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The Effect of Current Ratio, Return on Assets, Debt-to-Equity Ratio, Inflation, and Exchange Rates on Financial Distress in Companies in the Textile and Apparel Subsector Listed on the Indonesian Stock Exchange From 2020 to 2024

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Abstract

The textile and apparel industry plays an important role in Indonesia's manufacturing sector but has faced increasing financial pressure due to rising production costs, import competition, weakening global demand, and exchange rate fluctuations. This study aims to examine the effects of the current ratio (CR), return on assets (ROA), debt-to-equity ratio (DER), inflation, and exchange rates on financial distress in textile and apparel subsector companies listed on the Indonesia Stock Exchange during 2020–2024. A quantitative approach was employed using secondary data obtained from audited financial statements, the Indonesia Stock Exchange, Statistics Indonesia, and Bank Indonesia. Purposive sampling resulted in 11 companies and 55 panel observations. Financial distress was measured using the Altman Z-Score, while panel data regression was performed using EViews 12. The results show that CR has a positive and significant effect on the Z-Score, whereas the exchange rate has a negative and significant effect. ROA, DER, and inflation have no significant partial effects. Simultaneously, all independent variables significantly affect financial distress, with an adjusted R-squared of 77.60%. These findings indicate that liquidity and exchange rate movements are particularly important determinants of financial distress. Therefore, companies should strengthen liquidity management and implement appropriate exchange rate risk mitigation strategies to maintain financial stability.

INTRODUCTION

The manufacturing sector, as the backbone of the real economy, is facing unprecedented pressures due to surging production input costs and post-pandemic market instability. One of the important pillars of the national economy is the textile and garment sub-sector, which plays a major role in supporting non-oil and gas exports, creating jobs, and driving the growth of the manufacturing sector. However, pressure from the flood of imports of cheap textile products and textile products (TPT), weakening global export demand, and dependence on imported raw materials caused some companies in this sector to experience a decline in financial performance that has the potential to lead to financial distress.

Referring to Gross Domestic Product (GDP) data on the basis of prices applied to the textile and clothing industry business field during 2020–2024, the performance of this sector gradually increased from IDR 186,626.80 billion (2020) to IDR 218,208.00 billion (2024), although it had decreased in 2021 due to the COVID-19 pandemic. Although the trend of GDP is increasing, this condition does not fully reflect the overall stability of the sector, because in

the same period the textile industry was also faced with a wave of layoffs due to production cost pressures, global competition, and declining efficiency in several companies. The Indonesian Textile Association (API) has consistently reported production contractions, factory utilization below 60%, and mass layoffs due to the flood of textile imports which reached their peak in 2023–2024; The Central Statistics Agency recorded that textile export volumes fell by 2.43% in 2023, the lowest in nine years.

This phenomenon is clearly reflected in the financial data for 2024, when the average return on assets (ROA) of textile and garment sub-sector issuers declined sharply to -17.36%, with PT Pan Brothers Tbk (PBRX) even recording an ROA of -177.01%. The average current ratio (CR) of this sector also plummeted to negative -193.10% in 2024, while the capital structure of several issuers experienced worrying imbalances, for example the debt-to-equity ratio (DER) of PT Buana Artha Anugerah Tbk (STAR) which jumped to 57,769.40% at the end of the observation period. These conditions, when associated with macroeconomic indicators such as inflation and exchange rate fluctuations, create a systemic risk of bankruptcy for national textile industry players. In the midst of this pressure, there is also an interesting phenomenon: issuers such as PT Trisula International Tbk (TRIS) are actually able to survive and show a positive trend with an increase in ROA from 3% (2020) to 7% (2024), indicating an inconsistency in the influence of internal and external factors between companies in the same sub-sector.

Internal fundamental factors of the company are believed to be the main determinants of financial distress conditions. This study uses three financial ratios that represent the dimensions of liquidity, profitability, and solvency, namely current ratio (CR), return on assets (ROA), and debt to equity ratio (DER), which were chosen because they are theoretically and empirically closely related to bankruptcy risk in capital-intensive manufacturing industries such as textiles. On the other hand, the financial health of the company is not in a vacuum, but is greatly influenced by the macroeconomic external environment which is systemic and cannot be controlled by management (uncontrollable factors). The two macroeconomic indicators that are considered most relevant for the textile industry are inflation, which suppresses the structure of production costs and consumer purchasing power (cost-push inflation), and the exchange rate of the rupiah against the United States dollar, which is crucial because the national textile industry is still heavily dependent on imported raw materials and partly has debt in foreign exchange (currency mismatch).

