

The Effect of Liquidity, Profitability, and Firm Size on Financial Distress (In Retail Sector Companies Listed on the Indonesia Stock Exchange during the 2021-2024 Period)

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ABSTRAK

Penelitian ini bertujuan menganalisis pengaruh likuiditas, profitabilitas, dan ukuran perusahaan terhadap financial distress pada perusahaan sektor ritel yang terdaftar di Bursa Efek Indonesia periode 2021-2024. Financial distress diproksikan dengan Altman Z-Score, likuiditas diukur menggunakan Current Ratio, profitabilitas dengan Return on Asset, serta ukuran perusahaan dengan Ln total aset. Penelitian ini menggunakan pendekatan kuantitatif dengan metode regresi linier berganda terhadap 36 observasi yang diperoleh melalui purposive sampling. Hasil penelitian menunjukkan bahwa secara parsial likuiditas berpengaruh positif dan signifikan terhadap financial distress, sedangkan profitabilitas dan ukuran perusahaan tidak berpengaruh signifikan. Secara simultan, ketiga variabel berpengaruh signifikan, dengan likuiditas sebagai variabel paling dominan. Temuan ini mengindikasikan bahwa pengelolaan likuiditas merupakan faktor kunci dalam menjaga stabilitas keuangan perusahaan ritel.

Kata Kunci: Financial Distress, Likuiditas, Profitabilitas, Sektor Ritel, Ukuran Perusahaan

ABSTRACT

This study aims to analyze the effect of liquidity, profitability, and firm size on financial distress in retail sector companies listed on the Indonesia Stock Exchange during the 2021-2024 period. Financial distress is proxied by the Altman Z-Score, liquidity is measured using the Current Ratio, profitability with Return on Assets, and firm size with the natural logarithm of total assets. This research employs a quantitative approach with multiple linear regression analysis on 36 observations obtained through purposive sampling. The results show that partially, liquidity has a positive and significant effect on financial distress, while profitability and firm size have no significant effect. Simultaneously, the three variables have a significant effect on financial distress, with liquidity being the most dominant variable. These findings indicate that liquidity management is a key factor in maintaining the financial stability of retail companies.

Keywords: Financial Distress, Firm Size, Liquidity, Profitability, Retail Sector

INTRODUCTION

The current global economic situation creates intense competition among companies, including in the retail sector (Masruroh & Purnamawati, 2025). This condition encourages company management to continuously improve performance in order to achieve business goals and maintain company value (Sitorus et al., 2022). Along with technological advancements, the growth of the business world, particularly in the retail sector, is developing rapidly, forcing business actors to think more broadly and adapt to increasingly dynamic business environment changes (Aziz, 2022). The retail sector in Indonesia is experiencing rapid transformation, with many companies adapting to changes in consumer behavior and technological innovation, but not all companies can adapt well, thereby increasing the risk of financial difficulties (Rudiana & Arsjah, 2025).

In such intense competition, companies have the potential to experience financial pressure that can lead to financial distress (Fifriani & Santosa, 2019). Financial distress is a condition of declining financial health characterized by the company's inability to meet short-term obligations and pressure on the company's operational sustainability (Altman & Hotchkiss, 2005). This condition also describes the stage of financial decline before bankruptcy or liquidation occurs, characterized by the inability to meet short-term obligations or experiencing continuous losses (Adityaningrum et al., 2024). Financial difficulties that occur continuously can lead to bankruptcy, so it is crucial for both companies and investors to assess the company's financial condition to avoid financial failure (Klieštík et al., 2020).

Data shows that Indonesia's retail sector faces significant challenges post-COVID-19 pandemic (Angela et al., 2024). Based on data from the Indonesia Stock Exchange, out of 32 retail companies listed, more than 70% experienced a decline in net profit in 2022-2023, and several companies even recorded significant losses. This finding aligns with previous research demonstrating that the average net profit growth of retail sub-sector companies on the IDX fell by approximately 80% during recent periods (Githayoni et al., 2022), that the average NPM and ROA of listed retail trading companies were negative at -4.97% and -38.18% respectively during 2020-2023 (Purwanto et al., 2025), and that severe industry-wide slowdown due to e-commerce competition and post-pandemic adjustment has structurally eroded retail profitability (Dewi et al., 2025; Prianggi et al., 2020).

