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The Effect of Liquidity, Solvency, Activity, and Profitability on Financial Distress in Textile Companies Listed on the Indonesia Stock Exchange

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Abstract *–This study aims to examine the effect of liquidity, solvency, activity, and profitability on financial distress. This research employs a causal research design. The population consists of textile companies listed on the Corporations registered on the Indonesia Stock Exchange during 2015 and 2024 were examined, with five entities chosen through purposive criteria. Panel regression techniques were employed to process the dataset. The findings indicate that liquidity, , solvency, and activity do not exhibit a meaningful influence on financial distress, whereas profitability measured through Return on Assets (ROA) indicates a negative correlation suggesting that increased profitability lowers distress probability. This research enriches academic discourse by offering data-driven findings derived from the Indonesian textile sub-sector using a longer observation period (2015–2024), capturing financial dynamics before, before, throughout, and following the COVID-19 outbreak, as well as offering insights for management and investors in assessing financial conditions.*

Keywords*: Liquidity; Solvency; Activity; Profitability; Financial Distress.*

INTRODUCTION

Financial distress describes a condition in which a firm encounters economic hardships that may disrupt the company's operational activities and potentially lead to bankruptcy. This condition arises when an organization fails to fulfill its financial responsibilities, including settling liabilities and funding operational expenses(Dwijayanti, 2010), (Shintia, 2017). In recent years, financial distress has become a concern in various industrial sectors, one of which is the textile industry in Indonesia. The textile industry is one of the sectors that is quite vulnerable to changes in economic conditions,global competition, and fluctuations in market demand (Nurhayati et al., 2022),(Yusuf et al., 2022).

Several textile companies in Indonesia have experienced serious financial problems. One example is PT Sri Rejeki Isman Tbk (Sritex), which experienced bankruptcy due to the firm's failure to settle its liabilities (CNN, 2024). This condition indicates that companies in the textile industry face a relatively high risk of financial distress (Ratu, 2024). Financial distress can be influenced by various internal company factors, one of which reflects the firm's economic performance, which can be evaluated using indicators including liquidity, solvency, activity efficiency, and profitability (Widiastuti & Ikhsan, 2022). These indicators offer a general depiction of the firm's capacity to manage its assets, debts, and generate profits (Arief et al., 2021), (Setiawan & Rafiani, 2021).

The occurrence of financial distress within the textile industry in Indonesia has been further exacerbated by massive external pressures over the past decade. Following during the COVID-19 crisis, international distribution networks faced major interruptions accompanied by a surge in raw material prices and a decline in consumers purchasing power. In addition, the influx of imported products with far more competitive prices has created substantial pressure on the profit margins of local producers, thereby triggering prolonged cash flow deficits (Wijaya & Suhendah, 2023). The inability of companies to adapt to digital transformation and production efficiency has also become an important determinant that accelerates the transition from liquidity difficulties to technical insolvency.

However, previous studies have shown inconsistent results concerning how financial ratios affect financial distress. As an illustration,, (Nuraini & Hirdinis, 2025) find indicate that liquidity and profitability significantly influence financial distress, whereas(Wisnu & Astuti, 2023) report no a statistically meaningful association between these factors and financial distress. Similarly, (Ochtaviani, 2024) finds that solvency has a significant effect, whereas (Azizah & Yunita, 2022) show that solvency does not significantly affect

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These inconsistencies indicate a research gap that needs to be further examined, particularly in the textile sub-sector in Indonesia, which has unique characteristics and is highly vulnerable to economic fluctuations. Therefore, it is important to conduct further research to obtain more consistent empirical evidence regarding the factors influencing financial distress.

Based on the background described above, the research problems in this study are formulated as follows:

1. Does liquidity affect financial distress?
2. Does solvency affect financial distress?
3. Does activity affect financial distress?
4. Does profitability affect financial distress?

Therefore, this research intends to analyze how liquidity, leverage, operational effectiveness, and earnings influence financial difficulties distress among textile firms listed on the Indonesia Stock Exchange during the 2015–2024 period. This study attempts to address these inconsistencies by focusing on the textile sub-sector in Indonesia and using a longer observation period, which is expected to provide more comprehensive and consistent empirical evidence.