Previous studies have shown inconsistent results regarding the influence of CR, ROA, and DER on financial distress in various sectors. Damayanti and Rianto (2023) and Ginting and Kusumastuti (2023) proved that CR had a significant effect, while Pinastiti, Nugraha, and Prabawani (2023) found that ROA had no significant effect during the pandemic. Aini and Feranti (2024) found that DER had an effect on financial distress, while Ningsi, Akila, and Mursalin (2024) found the opposite result. Riani, Lasmanah, and Rizka (2024) also emphasized the importance of including macroeconomic variables in the financial distress prediction model. This difference in research results, coupled with the lack of studies that specifically combine CR, ROA, DER, inflation, and exchange rates in the context of the post-pandemic textile and garment industry, is the basis for the urgency of this study.

The analysis method used in this study is the Altman Z-Score model, which was chosen because it is able to combine various financial ratios into one comprehensive single score index

and is proven to have high accuracy in predicting the bankruptcy of manufacturing companies. Based on this description, this study aims to analyze the influence of current ratio (CR), return on assets (ROA), debt to equity ratio (DER), inflation, and exchange rate, both partially and simultaneously, on financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange for the 2020–2024 period. This research is expected to enrich the literature on financial distress through the integration of the latest macroeconomic variables post-pandemic, as well as an early warning system for management, investors, creditors, and regulators in responding to the risk of financial difficulties in the textile sector.

Agency theory (Jensen & Meckling, 1976) describes the contractual relationship between the principal (owner/investor) and the agent (management), where differences in interest and information asymmetry between the two can incur agency costs. The weak function of principal supervision of agent decisions in managing the structure of short-term liabilities, assets, and capital structure can accelerate the decline in financial performance towards financial distress. Meanwhile, signal theory (Ross, 1977; Spence, 1973) explained that management conveys information about the company's condition to external parties through financial indicators; An improving financial ratio is a positive signal, while a consistent decline in financial ratios is a negative signal indicating an increased risk of financial difficulties.

Financial distress is defined by Platt and Platt (2002) as a stage of decline in financial condition that occurs before the company experiences bankruptcy or liquidation, while Brahmana (2007) interprets it as the company's inability to meet its financial obligations that have matured. Altman (2000) classifies financial distress into several levels of severity, ranging from economic failure, business failure, technical insolvency, insolvency in bankruptcy, to legal bankruptcy. The Altman Z-Score Original model (1968) was used in this study because it was specifically designed for manufacturing companies that had gone public, with the formula $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$, where X_1 = Working Capital/Total Assets; X_2 = Retained Earnings/Total Assets; X_3 = Earnings Before Interest and Tax/Total Assets; X_4 = Market Capitalization/Total Liabilities; and X_5 = Sales/Total Assets. The Z value is used to classify the company into three zones: the safe zone if $Z > 2.99$; the grey zone when $1.81 \leq Z \leq 2.99$; and distress zone (distress zone) if $Z < 1.81$.

Current ratio (CR) is a liquidity ratio that measures a company's ability to meet short-term obligations with its current assets (Hanafi & Halim, 2016), calculated by the formula CR = (Total Current Assets/Total Current Debt) × 100%. Theoretically, a high CR indicates healthy liquidity so as to minimize the risk of default that triggers financial difficulties (Kasmir, 2019; Hery, 2018). Damayanti and Rianto (2023) and Ginting and Kusumastuti (2023) prove that CR has a significant effect on financial distress. Based on this description, the first hypothesis is formulated as follows.

H1: Current ratio (CR) affects financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange in 2020–2024.

Return on assets (ROA) is a profitability ratio that describes a company's ability to generate profits from its assets, with the formula ROA = (Net Profit After Tax/Total Assets) × 100% (Kasmir, 2019). ROA was chosen as a profitability proxy because it was able to measure the company's overall operational efficiency without being influenced by its funding structure; A consistent decrease in ROA is an early warning of financial difficulties. Caronge, Raznilawati, and Mursida (2022) proved the positive and significant influence of ROA on

financial distress, although Pinastiti, Nugraha, and Prabawani (2023) showed the opposite result during the pandemic. Based on this description, the second hypothesis is formulated as follows.

H2: Return on assets (ROA) affects financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange in 2020–2024.

