress, making its moderating role important to examine empirically.

Previous studies have reported mixed findings on the relationships among liquidity, leverage, profitability, and financial distress. Anisa et al. (2023) found a positive and significant relationship between liquidity and financial distress, while Alfiah et al. (2024) reported a negative relationship between leverage and financial distress. Furthermore, empirical evidence on profitability's moderating role remains

inconclusive. Amah et al. (2023) reported that profitability moderates the liquidity–financial distress relationship, whereas Pebrianti et al. (2023) found no significant moderating effect. Similarly, Maulidya et al. (2023) supported profitability's moderating role in the leverage–financial distress relationship, while Hayati and Sholichah (2022) reported otherwise. These inconsistencies indicate that profitability's moderating effect requires further investigation.

Based on the background outlined above, this study offers a novel approach by positioning profitability not merely as a direct influence, but as a moderating variable that determines the strength of the relationship between liquidity, leverage, and financial distress, particularly within the selected sector. Furthermore, using the Altman Z-score to measure financial distress provides relevant empirical insights into the financial condition of companies in the industrial goods sub-sector, which is characterized by capital intensity and high debt dependency. Accordingly, this study examines the effects of liquidity and leverage on financial distress and investigates whether profitability moderates both relationships among companies in Indonesia's industrial goods sub-sector. This study is expected to offer a more comprehensive understanding of the internal corporate dynamics involved in anticipating the risk of financial distress.

2. Literature Review and Hypothesis Development

2.1. The Effect of Liquidity on Financial Distress

The liquidity ratio measures a company's ability to meet short-term obligations. However, high liquidity does not always indicate sound financial health, as excessive current assets may remain unproductive and fail to generate adequate revenue (Syuhada et al., 2020). Idle cash, excess inventory, and slow-collecting receivables may reflect inefficient working capital management, suppress profitability, and increase the risk of financial distress (Hidayat et al., 2020; Brigham & Houston, 2014). This study measures liquidity using the Current Ratio (CR), calculated by dividing current assets by current liabilities. According to Kasmir (2020), a CR between 1.5 and 2 generally indicates healthy liquidity. A ratio below 1 suggests current assets are insufficient to cover current liabilities, potentially increasing the risk of financial distress. Conversely, a ratio above 3 does not necessarily indicate a strong financial condition because it may reflect excessive investment in unproductive current assets. Therefore, liquidity should be assessed not only by the availability of current assets but also by how efficiently they are managed to support revenue generation and profitability.

Research by Anisa et al. (2023) demonstrates that liquidity has a significant impact on financial distress; companies with high liquidity levels are not always able to effectively meet their obligations if their current assets are poorly managed. These findings align with studies by Zatira et al. (2023) and Adhiyudho and Sufiyati (2024), which indicate that liquidity has a positive and significant effect on financial distress. Therefore, it can be concluded that an increase in liquidity will raise the Altman Z-score, and a high value indicates a lack of bankruptcy risk. Accordingly, the first hypothesis is formulated as follows:

H1: Liquidity has a positive effect on financial distress.

2.2. The Effect of Leverage on Financial Distress

Leverage reflects a company's ability to utilize debt-sourced funds to finance its investment and operational activities (Sihombing & Angela, 2024). Leverage assesses the extent to which a company can meet its obligations to creditors and examines the role of debt in managing the company's assets (Bun et al., 2024). In this study, leverage was measured using the Debt-to-Asset Ratio (DAR), calculated by

dividing total liabilities by total assets. In effective financial management, the planned and productive use of debt can help a company increase operational capacity and generate higher profits. Leverage measures the proportion of a company's assets financed by debt (Kasmir, 2020). A debt ratio exceeding 50% indicates that most of the company's assets are financed by debt, increasing the risk of default if the company's performance declines. If the ratio approaches or exceeds 70%, the company's capital structure is considered quite aggressive and carries a high risk of financial distress (Brigham & Ehrhardt, 2017). According to Trade-off theory, excessive debt increases interest expenses and bankruptcy costs, which can push the company into financial distress.