LITERATURE REVIEW

Signaling Theory

Signaling Theory was initially proposed by Michael Spence in 1973. Spence explained that in market conditions, parties who possess more information, such as company management, will provide signals to external parties such as investors, creditors, or the market in order to reduce uncertainty in economic decision making (Spence, 1973)

In the context of this study, financial ratios act as signals that reflect the firm's fiscal position, where liquidity, operational, and profit indicators serve as measures provide important information regarding the the firm's capacity to fulfill responsibilities, optimize asset usage, and produce earnings (Dumitrescu et al., 2025), (Kurnia et al., 2024).. A strong liquidity position reflects the firm's capacity to meet its financial commitments short-term liabilities, high activity reflects efficient asset utilization, and high profitability shows strong financial performance. These conditions send positive signals to external parties and indicate a lower risk of financial distress.

Conversely, weak financial ratios may send negative signals, reflecting potential financial problems and a higher likelihood of financial distress.

Agency Theory

Agency Theory was first introduced by Michael C. Jensen and William H. Meckling. This theory emerged from the need to explain the contractual relationship between company owners (principals) and management (agents), particularly in situations where the roles of owners and managers are divided in modern organizational structures. According to their perspective, agents do not always act in accordance with the interests of principals due to the existence of information asymmetry and differences in objectives (Michael, 1976).

In the context of this study, Agency Theory is used to explain how managerial decisions, particularly related to financing, may influence the company's financial condition. Managers may take actions that prioritize short-term performance or personal interests, such as increasing the use of debt to maintain the company's image. However, excessive use excessive reliance on borrowing may heighten risk exposure and trigger financial difficulties.

Therefore, the solvency ratio, which reflects the level of company debt, becomes an important indicator in evaluating the probability that a firm will encounter financial hardship, where an increased level of debt indicates a greater risk of agency conflict and financial instability, which may increase the probability of financial distress (Dainelli et al., 2024), (Kalbuana et al., 2023)

Financial Distress and Financial Ratios

Financial distress refers to a state where a firm faces serious economic problems that could result in insolvency. Several predictive approaches have been introduced, such as the Altman Z-Score model, Springate, Ohlson O-Score, and Zmijewski X-Score. Each model has its own characteristics and limitations. The Altman Z-Score is widely used; however, it is considered less suitable for non-manufacturing sectors and emerging markets. The Ohlson model incorporates probabilistic approaches

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but requires more complex data. Meanwhile, the Zmijewski model is considered more efficient as it uses fewer variables while maintaining a high level of predictive accuracy (Zmijewski, 1984).

The Zmijewski model combines three key financial ratios, namely profitability (ROA), leverage, and liquidity, which are fundamental indicators in assessing a company's financial condition. Several studies have shown that this model provides reliable predictions of financial distress, particularly in manufacturing sectors such as the textile industry (Usmany & Loupatty, 2023),(Marjohan, 2024) Therefore, this study adopts the Zmijewski model to measure financial distress.

Liquidity The occurrence of financial distress is strongly associated with firm performance, observable through ratio analysis. These ratios provide important signals regarding an organization's competence in utilizing its assets effectively, meet its obligations, and generate profits. Liquidity reflects the firm's capacity to cover immediate liabilities, in which stronger liquidity typically reduces distress probability, although excessively high liquidity may also signal inefficient asset utilization.

In addition, solvency reflects how far a firm depends on borrowed funds within its financing composition, where increased leverage increases financial risk due to the burden of interest payments, consequently elevating the risk of financial instability, although in certain conditions debt can improve company performance if managed effectively. Furthermore, activity indicators evaluate the effectiveness of asset usage in operations to generate revenue. Efficient asset utilization reflects strong operational performance, which may reduce the probability of financial distress, while low efficiency may indicate declining performance.

Profitability also plays a crucial role because it represents the firm's capability to produce profits. Higher earnings capacity acts as protection against financial strain and lowers the risk of distress, making it one of the most consistent predictors in financial distress studies.

This research uses Current Ratio (CR) to represent liquidity, Debt to Equity Ratio (DER) for solvency, Total Asset Turnover (TATO) for activity, and Return on Assets (ROA) for profitability. The measurement formulas are presented as follows:

Zmijwski

$$X = -4{,}3 - 4{,}5X1 + 5{,}7X2 - 0{,}004X3$$

Keterangan :

$$X_1 = \frac{net\ income}{total\ asset}$$

$$X_2 = \frac{total\ liabilities}{total\ asset}$$

$$X_3 = \frac{current\ asset}{current\ liabilities}$$

Current Ratio

$$CR = \frac{aktiva\ lancar}{liabilitas\ lancar}$$

Description:
Current Assets : Total Assets
Current Liabilities : Short Term Liabilities