Debt to equity ratio (DER) is a solvency ratio that describes the company's capital structure and the level of its dependence on external funding, with the formula DER = (Total Debt/Total Equity) × 100% (Hery, 2018). As a capital-intensive industry that requires investment in high-tech machinery, the textile industry generally has a relatively large debt level; excessive debt burden can turn into a serious threat when an economic crisis occurs (Fahmi, 2017). Aini and Feranti (2024) found that DER had an effect on financial distress, while Ningsi, Akila, and Mursalin (2024) found that DER had no significant effect, resulting in a research gap that needed to be retested in the context of the textile industry. Based on this description, the third hypothesis is formulated as follows.

H3: Debt to equity ratio (DER) affects financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange in 2020–2024.

Inflation is a process of price increases that take place in general and continuously in an economy (Sukirno, 2019), which is inversely proportional to people's purchasing power (Mankiw, 2018). Cost-push inflation, triggered by rising prices of energy, raw materials, and wages, is the most dangerous type of inflation for the textile manufacturing sector because it directly increases the Cost of Goods Sold (COGS), while the decline in purchasing power suppresses the sales volume of textile products that are not primary needs (Nopirin, 2016; Boediono, 2014). The combination of these two pressures has the potential to erode net profit margins and accelerate financial distress conditions (Kasmir, 2019). Aini and Feranti (2024) revealed that inflation is an external factor that has the potential to affect financial distress. Based on this description, the fourth hypothesis is formulated as follows.

H4: Inflation affects financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange in 2020–2024.

The exchange rate is the price of one currency if expressed in the currency of another country (Fabozzi & Peterson, 2014), which is fluctuating according to the managed floating exchange rate system adopted by Indonesia (Ekananda, 2019). Indonesia's textile industry has high currency exposure because it relies on imports of raw materials such as cotton fibers and dyes, and some have debt in foreign exchange. The depreciation of the rupiah causes a surge in the cost of imported raw materials, an increase in the foreign exchange debt burden, and forex losses that can significantly erode net profit (Brigham & Houston, 2019; Sukirno, 2018). Ginting and Kusumastuti (2023) included macroeconomic indicators such as exchange rates in the analysis of financial distress predictions and found a significant influence. Based on this description, the fifth hypothesis is formulated as follows.

H5: Exchange rates affect financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange in 2020–2024.

A company's financial health is the result of the interaction between internal fundamental performance (liquidity, profitability, and capital structure) and external environmental pressures (inflation and exchange rates). Companies that do not have a strong financial foundation will more easily slip into the distress zone when hit by macroeconomic volatility.

Febriyanti and Kurniawan (2022) and Nur'ain and Supatmin (2024) show that together the financial ratio variable has a significant influence on the company's bankruptcy score (Z-Score). Based on this description, the sixth hypothesis is formulated as follows.

H6: Current ratio (CR), return on assets (ROA), debt to equity ratio (DER), inflation, and exchange rate simultaneously affect financial distress in textile and garment sub-sector companies listed on the Indonesia Stock Exchange in 2020–2024.

Previous Research

Some previous studies relevant to this study are presented in Table 1 below.

Table 1. Summary of Previous Research

Researcher (Year)	Key Variables	Objects/Sectors	Key Results
Febriyanti & Kurniawan (2022)	LENGTH, DAR, CR	Banking	ROA is influential; DAR and CR have no effect
Caronge, Raznilawati, & Mursida (2022)	LONG, ROE	Food & Beverage	ROA and ROE have a significant positive effect
Damayanti & Rianto (2023)	CR, Debt Ratio, ROA	Logistics & Deliveries	CR is influential; Debt Ratio and ROA have no effect
Ginting & Kusumastuti (2023)	CR, ROA, DAR, TATO, Sales Growth	Manufacturing (general)	CR, ROA, and DAR have a significant effect
Pinastiti, Nugraha, & Prabawani (2023)	LENGTH, CR, DAR	Hospitality (during the pandemic)	CR and DAR are influential; ROA has no effect
Aini & Feranti (2024)	DER, LONG, CR	Property & Real Estate	DER has a negative effect; ROA and CR have a positive effect
Ningsi, Akila, & Mursalin (2024)	CR, ROA, DER	Transportation	CR is influential; ROA and DER have no effect
Astuti & Dewi (2024)	ROA, CR, DAR, Company Size	Agriculture	CR, DAR, and Company Size are influential; ROA no
Nur'ain & Supatmin (2024)	LENGTH, CR, DAR	PT Smartfren Telecom Tbk	Only ROA has a partially significant effect
Riani, Lasmanah, & Rizka (2024)	Financial Ratio, Macroeconomics (moderation)	Customer Non-Cyclicals	Financial ratios are influential; macroeconomics is significant as moderation

Source: Processed from various previous studies (2022–2024)

Compared to these studies, this study has novelty because it specifically focuses on the textile and garment sub-sectors facing post-pandemic structural pressures, while combining three core financial ratios (CR, ROA, DER) with two macroeconomic indicators (inflation and exchange rate) as direct independent variables not as moderation variables in one comprehensive panel data regression model.