Research by Alfiah et al. (2024) shows that leverage negatively affects financial distress, indicating that companies with optimally managed leverage tend to face a lower risk of financial difficulties. These findings align with Bun et al. (2024), which states that leverage has a significant negative impact on financial distress, as effective debt utilization can help companies meet obligations and maintain financial stability. These results are further supported by Afriyani and Nurhayati (2023) and Handayani and Yusran (2024), who concluded that leverage has a significant negative effect on financial distress. This indicates that using debt, when accompanied by profitability and sound management, does not necessarily increase the risk of financial difficulties; rather, it can reduce the potential for financial distress. Accordingly, the second hypothesis is formulated as follows:

H2: Leverage has a negative effect on financial distress.

2.3. The Effect of Liquidity on Financial Distress Moderated by Profitability

Liquidity refers to a company's ability to meet its financial obligations as they fall due by utilizing its current assets to cover current liabilities (Mahasin et al., 2025). Meanwhile, profitability reflects a company's capacity to generate earnings from its operational activities, sales, and investments over a specific period (Kasmir, 2018; Kuntari & Machmuddah, 2025). In this study, profitability is measured using Return on Assets (ROA), calculated by dividing net income by total assets. Profitability serves as a moderating variable because earnings generated from business operations can strengthen a company's financial resources and support its ability to settle financial obligations. However, high liquidity does not always indicate efficient financial management, as excessive current assets, such as idle cash and surplus inventory, may remain unproductive. When profitability increases, accumulated earnings may increase current assets, particularly cash and accounts receivable. If these funds are not allocated productively, higher profitability and liquidity may not necessarily improve the company's financial condition.

Profitability may influence how liquidity affects financial distress because profitable companies generally have greater internal resources to meet short-term obligations. Adequate liquidity supported by sustainable earnings can strengthen financial stability and reduce the likelihood of financial difficulties. Conversely, liquidity from inefficiently managed current assets may not protect against financial distress, even when a company reports substantial current assets. Empirical findings from Hayati and Sholichah (2022), Amah et al. (2023), and Maulidya et al. (2023) indicate that profitability moderates the relationship between liquidity and financial distress. These findings suggest that profitability may alter the relationship by determining whether available financial resources can be converted into sustainable earnings and used effectively to meet obligations. However, Pebrianti et al. (2023) found that profitability does not moderate this relationship, indicating inconsistencies in the existing evidence. These differences warrant further investigation of profitability's moderating role in the liquidity–financial distress relationship. Accordingly, the third hypothesis is formulated as follows:

H3: Profitability moderates the effect of liquidity on financial distress.

2.4. The Effect of Leverage on Financial Distress Moderated by Profitability

Leverage is a financial ratio used to assess a company's reliance on debt in financing its assets and its ability to meet financial obligations (Kasmir, 2018). High leverage indicates a greater proportion of debt financing, which may increase the risk of financial distress when a company struggles to fulfill its obligations (Marfuah et al., 2026). Nevertheless, debt financing can also support business expansion, investment, and operations, potentially improving the company's ability to generate profits. Therefore, the effect of leverage on financial distress may depend not only on the amount of debt but also on the company's ability to generate sufficient earnings to meet its financial commitments.

Profitability may moderate the relationship between leverage and financial distress because it reflects a company's capacity to generate earnings to cover interest expenses and repay debt. Companies with higher profitability generally have greater financial flexibility to manage their debt obligations, potentially reducing the adverse consequences of leverage. Conversely, companies with lower profitability may face greater financial pressure because their earnings are insufficient to cover financing costs. Empirical evidence from Maulidya et al. (2023) supports profitability's moderating role in the relationship between leverage and financial distress. However, Hayati and Sholichah (2022) found no significant moderating effect. These inconsistent findings indicate that the moderating role of profitability remains inconclusive and warrants further empirical investigation. Accordingly, the fourth hypothesis is formulated as follows:

H4: Profitability moderates the effect of leverage on financial distress.