Debtt to Equity Ratio

$$DER = \frac{total\ liabilitas}{total\ equitas}$$

Description:
Total Liabilities : Total Company Debt
Total Equity : Total Equity of the Company

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Total Asset Turnover

$$TATO = \frac{net\ sales}{total\ assets}$$

Description:

Net Sales : Net sales of the company
Total Assets : Total assets of the company

Return on Asset

$$ROA = \frac{laba\ bersih}{total\ aset}\ x\ 100\%$$

Description:
Net Income : Profit after all expenses and taxes have been deducted
Total Assets : Total assets owned by the company

Hypotheses Development and Research Framework

Liquidity describes a the firm's capacity to fulfill its immediate obligations. From a signaling perspective, companies with a high level of liquidity provide a signal that they are the firm's ability to meet short-term liabilities. From a signaling perspective possibility of experiencing financial distress. Research by (Wijaya & Suhendah, 2023), (Ciptawan & Angeline, 2023) states that the Current Ratio (CR) has a negative effect on financial distress.

H1 : Liquidity has a negative effect on financial distress.

Solvency refers referring to how much the firm depends on borrowed capital. In agency theory, the use of high levels of debt can be a managerial decision that creates conflicts of interest because it increases the risk of default. this situation conveys an unfavorable indication to investors and indicates the potential for financial distress. According to (Widiastuti & Ikhsan, 2022), (Zahra et al., 2024) DER demonstrates a direct positive relationship with financial instability Considering the discussion above on the influence of the Debt to Equity Ratio (DER) on financial distress, the following hypothesis is proposed:

H2: Solvency has a positive effect on financial distress.

Activity reflects the impact of short-term funding strength, debt sustainability, asset utilization, and profit generation on financial crisis conditions among textile companies listed on IDX. This serves as a signal of operational efficiency that has the potential to lower the probability of financial difficulty. According to (Afifah et al., 2025), (Diana & Yudiantoro, 2023). Total Asset Turnover (TATO) has a negative impact on financial instability. Referring to the discussion above concerning the effect of Total Asset Turnover (TATO) regarding financial instability, the subsequent hypothesis is formulated:

H3: Activity has a negative effect on financial distress.

Profitability serves as a measure to evaluate the firm's ability to generate profit. Based on signaling theory, high profitability reflects good financial performance and provides a signal that the company is financially healthy, thus decreasing the probability of experiencing financial distress. According to (Erikawati et al., 2024), (Sitorus et al., 2022). Return on Assets (ROA) has a negative effect on financial distress. Based on the explanation above concerning the influence of ROA on financial distress, the hypothesis formulated is as follows:

H4: Profitability has a negative effect on financial distress.

Based on the literature review, the researcher developed the conceptual framework, which is presented in Figure 1.

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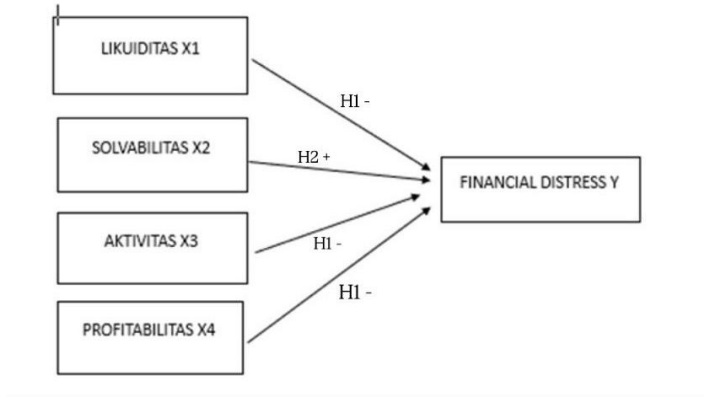

Figure 1. Research Framework

METHOD

This research applies a quantitative methodology with a causal framework , which aims to analyze the relationship between cash adequacy, capital structure strength, asset utilization, and earnings capability toward financial instability among textile sector issuers in the Indonesian capital market the 2015–2024 period. The study population includes every textile entity subsector publicly listed corporations during the study duration amounting to fifteen companies, with sample determination carried out using criterion-based selection techniques resulting in 5 companies that meet the criteria as the research sample.