METHOD

Research Design and Approach

This study used a quantitative approach with descriptive and verifiable properties. The descriptive stage was used to map the profile, trends, and fluctuations of CR, ROA, DER, inflation, exchange rate, and Altman Z-Score data during 2020–2024, while the verifiable (associative) stage was used to test the hypothesis regarding the influence of the five independent variables on financial distress through panel data regression. The research flow follows a deductive thinking process, which departs from grand theory (financial theory and signal theory), is downgraded to a middle range theory about capital structure and macroeconomic impact, then narrowed down to specific hypotheses that are empirically tested using historical company data.

Population, Samples, and Sampling Techniques

The population of this study includes all 19 textile and garment sub-sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The sample was determined using a purposive sampling technique with the following criteria: (1) companies listed consecutively on the IDX during 2020–2024; (2) consistently publish audited annual financial statements; and (3) not delisting and presenting financial statements in Rupiah. Based on these criteria, 11 sample companies were obtained, namely INDR, PBRX, ERTX, ESTI, RICY, STAR, TRIS, BELL, POLU, HDTX, and MYTX, so that 55 panel data observations were obtained (11 companies × 5 years).

Types, Sources, and Data Collection Techniques

The data used is quantitative with a panel data structure (pooled data), a combination of time series data (2020–2024) and cross section data (11 companies). Data is classified as secondary data collected through documentation techniques from two categories of official sources. The company's micro-variable data (CR, ROA, DER, and Altman Z-Score components) are sourced from audited annual financial statements downloaded through the official website of the Indonesia Stock Exchange (www.idx.co.id) and the official website of each company. Macroeconomic variable data is obtained from the official publication of the Central Statistics Agency (www.bps.go.id) for the annual inflation rate, as well as Bank Indonesia's economic and financial statistics (www.bi.go.id) for data on the central exchange rate of the Rupiah against the United States Dollar at the end of the year.

Variable Operational Definition

Table 2. Operationalization of Research Variables

Variable	Formula/Measurement	Scale
Current Ratio – CR (X_1)	CR = (Total Current Assets / Total Current Debt) × 100%	Ratio

Variable	Formula/Measurement	Scale
Return on Assets – ROA (X_2)	ROA = (Net Profit After Tax / Total Assets) × 100%	Ratio
Debt to Equity Ratio – DER (X_3)	DER = (Total Debt / Total Equity) × 100%	Ratio
Inflation (X_4)	Annual percentage inflation rate (CPM)	Percentage
Exchange Rate / Exchange Rate (X_5)	BI (IDR/USD) central exchange rate at year-end close	Rupiah
Financial Distress – Z-Score (Y)	$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$ (Altman component)	Ratio (continuous index)

Source: Hanafi & Halim (2016); Kasmir (2019); Powers (2018); Sukirno (2019); Fabozzi & Peterson (2014); Altman (1968)

Data Analysis Techniques

The data was analyzed using panel data regression with the help of EViews Version 12 software. The regression equations used are:

$$\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \varepsilon}$$

with Y = financial distress (Z-Score); α = constant; β1–β5 = regression coefficient; X1–X5 are CR, ROA, DER, inflation, and exchange rates; and ε = error term.

The selection of the panel data estimation model was carried out in stages through the Chow test (common effect model/CEM vs fixed effect model/FEM), the Hausman test (FEM vs random effect model/REM), and the Lagrange Multiplier/LM test (REM vs CEM), with decision criteria based on probability values at a significance level of 5% (Savitri et al., 2021). Before hypothesis testing, classical assumption tests were carried out in the form of multicollinearity tests (through an independent intervariable correlation matrix, with a threshold of 0.80–0.90) and heteroscedasticity tests (through residual distribution patterns) to ensure that the regression model produces unbiased estimates (Ghozali, 2021; Gujarati & Porter, 2009). Hypothesis testing was carried out through a partial test (t-test) at a significance level of 5% with a t-table of 2.005746, a simultaneous test (F test), and a determination coefficient test (Adjusted R-squared) to measure the clear power of the model against variations in financial distress.