Various previous studies have examined the relationship between liquidity, profitability, firm size, and financial distress. Research by Baros et al. (2022) and khoirunisa (2025) found that liquidity has a positive and significant effect on financial distress. Meanwhile, research by Shinta & Riharjo (2025) and Hafihz & Prameswari (2025) revealed that profitability has a negative significant effect on financial distress. Research by Wibawa & Cipta (2025) shows that firm size has a negative effect on financial distress. However, the findings among studies still

show inconsistencies (Primawan, 2023). These inconsistencies indicate that the relationship between variables is not fully conclusive and still requires further testing. In addition, most previous studies have not included analysis of dominant variables to identify the most influential factor in predicting the occurrence of financial distress (Minanari et al., 2024).

Based on this research gap, this study has several elements of novelty. First, the research was conducted in a relatively recent period, namely 2021-2024, so it is expected to provide a more up-to-date picture of the financial condition of the retail sector, especially regarding the post-pandemic recovery impact and digital transformation occurring in the retail sector. Second, this study focuses on retail sector companies listed on the Indonesia Stock Exchange, a sector with its own characteristics and dynamics that is still relatively limitedly studied in research related to financial distress. Third, this study uses analysis of dominant variables to determine which variable has the strongest influence on financial distress, which is still rarely used in similar studies.

On the other hand, the results of this study are expected to provide valuable insights for industry players, investors, and policymakers in understanding the factors that affect the sustainability of companies in the retail sector. By understanding the relationship between liquidity, profitability, firm size, and financial distress, it is hoped that companies can take more effective steps in managing financial risk and maintaining business stability and sustainability.

RESEARCH METHOD

Location and Time of Research

This research was conducted on retail sector companies listed on the Indonesia Stock Exchange (IDX) using secondary data in the form of annual financial reports and other supporting information obtained from the official IDX website (www.idx.co.id) and each company's official website. The research implementation began in November 2025, covering the stages of data collection, processing, analysis, to report preparation, with the research data period of 2021-2024.

Research Approach

This study uses a quantitative approach to objectively test the effect of liquidity, profitability, and firm size variables on *financial distress* through numerical data processing. This approach aims to determine the causal relationship between independent variables and dependent variables based on testing the hypotheses that have been formulated.

Population and Sample

Based on Indonesia Stock Exchange data, the number of retail sector companies listed during the research period was 32 companies, all of which were used as the research population. After screening based on predetermined criteria, 9 companies

met the criteria, so the number of research samples used was 9 companies with a total of 36 observations (9 companies $\times$ 4 years).

The sample criteria used in this study are:

- Retail sector companies listed on the Indonesia Stock Exchange (IDX) in the 2021-2024 period.
- Retail sector companies that experienced a liquidity ratio below 1 during the 2021-2024 period.
- Retail sector companies that published complete annual financial reports on the Indonesia Stock Exchange (IDX) during the 2021-2024 period.

Table 1. Sampling Criteria

No	Criteria	Number
1	Retail sector companies listed on the Indonesia Stock Exchange (IDX) in 2021-2024	32
2	Retail sector companies that did not publish complete financial reports during 2021-2024	(16)
3	Retail sector companies that did not experience a liquidity ratio below 1 during 2021-2024	(7)
	Total Research Sample	9

Source: Data Processed, 2026

Table 2. Research Sample

No	Code	Company Name
1	LPPF	PT Matahari Department Store Tbk
2	DAYA	PT Duta Intidaya Tbk
3	HERO	PT DFI Retail Nusantara Tbk
4	MIDI	PT Midi Utama Indonesia Tbk
5	MPPA	PT Matahari Putra Prima Tbk
6	RANC	PT Supra Boga Lestari Tbk
7	GLOB	PT Globe Kita Terang Tbk
8	TELE	PT Omni Inovasi Indonesia Tbk
9	TRIO	PT Trikonsel Oke Tbk

Source: www.idx.com (2025)

Table 3. Operational Definition and Variable Measurement

Variable	Measurement	Scale
Liquidity (X1)	Current Ratio = Current Assets / Current Liabilities	Ratio
Profitability (X2)	Return On Asset = (Net Income / Total Assets) $\times$ 100%	Ratio
Firm Size (X3)	Ln (Total Assets)	Ratio
Financial Distress (Y)	$Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$	Ratio

Source: Data Processed, 2026

Data Analysis Technique

Data analysis in this study uses multiple linear regression analysis with the following equation:

$$FD = \alpha + \beta_1 LIK + \beta_2 PROF + \beta_3 SIZE + e$$

Where:

FD = Financial Distress (Altman Z-Score)

LIK = Liquidity (Current Ratio)

PROF = Profitability (Return on Asset)

SIZE = Firm Size (Ln Total Assets)

A = Constant

$\beta_1, \beta_2, \beta_3$ = Regression coefficients

e = Error term

Before conducting regression analysis, classical assumption tests were performed including normality test (Kolmogorov-Smirnov with Monte Carlo approach), multicollinearity test (VIF and Tolerance), heteroscedasticity test (Scatterplot), and autocorrelation test (Durbin-Watson). Hypothesis testing was conducted through partial test (t-test), simultaneous test (F-test), and coefficient of determination test (R^2).