The type of the information utilized in this research consists of secondary sources derived from yearly financial reports issued by firms via the official Indonesia Stock Exchange platform as well as the respective companies' financial reports. The data used includes information associated with the study indicators, including CR as liquidity measure, DER representing leverage, TATO reflecting efficiency, and ROA indicating profitability, and financial instability, where the outcome variable analyzed is financial instability, whereas explanatory factors include liquidity represented by CR, leverage indicated by DER, and operational activity reflected through TATO, and profitability proxied by Return on Assets (ROA). This research applies panel regression techniques supported by EViews 13, involving descriptive examination, model selection procedures, and hypothesis verification stages (R^2).

RESULTS AND DISCUSSION

Model Feasibility Test

Table 1. F-Test Results

F-statistic	50.33846
Prob(F-statistic)	0.000000

Source: EViews 13 Output Results (2025)

Referring to the table, the probability score of 0.000000 is substantially lower than the 0.05 threshold. This result indicates that the F-test shows that the regression model used in this study meets the feasibility requirements and can be applied for further analysis.

Table 2. Coefficient of Determination (R^2) Results

R-squared	0.907597
Adjusted R-squared	0.889567

Source: EViews 13 Output Results (2025)

referring to the presented table, it is observable that the adjusted value indicates R-Squared value is 0.889567 or 88%. This indicates that CR, DER, TATO, and ROA collectively account for variations in

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Financial Distress, by 88%. Meanwhile, the other 12% is attributed to additional variables beyond the scope of the study that were not included in the model study.

Hypothesis Testing

Table 3. t-Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.196861	1.746588	3.547981	0.0010
X1CR	-1.319237	2.804739	-0.470360	0.6406
X2DER	-0.008874	0.030119	-0.294610	0.7698
X3TATO	-0.671474	2.177853	-0.308319	0.7594
X4ROA	-32.22866	6.517787	-4.944724	0.0000

Source: EViews 13 Output Results (2025)

1. Current Ratio (CR) shows a probability above 0.05, indicating no meaningful effect on financial difficulties among textile firms. Therefore, H1 is rejected, meaning that the company's level of liquidity has not been able to partially explain the condition of financial distress.

2. Debt to Equity Ratio (DER) shows a p-value exceeding 0.05, implying that leverage measured by DER does not exert a meaningful effect on financial instability. Therefore, H2 is rejected, meaning that the company's solvency level is not proven to influence the possibility of financial distress in the textile subsector.

3. Total Asset Turnover (TATO) shows a probability value greater exceeding the 0.05 benchmark, suggesting that TATO does not exert meaningful influence on financial distress. Therefore, H3 is rejected, meaning that the company's activity in utilizing its assets is not strong enough to explain the condition of financial distress.

4. Return on Assets (ROA) has a negative coefficient value and a probability value lower compared to the 0.05 significance threshold, suggesting that ROA has a exhibits an inverse and statistically meaningful relationship with financial difficulty, where increased profitability reduces risk. Therefore, H4 is accepted.

CLASSICAL ASSUMPTION TEST

Heteroscedasticity Test

Table 4. Heteroscedasticity Test Results

F-statistic	1.332842	Prob. F(4,43)	0.2732
Obs*R-squared	5.294817	Prob. Chi-Square(4)	0.2584
Scaled explained SS	5.006891	Prob. Chi-Square(4)	0.2866

The Obs*R-squared probability measure is 0.2584, which is greater than the significance level of 0.05. In addition, the Prob. F value of 0.2732 and Prob. Chi-Square value of 0.2866 also exceed 0.05. These results indicate that the regression model does not suffer from heteroskedasticity and meets the classical assumption

Autocorrelation Test

Table 5. Autocorrelation Test Results

F-statistic	2.000619	Prob. F(2,39)	0.1489
Obs*R-squared	4.280271	Prob. Chi-Square(2)	0.1176

The probability values are exceeding the accepted level, indicating that the regression model does not suffer from serial correlation and has met the classical assumption requirements.

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Multikolinearitas Test

	X1CR	X2DER	X3TATO	X4ROA
X1CR	1.000000	0.070376	-0.153029	0.444325
X2DER	0.070376	1.000000	-0.092911	0.038481
X3TATO	-0.153029	-0.092911	1.000000	0.070032
X4ROA	0.444325	0.038481	0.070032	1.000000

Based on the correlation matrix, every relationship value among explanatory variables remains under the specified limit 0.90. The highest correlation value is 0.444325, indicating indicating the absence of interdependence among predictors, thus the model meets the classical assumption.
Discussion of Hypothesis Results

DISCUSSION

1. The Effect of Liquidity on Financial Distress

Results indicate that liquidity measured by CR does not significantly influence financial instability liquidity is not able to explain the probability of a firm facing financial disruption, where firms possessing strong liquidity levels generally to experience fewer financial difficulties because they can easily pay their short-term obligations. According to Signaling Theory, if a company has healthy liquidity, it should provide a positive signal to external parties that the company is financially stable. However, findings suggest that liquidity alone cannot be considered the determining factor for main indicator in determining financial distress conditions in the textile subsector.