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive analysis was carried out on 55 panel data observations from 11 textile and garment sub-sector companies during 2020–2024. The results of data processing showed very high heterogeneity between companies across all research variables, as summarized in Table 3.

Table 3. Descriptive Statistical Summary of Research Variables (2020–2024)

Variable	Minimum Score	Maximum Value	General Characteristics
Current Ratio (CR)	0.02 (HDTX, 2024)	577.69 (STAR, 2024)	The majority of companies are in the range of 0.3–2.5; small amounts of high/low extremes
Return on Assets (ROA)	–1.77 (PBRX, 2024)	0.07 (TRIS, 2024)	Dominant is negative or close to zero in 2023–2024
Debt to Equity Ratio (DER)	–18.08 (RICY, 2024)	49.02 (RICY, 2023)	Highly volatile; Some companies record negative equity
Inflation	1,56% (2021)	4,21% (2022)	The annual average ranges from 1.56%–4.21%, tends to be controlled
Exchange Rate (Rate)	IDR 14,311.96 (2021)	IDR 15,255.05 (2023–2024)	Consistent trend of rupiah weakening throughout the period
Financial Distress (Z-Score)	–36.51 (HDTX, 2024)	313.59 (STAR, 2022)	The spread is very wide; most companies are in the grey/distress zone

Source: Author-processed secondary data (2026)

Companies such as TRIS, BELL, and POLU consistently recorded CRs above 1.5 and were in the safe zone or Z-Score-prone zone, while HDTX and MYTX were consistently in the distress zone with a CR below 1.0, negative ROA throughout the observation period, and extreme DER due to negative equity. This pattern is consistent with Agency Theory (Jensen & Meckling, 1976), which indicates the weak supervisory function of asset management and liability structures when performance continues to deteriorate without significant improvement. Meanwhile, the very high CR anomaly in STAR (reaching 577.69 in 2024) does not reflect the actual strength of liquidity, but rather idle assets due to very minimal current debt a condition that according to Brigham and Houston (2019) actually indicates management inefficiency in turning funds productively.

Comparison of Panel Data Regression Models (CEM, FEM, and REM)

Before determining the best estimation model, first compare the results of the panel data regression with three approaches, namely the common effect model (CEM), fixed effect model (FEM), and random effect model (REM), as presented in Table 4.

Table 4. Comparison of CEM, FEM and REM Models

Variable	CEM Coefficients	CEM Prob.	FEM Coefficient	FEM Prob.	REM Coefficient	REM Prob.
C	236,7943	0,0466	136,1331	0,1662	236,7943	0,0150
CR (X1)	0,435106	0,0000 *	-0,131808	0,2222	0,435106	0,0000*

Variable	CEM Coefficients	CEM Prob.	FEM Coefficient	FEM Prob.	REM Coefficient	REM Prob.
LENGTH (X2)	2,232550	0,8948	-0,098169	0,9949	2,232550	0,8701
DER (X3)	-0,012740	0,9543	0,001339	0,9942	-0,012740	0,9435
Inflation (X4)	4,468892	0,3115	6,489717	0,0759	4,468892	0,2123
Exchange Rate (X5)	-0,016605	0,0419 *	-0,008724	0,1976	-0,016605	0,0129*

Source: EViews Output Version 12, data processed by the author (2026)

Table 4 shows that the coefficients and probabilities in CEM and REM are identical for all variables, because the component of individual effect variance (cross-section random) in REM is 0.000000 with an Rho of 0.0000, so that the REM estimate is mathematically reduced to CEM. Different conditions are indicated by FEM, where the CR variable loses significance and changes direction to negative (coefficient -0.131808; probability 0.2222), while the exchange rate also loses significance (probability 0.1976), in contrast to the significant CEM/REM results for both variables. This difference shows that the estimation results are not fully robust for the inclusion of fixed effects between firms, so it is necessary to test the model selection in stages through the Chow test, the Hausman test, and the following Lagrange Multiplier test.

Panel Data Regression Model Selection Test

The Chow test yielded a cross-section probability value of F of 0.0019 (< 0.05), so that the fixed effect model (FEM) was more accurate than the common effect model (CEM). The Hausman test then produced a random cross-section probability value of 1.0000 (> 0.05), so that the random effect model (REM) was more accurate than FEM. Because the results of the Hausman test point to REM, the test is continued with the Lagrange Multiplier (LM) test, which results in a probability value of 0.1701 (> 0.05), so that CEM is more appropriate than REM. A summary of the results of the three stages of testing is presented in Table 5.