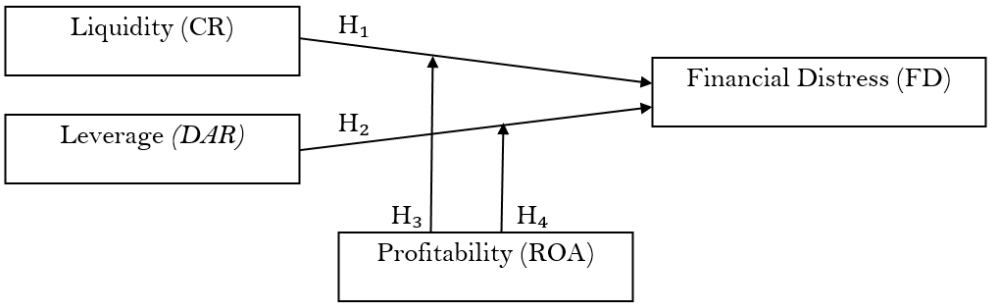


Figure 1. Conceptual Framework

Figure 1 illustrates the conceptual framework examining the effects of liquidity and leverage on financial distress, with profitability serving as a moderating variable. In this study, financial distress was measured using the Altman Z-score, which assesses a company's financial condition based on a composite of financial ratios. Liquidity is hypothesized to influence financial distress, as stated in H1. Leverage is proposed to affect financial distress under H2. Furthermore, profitability is expected to moderate the relationship between liquidity and financial distress (H3) and the relationship between leverage and financial distress (H4). This framework provides the basis for empirically testing the direct and moderating effects of the proposed relationships.

3. Methods

This study employs a quantitative explanatory research design to examine the effects of liquidity and leverage on financial distress, with profitability as a moderating variable, using numerical data from corporate financial statements for 2020–2024. The population comprises companies in the Industrial Goods sub-sector within the Industrials sector listed on the Indonesia Stock Exchange (IDX). Purposive sampling was used to select companies that remained listed throughout the observation period and published financial statements or annual reports containing complete data for measuring all research variables. The sampling process yielded 142 initial observations, of which 138 were retained for the final analysis after excluding four observations with negative Altman Z-scores. This sampling technique ensured the availability of relevant data for hypothesis testing, although the findings may have limited generalizability beyond the selected sub-sector.

This study uses secondary data collected through documentation from corporate financial statements and annual reports published on the official IDX website. Four variables were examined: liquidity as the first independent variable, leverage as the second independent variable, financial distress as the dependent variable, and profitability as the moderating variable. Liquidity was measured using the CR, calculated by dividing current assets by current liabilities. Leverage was measured using the DAR, calculated by dividing total liabilities by total assets. Profitability was measured using ROA, calculated as net income divided by total assets. Financial distress was measured using the Altman Z-score, which assesses a company's financial condition based on a composite of financial ratios. A higher Z-score generally indicates a stronger financial position and a lower likelihood of bankruptcy, subject to the appropriate Altman model and its classification thresholds.

Data analysis was conducted using SPSS. The analysis began with descriptive statistics to summarize the characteristics and distributions of the research variables. Classical assumption tests were subsequently performed, including the one-sample Kolmogorov–Smirnov test for residual normality, tolerance and Variance Inflation Factor (VIF) values for multicollinearity, the Durbin–Watson test for autocorrelation, and a residual scatterplot for heteroscedasticity. Multiple linear regression was then used to examine the direct effects of liquidity and leverage on financial distress. Moderated Regression Analysis (MRA) was used to test whether profitability moderated these relationships by adding the interaction terms CR × ROA and DAR × ROA to the regression model. The statistical significance of the regression coefficients was evaluated using t-tests at a 5% significance level ($p < 0.05$). A statistically significant interaction coefficient was interpreted as evidence of a moderating effect, whereas a nonsignificant coefficient indicated insufficient statistical evidence of moderation. The analysis also considered the direction and magnitude of the estimated coefficients to evaluate the research hypotheses.

4. Results

The normality test was conducted using the one-sample Kolmogorov–Smirnov test to determine whether the regression residuals were normally distributed. The test was performed on 138 observations by examining the unstandardized residuals. The assessment considered the residual mean, standard deviation, and significance value to evaluate the normality assumption. A significance value greater than 0.05 indicates that the residuals do not significantly deviate from a normal distribution. The results of the normality test are presented in Table 1, which provides the statistical parameters and significance value used to assess whether the data met the normality assumption before proceeding with further regression analysis.