This condition may occur because the majority of the sample companies have relatively low and homogeneous liquidity levels, and the textile industry is characterized as capital-intensive and highly dependent on inventory turnover and fluctuations in market demand. As a result, companies may still face financial difficulties even though they have relatively large current assets. Large assets do not necessarily guarantee stable cash flow. Therefore, liquidity in this study is not sufficient to explain financial difficulty, and these results are consistent with previous studies by (Arief et al., 2021), (Afifah et al., 2025) which state that liquidity does not have a significant effect on financial distress.

2. The Effect of Solvency on Financial Distress

The findings indicate that solvency, assessed through DER, does not exhibit a significant influence on financial difficulty, where DER illustrates the proportion of borrowing relative to equity. According to Agency Theory, the use of debt can serve as a mechanism to control management so that they work more efficiently. However, the outcomes of this research demonstrate that the solvency level of textile subsector companies is not able to partially explain financial distress.

This condition indicates that companies in the textile subsector sample have varying levels of debt usage, and during several periods the debt levels were still relatively manageable. Therefore, changes in the DER has not generated substantial financial effects pressure. In addition, financial distress in textile subsector firms are primarily affected by their capacity to produce earnings rather than by the level of debt. Thus, solvency in this study is not the dominant factor affecting the probability of financial difficulty, aligning with earlier research conducted by(Zahra et al., 2024), (Yolanda & Sudiyanto, 2024) which state that DER does not significantly affect financial distress.

3. The Effect of Activity on Financial Distress

The findings indicate that activity, represented by TATO, shows no meaningful impact on financial instability. This suggests that asset utilization efficiency alone is insufficient to explain financial difficulties in the textile subsector. From an analytical standpoint, fluctuations in TATO across firms and over time weaken its explanatory power. Some firms exhibit high asset turnover yet still experience financial distress, indicating that operational efficiency alone does not guarantee financial stability.

Additionally, external factors such as fluctuations in market demand, industry dynamics, and increasing costs of energy and raw materials may significantly influence firm performance. Therefore, activity ratios should not be used as the sole predictor of financial distress, especially in volatile industries. This result supports previous studies(Erikawati et al., 2024), (Kristanti & Dhaniswara, 2023), which state that efficiency indicators have no substantial impact on financial instability and are not always a primary indicator for predicting financial difficulties.

4. The Effect of Profitability on Financial Distress

Findings show that profitability, represented by ROA, exhibits a negative and significant effect on financial distress. This implies that increased earnings lower financial risk, aligning with signaling perspective that strong performance conveys positive insights for investors and stakeholders about a company's financial condition. Firms that are capable of generating consistent profits tend to have stronger financial stability.

From an analytical perspective, profitability emerges as the primary factor in accounting for financial instability relative to other predictors profit is more critical than liquidity or capital structure. However, this result should be interpreted with caution, as the significance of profitability may vary depending on the estimation method used. Therefore, financial distress analysis should consider multiple methodological approaches to ensure robustness. These findings are consistent with (Erikawati et al., 2024), (Sitorus et al., 2022) which also found that ROA has a negative and meaningful influence on financial instability, indicating profit generation is crucial for firm stability particularly in the textile subsector.

CONCLUSION

Drawing from the findings, it can be inferred that liquidity, leverage, and operational efficiency do not significantly influence financial distress to manage short-term assets, debt levels, and asset utilization does not necessarily determine the conversely, profitability shows an inverse and meaningful relationship, lowering the probability of financial instability.

This study contributes to academic discourse through presenting empirical findings derived from the Indonesian textile sub-sector using a longer observation period 2015–2024, which captures financial dynamics before, during, as well as in the post-COVID-19 period. The findings highlight that profitability is a more consistent predictor of financial distress compared to other financial ratios. These results imply that companies should focus on improving profitability to maintain financial stability, while investors may consider profitability as a key indicator in evaluating the potential for financial instability.

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