

Analysis of The Effect of Leverage and Operating Cash Flow on Financial Distress in Textile and Garment Companies Listed on The IDX 2020-2024

Triana Karina Witri^{1*}, Amalia Nur Chasanah², Maria Safitri³, Fakhmi Zakaria⁴

¹⁻⁴Universitas Dian Nuswantoro, Indonesia
*211202207719@mhs.dinus.ac.id

Abstract

The textile and garment industry has faced considerable pressure due to the COVID-19 pandemic and global economic instability, increasing the risk of financial distress. This study analyzes the effects of leverage and operating cash flow on financial distress among textile and garment subsector companies listed on the Indonesia Stock Exchange from 2020 to 2024. A quantitative approach was employed using secondary data obtained from annual financial statements. The sample comprised 14 companies and 70 observations selected through purposive sampling. Financial distress was measured using the Modified Altman Z-Score, leverage was proxied by the Debt to Asset Ratio, and operating cash flow was measured as the ratio of operating cash flow to total assets. The data were analyzed using panel data regression in EViews 14. The results indicate that the Random Effect Model was the most appropriate specification and was corrected using White period coefficient covariance to address heteroskedasticity. Leverage had a significant negative effect on the Z-Score (coefficient -9.268072; probability 0.0341), whereas operating cash flow had no significant effect (coefficient -140.5743; probability 0.2499). Simultaneously, the two variables had a significant effect on financial distress, with an R-squared value of 34.93%. These findings demonstrate that debt structure should be a primary consideration when assessing financial distress risk in textile and garment companies.

Keywords: financial distress, leverage, debt to asset ratio, operating cash flow, Modified Altman Z-Score, textile and garment companies

Introduction

The increasingly dynamic global economy has intensified competition among companies across various industrial sectors, including the textile and garment sector. Due to its substantial dependence on global supply chains, this sector is among the most vulnerable to external economic shocks, despite its significant contribution to employment absorption and gross domestic product in developing countries. This vulnerability became more evident during the COVID-19 pandemic, when cross-border restrictions led to order cancellations and large-scale disruptions in manufacturing activities. Previous studies in South Asia confirm that the pandemic had a highly adverse effect on the performance of textile companies, reflecting the structural vulnerability of this industry in facing financial crises (Zahra et al., 2024). A similar phenomenon occurred in the Indonesian textile industry, as indicated by unstable growth trends. This condition suggests the emergence of financial distress risk that requires further empirical investigation.

In line with these conditions, the domestic textile and garment industry also experienced severe financial pressure as a result of the COVID-19 pandemic, driven by declining market demand and global logistics disruptions. According to data released by Statistics Indonesia, the sector experienced sharp growth volatility, increasing by 15.35% in 2019, declining drastically to -8.88% in 2020, and remaining negative at -4.08% in 2021. In addition to weakening manufacturing performance and production capacity, the global health crisis also reduced consumer purchasing power and demand for apparel products. This situation reinforces the importance of early detection of financial distress using valid financial indicators to avoid bankruptcy risk (Agus & Ridha, 2025). In the textile and garment business, declining liquidity amid market pressure can trigger corporate financial difficulties, particularly when profitability and operating cash flow experience structural declines during and after the pandemic (Islamy & Unggul, 2021). This pattern is reflected in increasing debt ratios and decreasing operating cash flow capacity in recent years, confirming the existence of liquidity pressure and a real risk of financial distress in the sector.

Based on these circumstances, financial distress can be understood as a stage in which a company experiences a substantial decline in financial performance, resulting in an inability to meet short-term

obligations. This condition reflects weakened liquidity and a deterioration in the company's overall financial health. Therefore, an in-depth examination of financial instruments and liability reporting is essential, as errors in debt classification may prevent financial failure risk from being accurately identified. If this condition persists over time, a company may face more severe financial problems that may ultimately lead to bankruptcy (Hafidza et al., 2024; Saragih et al., 2024). Corporate leverage is one of the structural factors frequently associated with the emergence of financial distress.