Table 5. Summary of Panel Data Regression Model Selection Test

Test Stage	Comparison	Probability Value	Verdict
Chow Test	EMC vs EMF	0,0019	FEM is more accurate (H0 is rejected)
Hausman Test	FEM vs REM	1,0000	REM is more accurate (H0 is accepted)
Lagrange Multiplier Test	REM vs EMC	0,1701	CEM is more accurate (H0 accepted)

Source: EViews Output Version 12, data processed by the author (2026)

Based on the multi-level test, the common effect model (CEM) was determined as the best estimation model in this study. This finding is also supported by the value of the individual effect variance component (cross-section random) in the REM estimate which is 0.000000 with Rho 0.0000, which indicates that there is no significant random variation between firms so that

the REM estimate is mathematically reduced to CEM. All subsequent stages of analysis multiple linear regression, hypothesis test, and determination coefficient test are based on the results of the CEM estimation.

Classical Assumption Test

The multicollinearity test showed that the entire correlation coefficient between independent variables was in the range of -0.193490 to 0.270609, with the highest value in the relationship between inflation and the exchange rate (0.270609). The value is well below the threshold of 0.80–0.90 (Gujarati & Porter, 2009), so the model is declared free of multicollinearity symptoms. The heteroscedasticity test through the residual distribution pattern showed that the residual points spread randomly around the zero line without forming a systematic cone-shaped pattern, so that the model was declared to meet the assumption of homoscedasticity (Ghozali, 2021). With the fulfillment of these two classical assumptions, the CEM regression model is declared feasible for hypothesis testing.

Multiple Linear Regression Analysis

The results of the common effect model estimate produce the following panel data regression equation.

$$\mathbf{Y = 236.794345 + 0.435106X1 + 2.232550X2 – 0.012740X3 + 4.468892X4 – 0.016605X5 + \varepsilon}$$

Table 6. Common Effect Model (CEM) Estimation Results

Variable	Coefficients	t-count	Probability
Constant (C)	236,794345	–	0,0466
Current Ratio (CR)	0,435106	13,677060	0,0000*
Return on Assets (ROA)	2,232550	0,132980	0,8948
Debt to Equity Ratio (DER)	–0,012740	–0,057606	0,9543
Inflation	4,468892	1,022591	0,3115
Exchange Rate (Rate)	–0,016605	–2,089001	0,0419*

Source: Output EViews Version 12, data processed by the author (2026). *Significant at α = 5%

The CR coefficient (0.435106) and marked positive indicates that each increase in CR by one unit increases the Z-Score by 0.435106 units (ceteris paribus), in accordance with liquidity theory (Kasmir, 2019). The coefficients of ROA (2.232550) and DER (–0.012740) have theoretically correct directions profitability versus positive and leverage versus negative with Z-Score but neither are statistically significant. The inflation coefficient (4.468892) is positive, different from the prediction of the cost-push inflation theory which should be negative, but not significant, so the direction of the relationship cannot be interpreted as strong empirical evidence. The exchange rate coefficient (-0.016605) and negative and significant signs indicate that the weakening of the Rupiah against the US Dollar increases the risk of financial distress, in accordance with the theory of currency exposure (Brigham & Houston, 2019).

Hypothesis Testing

a. Partial Test (t-test)

With a t-table of 2.005746 at α = 5%, the t-test results show that H1 and H5 are accepted, while H2, H3, and H4 are rejected, as summarized in Table 7.

Table 7. Summary of Partial Hypothesis Test Results (t-Test)

Hypothesis	Variable	Directions	Significance	Verdict
H1	Current Ratio (CR)	Positive	0.0000 (< 0.05)	Accepted has a significant impact
H2	Return on Assets (ROA)	Positive	0.8948 (> 0.05)	Rejected has no significant effect
H3	Debt to Equity Ratio (DER)	Negatives	0.9543 (> 0.05)	Rejected has no significant effect
H4	Inflation	Positive	0.3115 (> 0.05)	Rejected has no significant effect
H5	Exchange Rate (Rate)	Negatives	0.0419 (< 0.05)	Accepted has a significant impact

Source: EViews Output Version 12, data processed by the author (2026)

b. Simultaneous Test (F Test) and Coefficient of Determination

The simultaneous test yielded an F-calculated value of 38.42119 with a probability of 0.000000 (< 0.05), so that H6 was accepted: CR, ROA, DER, inflation, and exchange rates together had a significant effect on financial distress. The Adjusted R-squared value of 0.776032 (77.60%) shows that the five independent variables are able to explain 77.60% of the variation in financial distress, while the remaining 22.40% is explained by other factors outside the model, such as firm size, sales growth, activity ratio (TATO), and other macroeconomic variables that were not involved in this study (Ginting & Kusumastuti, 2023; Astuti & Dewi, 2024).