Table 1. Normality Test Results

Test Parameter	Unstandardized Residual
N	138
Mean	0.0000000
Std. Deviation	0.27963114
Absolute	0.087
Positive	0.083
Negative	-0.087
Kolmogorov-Smirnov Z	1.021
Asymp. Sig. (2-tailed)	0.248

The one-sample Kolmogorov-Smirnov test is used to determine whether a variable follows a normal distribution. If the Asymp. Sig. (2-tailed) value is less than 0.05, the data is not normally distributed; conversely, if the value is greater than 0.05, the data is normally distributed. This study initially comprised 152 data points; however, 14 data points were excluded: 10 due to extreme values and 4 due to negative financial distress values, which rendered them unsuitable for processing. Based on the normality test results using the one-sample Kolmogorov-Smirnov test shown in Table 1, the Asymp. Sig. (2-tailed) value is 0.248, which is greater than 0.05. This indicates the data are normally distributed and suitable for further analysis.

Table 2. Multicollinearity Test Results

Variable	Tolerance	VIF
Current Ratio	0.661	1.513
Debt-to-Asset Ratio	0.636	1.573
Return on Assets		0.943

The multicollinearity test was performed to assess potential correlations among the independent variables using tolerance and VIF values. Multicollinearity is generally considered absent when tolerance exceeds 0.10, and VIF remains below 10. As shown in Table 2, the current ratio had a tolerance of 0.661 and a VIF of 1.513, while the debt-to-asset ratio had a tolerance of 0.636 and a VIF of 1.573. Return on assets also demonstrated a tolerance value of 0.943 and a VIF of 1.060. All three variables satisfy the established criteria, indicating that multicollinearity is not a concern in the regression model. Therefore, the independent variables can be included in subsequent regression analyses without substantial concerns regarding excessive intercorrelations.

Table 3. Autocorrelation Test Results

Test	Value
R	0.738
R-Square	0.545
Adjusted R-Square	0.535
Std. Error of the Estimate	0.28274
Durbin-Watson	1.896

The autocorrelation test examines the relationship between the disturbance term in a given period and the error term in the preceding period. This study uses the Durbin-Watson test to determine the DW value. A DW value below -2 indicates positive autocorrelation; a DW value between -2 and 2 indicates no autocorrelation; and a DW value above 2 indicates negative autocorrelation. Based on the autocorrelation test results in Table 3, the Durbin-Watson value is 1.896, which falls within the range of -2 to 2. This result indicates no autocorrelation in this study, meaning it is free from autocorrelation.

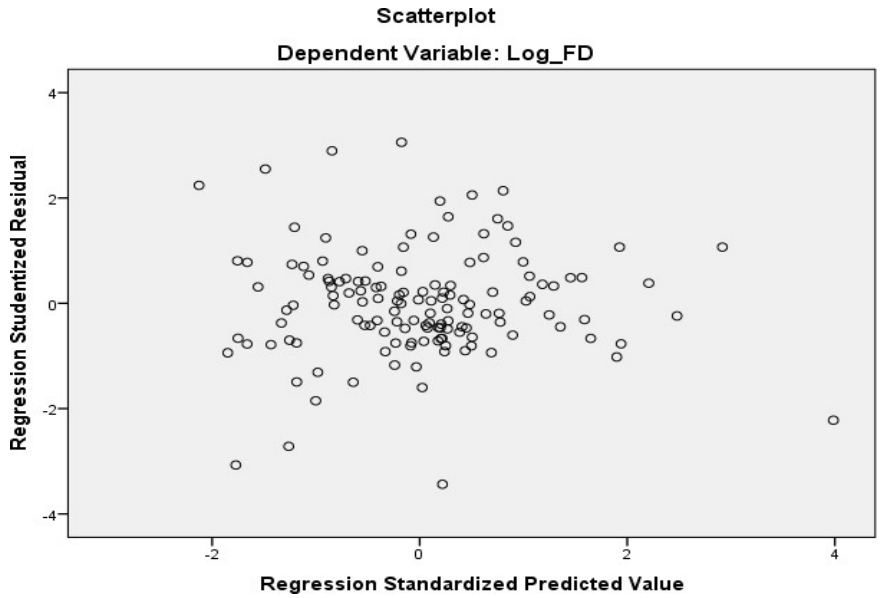


Figure 2. Heteroscedasticity Test Results

The heteroscedasticity test is conducted to determine whether the variance of the residuals varies across observations without forming a specific pattern. If the data points exhibit a regular, discernible pattern, this indicates heteroscedasticity. Conversely, if the points do not form a regular pattern, heteroscedasticity is absent. Based on the heteroscedasticity test results shown in Figure 2, the data points do not form a specific, regular pattern; instead, they are randomly distributed. Consequently, it can be concluded that heteroscedasticity is not present in this study.