Financial distress conditions in textile and garment subsector companies can be seen in PT Sri Rejeki Isman Tbk or Sritex. Financial report data for 2023 shows that the company's cash ratio only reaches 0.02 times, a figure obtained from the division between cash and cash equivalents of USD 2,468,057 with total short-term liabilities of USD 113,000,000. In other words, Sritex's cash availability is only sufficient to cover around 2% of its short-term liabilities, far below the ideal threshold of 0.20 times which is commonly used as a reference for the health of a company's liquidity. This problem is further exacerbated by the large capital deficiency experienced by the company, whereas of 31 December 2023 Sritex's total liabilities were recorded at USD 1.603 billion while its total assets were only USD 648.98 million, resulting in a capital deficiency difference of USD 954.82 million. This ongoing accumulation of financial pressure ultimately dragged Sritex to the brink of bankruptcy, until the Semarang Commercial Court officially declared the company bankrupt status in October 2024 due to its inability to pay debts to creditors, with total debts estimated at IDR 29.8 trillion (Wulandari et al., 2026). This series of data confirms that the financial distress phenomenon is actually experienced by Sritex, not just a theoretical assumption. Recent studies in the textile and garment sector also confirm that the leverage ratio plays a significant role in company value during the 2019–2024 period, reinforcing the urgency of an in-depth study of the role of leverage in the financial condition of issuers in this sector (Azizah et al., 2026). The level of corporate leverage is one of the structural elements that often correlates with the emergence of financial distress conditions.

In addition to internal elements such as liquidity and liability structure, leverage plays a critical structural role in explaining financial distress. Leverage, which represents capital structure, measures the extent to which a company uses debt financing to support its operations compared with internal capital. A higher proportion of debt indicates greater dependence on external financing, thereby increasing the likelihood of financial distress. In developing countries, uncertainty in the macroeconomic environment may also influence managerial decision-making, including accounting policy choices. Companies experiencing financial pressure commonly adopt lower levels of accounting conservatism as a strategy to obscure going-concern risks. Therefore, leverage is positioned as a fundamental predictor in assessing a company's financial health (Farooq, 2021).

In addition to leverage, a company's ability to generate cash flow from its operating activities is also an important parameter in mitigating financial distress risk. Operating cash flow refers to the net liquidity generated from a company's core business activities and reflects its ability to generate cash on a continuous basis. Compared with accounting earnings, operating cash flow is considered to provide more objective information because periodic earnings are susceptible to managerial discretion and certain estimates. Under conditions of economic volatility, management tends to be more prudent in presenting cash flow information in order to reduce information asymmetry with shareholders. A consistent decline or negative value in operating cash flow may serve as an early signal of liquidity deficits that can potentially trigger financial distress (Kim & An, 2025).

The selection of leverage and operating cash flow in this research is based on the relationship between these two variables and the company's ability to fulfill its obligations. Leverage shows the magnitude of the burden of obligations that the company must bear, while operating cash flow shows the company's ability to generate cash from operational activities to fulfill these obligations. Companies with high debt levels will face greater financial burdens. If these conditions are not accompanied by adequate operating cash flow, the company may experience a lack of liquidity and difficulty making payments. Thus, the balance between the size of liabilities and the ability to generate cash is important in determining the company's financial condition and business continuity.

Even though leverage and operating cash flow theoretically have a relationship with financial distress, the results of previous research still show inconsistencies. Mustamin and Ida (2025) and Azzahra et al. (2025) found that leverage has a positive effect on financial distress. These results indicate that increasing the use of debt can increase the risk of a company experiencing financial distress. On the

other hand, Samara (2021) found that leverage had no effect on financial distress, while Suryani and Mariani (Suryani & Mariani, 2022) found that leverage had a negative effect on financial distress. Differences in results were also found in the operating cash flow variable. Christy and Natalylova (2023) found that operating cash flow had no effect on financial distress, while Pratiwi and Sasongko (2023) found that operating cash flow had an effect on financial distress. The inconsistency of these results shows that the influence of leverage and operating cash flow on financial distress still needs to be researched again.

Based on this explanation and the inconsistencies in the results of previous research, this research is oriented to empirically test the significance of the impact of leverage and operating cash flow on the emergence of financial distress in textile and garment sub-sector issuers listed on the Indonesia Stock Exchange (BEI) throughout the 2020-2024 period. The 2020–2024 period was chosen because it covers the COVID-19 pandemic, the economic recovery period, and the period of financial pressure on a number of companies in this subsector. Therefore, this research aims to analyze the effect of leverage and operating cash flow on financial distress in textile and garment subsector companies listed on the Indonesia Stock Exchange for the 2020–2024 period.