RESULTS AND DISCUSSION

Descriptive Statistics Results

Based on the descriptive statistical test on 36 observations, the liquidity variable measured by Current Ratio (CR) has an average of 0.4675 with a minimum value of 0.01 and maximum of 0.95. This shows that in general retail sector companies in this study have low liquidity levels, meaning current assets are not sufficient to cover short-term liabilities. The profitability variable measured by Return on Assets (ROA) has an average of -0.5564, indicating that in general companies in the study have not been able to generate optimal profits from the assets owned. The firm size variable has an average of 26.8233, indicating that companies in the sample fall into the large company category (based on grouping Ln total assets > 28 as large companies). The financial distress variable has an average of -8.6061, indicating that in general retail sector companies are in an unhealthy financial condition ($Z < 1.1$).

Classical Assumption Tests

Normality Test

Normality testing of residuals was conducted using the Kolmogorov-Smirnov test with the Monte Carlo approach on 36 observations. The Kolmogorov-Smirnov statistic value of 0.216 with Asymp. Sig. (2-tailed) of 0.000 indicates that asymptotically the residuals are not normally distributed. However, based on the Monte Carlo Significance results, a significance value of 0.060 was obtained with a 99% confidence interval between 0.054 and 0.066. The Monte Carlo method

was chosen because it can provide more reliable significance estimates when data does not fully meet asymptotic distribution assumptions, especially with limited sample sizes (Ghozali, 2021). Since the Monte Carlo significance value (0.060) is greater than 0.05, it can be concluded that the residuals are normally distributed, so the normality assumption in the regression model has been met.

Multicollinearity Test

The multicollinearity test results show that all independent variables have Tolerance values > 0.10 and VIF < 10 , so it can be concluded that there are no symptoms of multicollinearity in the regression model and the model is suitable for further analysis.

Heteroscedasticity Test

Based on the scatterplot graph, residual points are randomly scattered around the zero axis and do not form a specific pattern, indicating that the residual variance is constant. The absence of a systematic pattern between residuals and predicted values indicates that the regression model does not experience heteroscedasticity. Thus, it can be concluded that the homoscedasticity assumption has been met and the regression model is suitable for further analysis.

Table 4. Descriptive Statistics Test Results

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Current Ratio	36	0.01	0.95	0.4675	0.35335
Return On Asset	36	-9.93	22.30	-0.5564	4.89799
Ln (Total Asset)	36	20.90	31.70	26.8233	2.94000
Altman Z-Score	36	-124.68	198.79	-8.6061	62.35163
Valid N (listwise)	36				

Source: Data Processed, 2026

Table 5. Normality Test Results

	Unstandardized Residual
N	36
Normal Parameters	Mean: 0.0000000 Std. Deviation: 54.35087210
Most Extreme Differences	Absolute: 0.216 Positive: 0.216 Negative: -0.156
Test Statistic	0.216
Asymp. Sig. (2-tailed)	0.000
Monte Carlo Sig. (2-tailed)	0.060
99% Confidence Interval	Lower Bound: 0.054 Upper Bound: 0.066

Source: Data Processed, 2026

Table 6. Multicollinearity Test Results

Variable	Tolerance	VIF
Current Ratio	0.745	1.343
Return On Asset	0.861	1.161
Ln (Total Asset)	0.855	1.169

Source: Data Processed, 2026

Table 7. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.490	0.240	0.169	56.84150	2.302

Source: Data Processed, 2026

Table 8. Multiple Linear Regression Analysis Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	57.242	90.784		0.631	0.533
Current Ratio	99.073	31.507	0.561	3.145	0.004
Return On Asset	-3.364	2.114	-0.264	-1.591	0.121
Ln (Total Asset)	-4.251	3.534	-0.200	-1.203	0.238

Source: Data Processed, 2026

Autocorrelation Test

The autocorrelation test was conducted using the Durbin-Watson (DW) test. Based on the test results, the Durbin-Watson value obtained is 2.302, which is around the number 2 and still within the tolerance limit (between 1.5 and 2.5). This indicates that the regression model does not experience autocorrelation, either positive or negative, thus meeting the classical assumption and is suitable for further analysis.