Table 4. Hypothesis Testing Results

Variable	Unstd. Coeff. B	Std. Error	Std. Coeff Beta	T-Statistics	Sig.
Constant	0.424	0.099		4.297	<0.001
Current Ratio	0.072	0.016	0.428	4.466	<0.001
Debt-to-Asset Ratio	-0.540	0.149	-0.280	-3.618	<0.001

Table 4 presents the t-test results examining the effects of liquidity and leverage on financial distress. Liquidity, measured by the current ratio, has a positive regression coefficient of 0.072, a standardized beta of 0.428, and a t-statistic of 4.466, with $p < 0.001$. These results indicate that liquidity has a positive and statistically significant effect on financial distress, supporting H1. Meanwhile, leverage, measured by the debt-to-asset ratio, has a negative regression coefficient of −0.540, a standardized beta coefficient of −0.280, and a t-statistic of −3.618, with a significance value of $p < 0.001$. This finding indicates that leverage has a negative and statistically significant effect on financial distress, supporting H2. The results suggest that liquidity and leverage are significantly associated with financial distress, although their relationships differ in direction. Specifically, the positive liquidity coefficient indicates that higher current ratios are associated with higher financial distress scores, whereas the negative leverage coefficient indicates an inverse relationship between leverage and financial distress scores.

Table 5. Moderated Regression Analysis (MRA) Test Result

Variable	Unstd. Coeff. B	Std. Error	Std. Coeff Beta	T-Statistics	Sig.
Constant	0.424	0.099		4.297	<0.001
Current Ratio	0.072	0.016	0.428	4.466	<0.001
Debt-to-Asset Ratio	-0.540	0.149	-0.280	-3.618	<0.001
Return on Assets	2.850	0.813	0.678	3.507	0.001
Current Ratio_Return on Assets	-0.269	0.104	-0.317	-2.592	0.011
Debt-to-Asset Ratio_Return on Assets	-0.985	1.618	-0.089	-0.609	0.544

Table 5 presents the results of the moderated regression analysis examining the direct and moderating effects of ROA on financial distress. ROA exhibits a positive and statistically significant association with financial distress (B = 2.850, p = 0.001), indicating that higher profitability is associated with higher financial distress scores, depending on the distress measurement scale. Regarding moderation, the interaction between current ratio and ROA is negative and significant (B = −0.269, p = 0.011), suggesting that ROA significantly weakens the relationship between liquidity and financial distress. Conversely, the interaction between debt-to-asset ratio and ROA is statistically insignificant (B = −0.985, p = 0.544), indicating that profitability does not significantly moderate the relationship between leverage and financial distress. These findings suggest that profitability plays a moderating role in the liquidity–distress relationship but does not alter the leverage–distress association. Therefore, ROA demonstrates a significant moderating effect on liquidity, while its moderating effect on leverage remains unsupported.

5. Discussion

Liquidity has a significant positive effect on financial distress. High liquidity may reflect excessive inventory or uncollected receivables, which can restrict cash availability, reduce profitability, and hinder the settlement of short-term obligations (Handayani & Yusran, 2024). However, this finding by Altman (1968) should be interpreted using the Altman Z-score, where a higher score indicates better financial health and a lower risk of bankruptcy. Therefore, the positive relationship between liquidity and the Z-score suggests that greater liquidity improves a company's ability to meet short-term obligations and reduces the risk of financial distress (Damayanti & Kurnia, 2024). Conversely, inadequate liquidity may lower the Z-score, indicating greater financial vulnerability because insufficient current assets cannot support operations and meet immediate liabilities (Afriyani & Nurhayati, 2023). Nevertheless, excessively high liquidity may indicate inefficient working capital management, particularly when funds are tied up in idle cash, surplus inventory, or overdue receivables. These assets may fail to generate optimal returns, potentially weakening operational efficiency and profitability. Thus, liquidity's implications for financial distress depend on both the availability and the effective utilization of current assets.