Literature Review

Through the conceptualization of signaling theory, Spence (1973) argued that the existence of information asymmetry between internal parties (insiders) and external parties of the corporation encourages management to release credible information signals regarding the company's financial performance prospects to the public. In relation to the focus of this research, leverage and operating cash flow indicators are positioned as forms of this signal instrument. Leverage and operating cash flow are seen as financial signals that can be used by investors and creditors to assess the risk of financial distress. High leverage indicates the large proportion of debt-based funding and the principal and interest obligations that must be met. If the increase in obligations is not accompanied by adequate financial capabilities, leverage can be perceived as a negative signal of increasing company financial pressure (Fitrianingsih et al., 2022).

On the other hand, the achievement of positive and stable operating activity cash flows indicates that the issuer has a strong financial foundation to support its operational agenda independently, thus having implications for increasing the level of trust from creditors and investors. On the other hand, operating activity cash flow conditions that experience a downward trend or are in the negative area act as a bad signal (bad news) which reflects acute liquidity pressure which risks dragging the corporation into the financial distress phase (Kim & An, 2025).

Conceptually, financial distress represents a phase of corporate financial dysfunction marked by a decline in financial health and serves as an early indicator before business bankruptcy occurs. This phenomenon does not arise spontaneously but follows a process involving a time dimension, escalation of financial difficulties, and stages of declining business performance. The financial distress cycle generally begins with a deterioration in financial performance, which then escalates to a critical point of financial pressure before leading to two possible outcomes. If the company's fundamentals continue to deteriorate, the probability of bankruptcy increases. Conversely, if performance restructuring is implemented effectively, the company has an opportunity to escape the crisis and restore its financial stability (Tikollah et al., 2022)

Leverage is defined as a ratio used to measure the extent to which a company utilizes debt to finance its assets (Kasmir, 2019). An excessively dominant proportion of debt in the capital structure may burden the company with continuous interest expenses and principal repayments, thereby weakening its ability to maintain cash flow stability. In this study, leverage is measured using the Debt to Asset Ratio (DAR), which represents the ratio of total liabilities to total assets. The higher the DAR, the greater the dependence of company assets on debt-based financing, and consequently the greater the company's exposure to financial risk (E. Y. Pratiwi & Sudiyatno, 2022).

Operating cash flow is the amount of liquidity generated from a company's core business activities, such as manufacturing and the sale of goods or services. In accordance with PSAK No. 2 (IAI, 2022), operating cash flow serves as a fundamental parameter for assessing a company's capacity to generate sufficient cash to repay loans, support operational activities, distribute dividends, and undertake new investments without relying on external financing. Companies with high operating cash

flow demonstrate strong internal financing capacity to support business operations. Conversely, low operating cash flow reflects limited internal liquidity, which may make the company more dependent on external financing schemes to meet recurring operational needs (Annabila & Rasyid, 2022).

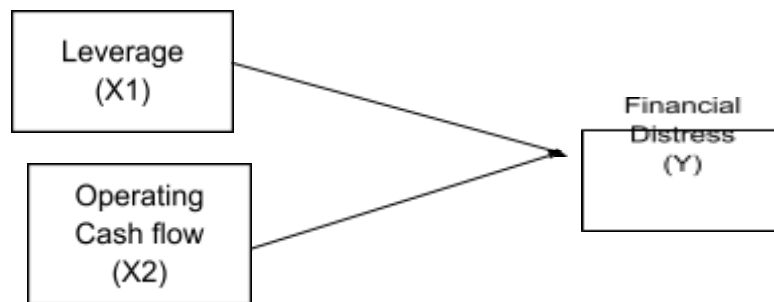


Figure 1. Conceptual Framework
Source: Elemented by the author

Hypotheses Development

Leverage reflects the proportion of corporate assets and operations financed by external borrowing and is therefore one of the main determinants that may trigger financial deterioration toward financial distress (Wang et al., 2026). In line with agency theory, overly expansive debt policies that do not consider long-term repayment capacity may accelerate the emergence of financial crisis, as accumulated interest expenses and principal repayments directly reduce corporate profitability margins (Kumala, 2025; Yoganata & Fitria, 2024). A high dependence on debt-based financing may increase fixed financial obligations, which ultimately erode the company's net profit (Lin et al., 2025). This concept is supported by evidence from the construction materials industry (Mustamin & Ida, 2025) as well as the textile and garment sector, which shows that leverage has a significant positive effect in increasing financial distress risk (Azzahra et al., 2025).