The Effect of Current Ratio (CR) on Financial Distress

CR has been proven to have a positive and significant effect on the Z-Score (H1 received), which means that the higher the company's liquidity, the lower the risk of financial distress. These findings are consistent with the liquidity theory of Kasmir (2019) as well as the research results of Damayanti and Rianto (2023), Ginting and Kusumastuti (2023), Pinastiti, Nugraha, and Prabawani (2023), Ningsi, Akila, and Mursalin (2024), and Aini and Feranti (2024). Companies that are consistently in distress zones such as ESTI, RICY, HDTX, and MYTX generally have low liquidity, while companies in safe zones such as ERTX and STAR are supported by much healthier liquidity. However, these findings are in contrast to Febriyanti and Kurniawan (2022) in the banking sector and Nur'ain and Supatmin (2024), which can be explained by different industry characteristics in real sectors with heavy working capital such as textiles, liquidity is a much more determinant of financial security. The implication is that

the management of textile and garment companies needs to prioritize working capital management through the acceleration of the turnover of receivables and inventory.

The Effect of Return on Assets (ROA) on Financial Distress

ROA had no significant effect on financial distress (H2 was rejected), although the coefficient direction was positive and in line with signal theory (Ross, 1977). This insignificance is explained by two factors: first, most of the sample companies recorded a low, even negative and highly volatile ROA due to pandemic pressures, surge in raw material and energy costs, and a flood of cheap product imports, so that profitability lost its differentiating power between companies; Second, in crisis conditions, the company's survival is determined more by the availability of cash and current assets than the amount of accounting profit, so that the role of profitability is reduced by the dominance of liquidity factors. These findings are consistent with Ningsi, Akila, and Mursalin (2024), Pinastiti, Nugraha, and Prabawani (2023), Damayanti and Rianto (2023), and Astuti and Dewi (2024), but in contrast to Caronge, Raznilawati, and Mursida (2022) who examined relatively stable economic periods and sectors with inelastic demand.

The Effect of Debt-to-Equity Ratio (DER) on Financial Distress

DER has no significant effect on financial distress (H3 is rejected), even though the coefficient direction is negative according to Hery's (2018) solvency theory. This insignificance is thought to be due to the extreme heterogeneity of capital structure in the sample companies some companies that experience prolonged distress even have negative equity due to accumulated losses, so that the value of the DER is extreme and less informative to distinguish the level of risk between companies. In addition, during the crisis period, the source of financial pressure for textile companies is more dominant in terms of operations and short-term liquidity than the composition of debt to capital. These findings are in line with Ningsi, Akila, and Mursalin (2024) and Damayanti and Rianto (2023), but in contrast to Aini and Feranti (2024) who found that DER has a significant effect on the property and real estate sub-sectors, indicating that the influence of debt structure on financial distress is sensitive to the characteristics of the industrial sector.

The Effect of Inflation on Financial Distress

Inflation has no significant effect on financial distress (H4 is rejected). These results are not entirely in line with Nopirin's (2016) cost-push inflation theory, which is supposed to be negatively related to financial health. This discrepancy can be explained by several factors: first, Indonesia's inflation rate during the observation period is relatively low to moderate (ranging from 1.56%–4.21%) and is controlled by Bank Indonesia's monetary policy; Second, the impact of inflation on financial performance is indirect and requires a time lag to be transmitted to the financial statements; Third, as a macroeconomic variable, the inflation value is uniform for all companies in the same year, so the variation in the panel data is relatively small compared to the variation in financial ratios between companies. These findings strengthen the argument of Riani, Lasmanah, and Rizka (2024) that macroeconomic variables are likely to be more appropriately positioned as a moderation variable than a variable that has a direct effect on financial distress.