Multiple Linear Regression Analysis

Based on the multiple linear regression analysis results, the following regression equation was obtained:

$$Z - Score = 57.242 + 99.073(CR) - 3.364(ROA) - 4.251(LnTotalAsset) + e$$

The constant value of 57.242 indicates that when all independent variables are zero, the Altman Z-Score value is 57.242. The Current Ratio coefficient is positive (99.073), while the Return on Asset coefficient (-3.364) and firm size (-4.251) are negative. The test results show that Current Ratio (CR) has a positive and significant effect on financial distress measured by Altman Z-Score, while Return on Asset (ROA) and firm size (Ln Total Asset) have no significant effect.

Coefficient of Determination (R^2)

The R Square value of 0.240 indicates that Current Ratio, Return on Asset (ROA), and firm size are able to explain 24% of the Altman Z-Score variation, while the remaining 76% is influenced by other factors outside the model. The Adjusted R Square value of 0.169 and R value of 0.490 indicate that the model's predictive ability is limited but has a relatively strong relationship. The low coefficient of determination indicates that Altman Z-Score is influenced by various other financial ratios.

Partial Test (t-test)

Based on the t-test results, the Current Ratio variable has a t-count value of 3.145 and significance of 0.004 (< 0.05), so it can be concluded that Current Ratio has a positive and significant effect on Altman Z-Score. Meanwhile, the Return on Asset variable has a t-count value of -1.591 and significance of 0.121 (> 0.05), and the firm size variable has a t-count value of -1.203 and significance of 0.238 (> 0.05), so both variables have no significant effect on Altman Z-Score.

Simultaneous Test (F-test)

Based on the F-test results in the ANOVA table, the F-count value is 3.372 with a significance level of 0.030 (< 0.05), so H_0 is rejected and H_a is accepted. This indicates that Current Ratio, Return on Asset, and firm size (Ln Total Asset) simultaneously have a significant effect on Altman Z-Score.

Table 9. Coefficient of Determination Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.490	0.240	0.169	56.84150

Source: Data Processed, 2026

Table 10. Partial Test Results (t-test)

Variable	t-count	t-table	Sig.	Conclusion
Current Ratio	3.145	2.042	0.004	Significant
Return On Asset	-1.591	2.042	0.121	Not Significant
Ln (Total Asset)	-1.203	2.042	0.238	Not Significant

Source: Data Processed, 2026

Table 11. Simultaneous Test Results (F-test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32679.800	3	10893.267	3.372	0.030
Residual	103390.605	32	3230.956		
Total	136070.405	35			

Source: Data Processed, 2026

Table 12. Dominant Variable Test Results

Variable	Standardized Coefficients Beta	Description
Current Ratio	0.561	Most Dominant Variable
Return On Asset	-0.264	
Ln (Total Asset)	-0.200	

Source: Data Processed, 2026

Dominant Variable Test

Based on the dominant test results, the Current Ratio variable has the highest Standardized Coefficient Beta value of 0.561, followed by Return on Asset (ROA) at -0.264 and firm size (Ln Total Asset) at -0.200. The highest Beta value indicates that Current Ratio is the most dominant variable in influencing the Altman Z-Score. This dominance is reinforced by the significance value of 0.004 (< 0.05), making Current Ratio the only variable that is statistically significant.

DISCUSSION

The Effect of Liquidity on Financial Distress

Based on the t-test results, the liquidity variable proxied by Current Ratio has a significance value of 0.004 (< 0.05), so it can be concluded that liquidity has a positive and significant effect on financial distress measured using the Altman Z-Score. The higher the liquidity level of retail sector companies, the higher the Z-Score value indicating better financial condition and lower risk of financial distress. This aligns with the theory stating that retail companies are highly dependent on smooth cash flow to manage inventory and meet short-term obligations.

This finding supports research by khoirunisa (2025) and Baros et al. (2022) which states that liquidity has a positive and significant effect on financial distress. High liquidity allows retail companies to maintain operations, meet obligations to suppliers and employees, and face changes in market demand without experiencing significant financial pressure. This is very important considering the characteristics of the retail sector which has fast inventory turnover and large working capital needs.

The Effect of Profitability on Financial Distress

Profitability proxied by Return on Asset (ROA) has a significance value of 0.121 (> 0.05), so partially it does not have a significant effect on financial distress in retail sector companies for the 2021-2024 period. This result indicates that financial distress is not only determined by the company's ability to generate profits, but also influenced by the ability to manage cash flow and financial obligations.