Nevertheless, several previous empirical studies present diverse and contradictory findings. Hajji (2026) argues that amid high macroeconomic uncertainty, a substantial debt ratio may encourage management to publish more transparent financial reports as a strategy to maintain credibility in the eyes of shareholders. Meanwhile, (Samara, 2021) finds that leverage does not partially affect financial distress. Different results are also reported by Suryani & Mariani (2022) who indicate that leverage has a negative effect on financial distress. During a crisis, debt management that is conducted tactically and strategically may even be optimized as an emergency financing instrument for companies (Oktapani & Maryani, 2024).

H1: Leverage has a positive effect on financial distress.

Operating cash flow reflects a company's real ability to generate liquidity directly from its main operating activities. This characteristic makes it a more objective parameter than accounting earnings, which may be distorted by managerial estimates and discretion. Based on signaling theory, positive and consistent operating cash flow functions as an important signal of financial health for external parties, thereby reducing the potential for financial distress. Strong operating cash flow has been shown to significantly minimize bankruptcy risk because liquidity generated from operating activities is a fundamental basis for companies to meet short-term obligations and avoid default risk (Miswaty & Novitasari, 2023). In an international context, a company's ability to maintain operating cash flow stability also generates a positive response in capital markets because it can support stock performance resilience even when the company faces global economic crisis pressure (Orhun, 2020).

However, the role of operating cash flow in influencing financial distress does not always show consistent results. Previous empirical evidence finds that operating cash flow does not have a significant effect on financial distress (Christy & Natalylova, 2023), indicating that this liquidity indicator should ideally be evaluated together with the company's net profit margin. When internal cash availability begins to decline, management is often encouraged to take short-term actions to protect the company's reputation (Chung et al., 2026). On the other hand, Pratiwi & Sasongko (2023) find that operating cash flow has a positive effect on financial distress. This condition may occur when large cash outflows allocated to working capital recovery are managed inefficiently, thereby depleting the company's main cash reserves and intensifying financial pressure. Ultimately, the deterioration of

financial condition may have adverse consequences for the internal work environment, as declining financial performance can reduce employee satisfaction and work motivation (Eun et al., 2023).

H2: Operating cash flow has a negative effect on financial distress.

Method

This study applies a quantitative approach to analyze the significance of the effect of leverage and operating cash flow on financial distress in textile and garment subsector companies listed on the Indonesia Stock Exchange during the 2020-2024 period. The data used in this study are secondary data in the form of annual financial statements obtained from the official platform of the Indonesia Stock Exchange and the official websites of each sample company.

The target population of this study includes all textile and garment subsector companies listed on the Indonesia Stock Exchange during the 2020-2024 period. The sample was selected using purposive sampling based on the following criteria: (1) companies consistently listed on the exchange throughout the research period, (2) companies that published comprehensive annual financial statements, and (3) companies that provided valid and complete data required for calculating all research variables.

This study employs the Modified Altman Z-Score model as a proxy for measuring financial distress. Under this model, a lower Z-Score indicates that a company's fundamentals are moving closer to financial distress. Therefore, the first hypothesis, which states that leverage has a positive effect on financial distress, should be interpreted as a positive effect on the escalation of financial distress risk. Statistically, this relationship is indicated by a negative coefficient on the Z-Score. Conceptually, an increase in leverage reduces the company's Z-Score and increases the probability that the company will enter a financial distress condition. The mathematical formulation of the Modified Altman Z-Score model is presented as follows:

$$Z'' = 6,56X_1 + 3,26X_2 + 6,72X_3 + 1,05X_4$$

The components of the formula are as follows: X_1 represents the ratio of working capital to total assets, X_2 represents the ratio of retained earnings to total assets, X_3 represents the ratio of earnings before interest and taxes to total assets, and X_4 represents the ratio of book value of equity to total liabilities.

The independent variables in this study consist of leverage and operating cash flow. Leverage is proxied by the Debt to Asset Ratio (DAR) because this ratio can describe the proportion of corporate assets financed through external debt. Meanwhile, operating cash flow is used to measure the company's actual ability to generate liquidity through its main operating activities. The operational definitions of each variable are systematically presented in table 1.

Table 1. Operational Definition of Variables

Variable	Proxy	Formula	Scale
Financial distress	Modified Altman Z-Score	$Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$	Ratio
Leverage	Debt to Asset Ratio	Total liabilities / Total assets	Ratio
Operating cash flow	Operating Cash Flow Ratio	Operating cash flow / Total assets	Ratio

The data in this study are processed using panel data regression analysis with EViews 14 software. Panel data regression is selected because the research data integrate a cross-sectional dimension, represented by sample companies, and a time-series dimension, represented by the years of observation. This panel data model enables a comprehensive analysis by considering variations in characteristics across companies as well as periodic data fluctuations (Gujarati & Porter, 2009). The regression estimation model used in this study is formulated as follows:

$$FD = \alpha + \beta_1 DAR + \beta_2 OCF + e$$

In this model, FD represents financial distress, α represents the constant, β_1 and β_2 represent the regression coefficients of each independent variable, DAR represents leverage, OCF represents operating cash flow, and e represents the error term.