The Effect of Exchange Rate (Rate) on Financial Distress

The exchange rate has a negative and significant effect on the Z-Score (H5 is accepted), which means that any depreciation of the Rupiah against the US Dollar increases the risk of

financial distress. This finding is in accordance with the theory of Brigham and Houston (2019) and Sukirno (2018), that the depreciation of the domestic currency causes a surge in the cost of imported raw materials and an increase in the foreign exchange debt burden for companies with high currency exposure. Indonesia's textile and garment industry is heavily dependent on imported raw materials such as cotton, synthetic fibers, and dyes paid in US dollars, so the weakening of the Rupiah directly erodes profit margins. Interestingly, although some of the sample companies such as INDR and PBRX are export-oriented and could theoretically benefit from the depreciation of the Rupiah, the results of the study show that the negative effects of the increase in import input costs and foreign exchange debt burden are more dominant than the benefits in terms of export receipts. In contrast to insignificant inflation, the exchange rate proved to have a direct effect because its transmission to the cost structure and liabilities of textile companies was immediate through import transactions and foreign exchange debt. The implication is that management needs to implement exchange rate risk mitigation strategies, such as hedging, diversification of domestic raw material suppliers, and natural hedging.

Simultaneous Effects of CR, ROA, DER, Inflation, and Exchange Rate on Financial Distress

Simultaneously, CR, ROA, DER, inflation, and exchange rates were proven to have a significant effect on financial distress (H6 accepted), with a clear power of 77.60% of the model. These findings confirm that although only partially CR and exchange rates are proven to be significant, financial distress risk assessments cannot be carried out partially on a single ratio, but must consider a combination of liquidity conditions, profitability, debt structure, and macroeconomic dynamics as a whole. For investors and creditors, this model can be an early warning system in assessing the financial health of textile and garment companies, while for management, these findings emphasize the importance of strengthening liquidity and managing exchange rate risk as the top priority for preventing financial distress.

CONCLUSION

Based on the results of the panel data regression analysis using the common effect model approach, it can be concluded that the current ratio (CR) has a positive and significant effect on financial distress with a t-calculated value of 13.677060 which is greater than the t-table of 2.005746 and a probability value of 0.0000 < 0.05, so that H1 is accepted. These results show that the higher the company's liquidity level, the less likely the company is to experience financial difficulties because the company's ability to meet its short-term obligations is better. Furthermore, the return on assets (ROA) variable had no significant effect on financial distress, as shown by the t-calculated value of 0.132980 < t-table 2.005746 with a probability value of 0.8948 > 0.05, so H2 was rejected. This shows that the level of profitability of companies has not been able to be the main determining factor in explaining the financial distress conditions of textile and garment companies during the study period. In addition, the debt-to-equity ratio (DER) also did not show a significant influence on financial distress, with a t-calculated value of -0.057606 and a probability of 0.9543 > 0.05, so H3 was rejected. These findings indicate that the level of debt utilization compared to own capital has not directly affected the potential for corporate financial difficulties. The macroeconomic variable in the form of inflation also did not have a significant effect on financial distress, with a t-calculated value of 1.022591 and a probability of 0.3115 > 0.05, so H4 was rejected. These conditions show that changes in the

inflation rate during the study period have not had a significant impact on the level of financial hardship of textile and garment companies. In contrast to inflation, the exchange rate has a negative and significant effect on financial distress, with a t-calculated value of -2.089001 and a probability of 0.0419 < 0.05, so H5 is accepted. These results show that the weakening of the rupiah against the United States dollar can increase the risk of financial distress in textile and garment companies, especially because this industry has a strong link with raw material import activities and international transactions. Simultaneously, the variables current ratio (CR), return on assets (ROA), debt to equity ratio (DER), inflation, and exchange rate (exchange rate) together had a significant effect on financial distress, with an F-calculation value of 38.42119 and a probability of 0.000000 < 0.05, so H6 was accepted. This research model has a strong explanatory ability with an Adjusted R-squared value of 77.60%, which shows that 77.60% of the variation in financial distress can be explained by the five independent variables, while the rest is influenced by other factors outside the research model. Thus, the results of the study show that internal factors in the form of liquidity proxied through the current ratio (CR) and external factors in the form of exchange rates are the most dominant and consistent determinants in influencing financial distress in textile and garment sub-sector companies. Meanwhile, profitability factors (ROA), capital structure (DER), and inflationary conditions have not been proven to have a partial influence on financial distress in the study period. Nevertheless, these five variables still have an important role when analyzed simultaneously in explaining the company's financial health condition.

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