The insignificant effect of profitability indicates that retail company profits during the research period tend to be unstable and not yet strong enough to reduce the risk of financial distress. In the Altman Z-Score model, profitability (measured

through $X3 = \text{EBIT} / \text{Total Assets}$ and $X2 = \text{Retained Earnings} / \text{Total Assets}$) is only one component of the assessment, so increasing profits alone is not enough to improve financial condition if not supported by healthy liquidity and financial structure. This condition is thought to be influenced by the post-pandemic economic recovery process, where the retail sector still faces pressure from operational costs and changes in consumer behavior. Retail profit margins are still affected by high operational costs, intense price competition, and shifting consumer shopping patterns to e-commerce platforms (Raras, 2024).

This finding is not in line with research by Shinta & Riharjo (2025) and Hafihz & Prameswari (2025) which states that profitability has a significant effect on financial distress. The difference in results indicates that in the post-pandemic economic recovery period, retail companies still face challenges in maintaining stable profitability, so the profits generated do not fully reflect healthy financial conditions.

The Effect of Firm Size on Financial Distress

Firm size proxied by $\text{Ln}(\text{Total Asset})$ has a significance value of 0.238 (> 0.05), so partially it does not have a significant effect on financial distress in retail sector companies for the 2021-2024 period. This result indicates that the size of total assets does not guarantee that companies are safe from the risk of financial difficulties.

The insignificant effect of firm size on financial distress can be explained by the characteristics of the retail industry which has high fixed costs and intense competition. Financial distress measured using the Altman Z-Score places more emphasis on the effectiveness of asset management and financial structure rather than the size of total assets. This shows that efficiency and quality of financial management play a greater role in determining financial distress compared to firm size itself. Even large companies can experience financial distress if not managed properly, as happened to several large retail companies that experienced financial difficulties despite having large total assets.

This finding shows that firm size is not always a strong signal in detecting financial distress, especially in the highly dynamic retail sector. The size of the company cannot be used as the sole indicator in assessing the risk of financial distress without considering other internal financial conditions. This aligns with the findings of Fikri et al. (2023) which states that firm size is not sufficient to explain the risk of financial distress without considering other factors such as liquidity and profitability.

Simultaneous Effect of Liquidity, Profitability, and Firm Size on Financial Distress

Based on the F-test results, a significance value of 0.030 (< 0.05) was obtained, so it can be concluded that liquidity, profitability, and firm size simultaneously have a significant effect on financial distress in retail sector companies for the 2021-

2024 period. This result indicates that financial distress is not determined by one factor alone, but is a combination of the company's ability to meet short-term obligations, generate profits, and manage owned assets. Although only liquidity has a significant effect partially, the presence of profitability and firm size still contributes to forming the financial distress prediction model. This finding shows that an approach that considers various financial indicators simultaneously is very important in analyzing bankruptcy risk.

Dominant Effect of Liquidity on Financial Distress

Based on the dominant test results through the Standardized Coefficients Beta values, the liquidity variable (Current Ratio) has the highest Beta value of 0.561 compared to profitability (-0.264) and firm size (-0.200). This shows that liquidity is the most dominant variable in influencing financial distress in retail sector companies listed on the Indonesia Stock Exchange, so the hypothesis stating that liquidity has a dominant effect on financial distress can be accepted.

The dominance of liquidity is in line with the characteristics of the retail sector which is highly dependent on smooth cash flow and the ability to meet short-term obligations to maintain operational continuity. Retail operational activities require fast inventory turnover and the ability to meet short-term obligations to suppliers, employees, and lenders. If company liquidity is too low, the risk of operational disruption and financial pressure will increase, which could lead to financial distress. This finding confirms that retail companies can survive even with relatively low profitability or asset size, as long as they can manage liquidity well as the main factor of financial stability.

CONCLUSION

Based on the research results, the following conclusions can be drawn: 1) Liquidity proxied by Current Ratio (CR) has a positive and significant effect on financial distress. This indicates that the higher the company's ability to meet its short-term obligations, the better the company's financial health condition and the lower the risk of financial distress. 2) Profitability proxied by Return on Asset (ROA) has no significant effect on financial distress. This indicates that the profits generated by retail companies during the research period are not statistically strong enough to affect financial distress conditions, especially in the post-pandemic economic recovery context. 3) Firm Size proxied by Ln (Total Asset) has no significant effect on financial distress. This result shows that the size of company assets does not guarantee the company is safe from bankruptcy risk if not accompanied by efficient financial management. 4) Simultaneously, liquidity, profitability, and firm size have a significant effect on financial distress. This proves that the combination of these three variables together is able to explain the financial health condition of retail sector companies. 5) Liquidity is the most dominant variable affecting financial distress compared to profitability and firm

size. This finding confirms that the management of current assets and cash flow is the main factor in maintaining business sustainability of retail companies.

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