The most appropriate panel regression estimation model is determined through a series of econometric tests, namely the Chow test, the Hausman test, and the Lagrange Multiplier test. The Chow test is used to compare the common effect model and the fixed effect model. The Hausman test

is used to determine the best choice between the fixed effect model and the random effect model. Meanwhile, the Lagrange Multiplier test is used to select the most appropriate model between the common effect model and the random effect model. The final model used for hypothesis testing is determined based on the results of these three tests (Ghozali, 2021).

After the best estimation model is identified, classical assumption tests are conducted, focusing on multicollinearity and heteroscedasticity tests. The multicollinearity test is used to detect whether there is a strong linear relationship among the independent variables in the model. Meanwhile, the heteroscedasticity test is used to evaluate the consistency of residual variance in the regression estimation model (Gujarati & Porter, 2009).

Hypothesis testing is conducted using the partial test (t-test), simultaneous test (F-test), and coefficient of determination (R^2). The partial test is used to identify the significance of the individual effects of leverage and operating cash flow on financial distress. The simultaneous test is used to measure the combined effect of the two independent variables on the dependent variable. The coefficient of determination is used as an indicator to determine the extent to which leverage and operating cash flow can explain variations in financial distress. All decisions in this study are based on the applicable significance level.

Results and Discussion

This empirical study uses data from 14 textile and garment subsector companies listed on the Indonesia Stock Exchange during the 2020-2024 period, resulting in a total of 70 observations. Financial distress is measured using the Modified Altman Z-Score model. Leverage is used as an indicator of corporate debt structure, while operating cash flow is used to detect the company's ability to generate cash flow from operating activities.

The most valid and appropriate panel data regression estimation model is first determined before proceeding to hypothesis testing. The results of the estimation model selection process are presented in the following tables:

Table 2. Descriptive Statistics

Variable	Mean	Minimum	Maximum	Std. Dev.
Financial Distress (Z")	17.48742	-132.1394	428.9689	94.86176
Leverage (DAR)	1.070655	0.002480	10.20294	1.608385
Operating Cash Flow Ratio	0.034317	-0.098573	0.248213	0.063137

Source: Data processed using EViews 14

Based on table 2, the financial distress variable proxied through the Modified Altman Z-Score collects a very wide range of values, namely from -132.1394 to 428.9689, with a standard deviation of 94.86176, which indicates high disparities in financial conditions between companies and between years in the research sample. The leverage variable recorded an average of 1.070655, with a maximum value of 10.20294 which confirms the existence of observations with total liabilities far exceeding total corporate assets. The Operating Cash Flow Ratio variable recorded an average of 0.034317, which means that the average operating cash flow is equivalent to around 3.43% of the sample company's total assets; A negative minimum value indicates an entity with negative operating cash flow in a particular year.

The stages of determining the characteristics of the most valid and accurate panel data regression estimation model are executed first before proceeding to the hypothesis testing procedure, including the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test.

Table 3. Model Selection

Test	Model Comparison	Probability	Decision
Chow	CEM vs FEM	0.0000	FEM
Hausman	FEM vs REM	0.7845	REM
Lagrange Multipliers	CEM vs REM	0.0000	REM

Source: Data processed using EViews 14

The overall model-selection results show that the Chow test produced a probability value of 0.0000, indicating that the Fixed Effect Model (FEM) was preferable to the Common Effect Model (CEM). The subsequent Hausman test produced a probability value of 0.7845, supporting the Random Effect Model (REM) over the Fixed Effect Model. Consistent with this result, the Lagrange Multiplier test yielded a probability value of 0.0000, further establishing the Random Effect Model as preferable to the Common Effect Model. Based on these consistent selection results, the Random Effect Model was adopted as the primary estimation model in this study. The selected panel data regression model was then assessed using multicollinearity and heteroskedasticity tests. A comprehensive summary of the model-selection results is presented in table 3.

The selected panel data regression model was subsequently evaluated using multicollinearity and heteroskedasticity tests.