Leverage has a significant negative effect on financial distress. This finding by Syuhada et al. (2020) and Alfiah et al. (2024) indicates that higher leverage is associated with a lower Altman Z-score only if the dependent variable is coded in that direction; therefore, the result should be interpreted according to the study's financial distress measurement. Under the Altman Z-score framework, a higher score indicates better financial health and a lower bankruptcy risk. Trade-off theory provides a theoretical explanation, suggesting that debt financing can generate benefits, including tax shields and increased firm value, when managed at an optimal

level. However, excessive debt increases interest expenses and repayment burdens, potentially weakening financial stability. The descriptive statistics show a mean DAR of 0.42241, indicating that approximately 42.24% of total assets are financed by debt. This proportion suggests relatively moderate reliance on debt financing, although its implications depend on profitability, cash flow, and debt management efficiency. Therefore, leverage should be evaluated in terms of both its magnitude and the company's capacity to meet its financial obligations.

Profitability significantly weakens liquidity's effect on financial distress. Because profitability has both a significant direct effect and a significant interaction effect, it functions as a quasi-moderator. Profitability can serve as a financial buffer by generating internal funds to support operations and meet short-term obligations. Thus, even when high liquidity reflects inefficient working capital management, strong profitability can mitigate its adverse implications for financial stability. This finding is consistent with Asmiraldha et al. (2024), who explain that profit generation reflects effective asset management and strengthens a company's financial position. Similarly, Cyntara and Apriwandi (2025) identify profitability as a protective factor against financial distress. Maulidya et al. (2023) also highlight that profitability can increase current assets, including cash and receivables, which support settling short-term liabilities. Hayati and Sholichah (2022) further argue that combining adequate liquidity with high profitability strengthens a company's capacity to meet current obligations and reduces default risk. Conversely, insufficient profits may constrain debt repayment and increase financial pressure. Therefore, profitability can strengthen the benefits of liquidity management and reduce the likelihood of financial distress.

Profitability does not moderate the effect of leverage on financial distress. Based on these results, profitability is not a moderating variable in this study because the interaction term was insignificant. This implies that profitability, whether high or low, neither strengthens nor weakens the relationship between leverage and financial distress (Mahasin et al., 2025). High profitability does not guarantee an increase in a company's leverage level, as substantial profits may actually drive up the company's requirements (Pebrianti et al., 2023). Corporate earnings are not used solely to settle obligations in full; they are also allocated to operational costs and other expenses. Low profitability does not guarantee a debt reduction, nor does debt necessarily decrease as profitability rises (Rejeki et al., 2023). Profitability magnitude does not determine leverage's impact on financial distress, as high profitability does not guarantee a company can settle its obligations or manage them effectively.

6. Conclusion

This study examines the effects of liquidity and leverage on financial distress, with profitability as a moderating variable, among Industrial Goods sub-sector companies listed on the Indonesia Stock Exchange during 2020–2024. The findings indicate that liquidity is positively associated with the Altman Z-score, suggesting that higher liquidity is associated with better financial health. In contrast, leverage negatively affects the Z-score, indicating that greater debt exposure is associated with a higher risk of financial distress. Profitability moderates the relationship between liquidity and financial distress but does not significantly moderate the relationship between leverage and financial distress. These findings highlight the importance of managing working capital efficiently and maintaining sustainable profitability. Financial managers should monitor liquidity quality and debt exposure rather than relying solely on financial ratios when evaluating bankruptcy risk.

Despite these findings, the study has several limitations. Its focus on the Industrial Goods sub-sector and the 2020–2024 period limits the results' generalizability to other industries and economic conditions. Furthermore, the analysis relies on CR, DAR, ROA, and the Altman Z-score, which may not capture

all financial and nonfinancial factors associated with financial distress. Purposive sampling and conventional regression analysis may also limit the extent to which the findings can be generalized and account for differences across companies over time. Future research should extend the observation period, include companies from multiple sectors, and examine additional predictors, such as cash flow, firm size, sales growth, and corporate governance. Researchers could also apply panel-data regression or alternative financial distress prediction models to account for company-specific characteristics and assess the robustness of the findings. Such extensions would provide a more comprehensive understanding of the factors influencing financial distress and the conditions under which profitability strengthens corporate financial resilience.

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