Table 4. Multicollinearity Test Results

Variable Pairs	Correlation Coefficient	Limit	Decision
Leverage – Operating Cash Flow Ratio	0.189498	< 0.80	Multicollinearity did not occur

Source: Data processed using EViews 14

The test recorded a correlation value of 0.189498 between the leverage variable and the Operating Cash Flow Ratio, where this achievement was much smaller than the parameter of 0.80, thus confirming the absence of a strong linear correlation between the independent variables in this research model (Gujarati & Porter, 2009).

Table 5. Heteroscedasticity Test Results (Glejser Test)

Variable	Probability	Criteria	Decision
Leverage	0.0163	< 0.05	Indicated heteroscedasticity
Operating Cash Flow Ratio	0.0000	< 0.05	Indicated heteroscedasticity

Source: Data processed using EViews 14

Referring to the results of heteroscedasticity estimation using the Glejser method approach, it is noted that the probability significance value for the leverage variable is at 0.0163, while the Operating Cash Flow Ratio component reaches the position of 0.0000. Because the achievement of these two parameters is below the significance threshold of 0.05, it can be concluded empirically that the estimation of the Random Effect (REM) regression model in this study is indicated to experience heteroscedasticity problems. This condition is commonly found in panel data which collects companies with varying business scales and capital structures, so that the residual variance between companies tends to be non-uniform (Gujarati & Porter, 2009). The presence of heteroscedasticity does not necessarily require data to be eliminated or transformed; This treatment is carried out through corrections to the standard error of the regression model.

In order to overcome the problem of heteroscedasticity, the Random Effect model was re-estimated using the White period (cross-section cluster) covariance coefficient correction method. This correction maintains the regression coefficient values that have been obtained, but adjusts the standard error, t-statistic, and probability, so that hypothesis testing becomes more reliable against disturbances that are clustered within each company.

Table 6. Random Effect Model Regression Results (Corrected for White Period)

Variable	Coefficient	Prob.	Direction	Decision ($\alpha = 5\%$)
Constant (C)	32.23435	0.2590	Positive	Not significant
Leverage (DAR)	-9.268072	0.0341	Negative	Significant
Operating Cash Flow Ratio	-140.5743	0.2499	Negative	Not significant

Source: Data processed using EViews 14

Relying on panel data regression calculations, the linear equations obtained are formulated as follows:

$$Y = 32.23435 - 9.268072X_1 - 140.5743X_2 + e$$

Anotation:

Y = Financial distress (Z")

X₁ = Leverage

X₂ = Operating Cash Flow Ratio

e = Error term

The constant value of 32.23435 indicates that if the leverage and Operating Cash Flow Ratio are zero, then the Modified Z-Score value is 32.23435. The leverage coefficient of -9.268072 and the Operating Cash Flow Ratio coefficient of -140.5743 both have negative signs; However, considering that the dependent variable in this model is the Z-Score Modified score, not financial distress directly, a negative coefficient indicates a decrease in the Z-Score Modified score (which means an increase in the risk of financial distress), not a decrease in the risk itself.

The data processing output represents that the leverage variable has a significant influence on the level of corporate financial distress as proxied through the Modified Altman Z-Score model. This reality is based on obtaining a leverage probability significance value of 0.0341 which is below the tolerance threshold of 0.05, which confirms that the conjecture in the first hypothesis is officially accepted. The leverage coefficient value was recorded as negative at -9.268072. The characteristic of a negative sign in this coefficient value should ideally not be interpreted directly as meaning that leverage exposure suppresses the level of financial distress, but must be aligned with the parameters of the dependent variable of this research in the form of a Z-Score score. In the mechanics of the Modified Altman Z-Score model, a decreasing Z-Score score actually indicates that the issuer's internal condition is increasingly approaching the financial crisis phase. Thus, the accumulation of high leverage ratios has been empirically proven to degrade the achievement of the Z-Score value, which has implications for the greater risk of companies being trapped in a vortex of financial distress.

This empirical evidence is consistent with the premise of signaling theory. From a signaling perspective, a high level of leverage conveys negative information (bad news) to external stakeholders because it reflects greater exposure to the company's financial risk. The findings reinforce the empirical conclusions of Mufidah and Istanti(2024), Arianto and Kurniasih (2023), and Azzahra et al. (2025), who demonstrated the significant role of leverage in the dynamics of financial distress.

Practically, these findings are relevant to the conditions experienced by PT Sri Rejeki Isman Tbk (Sritex), where the accumulation of debt burdens that were not matched by repayment capacity led to bankruptcy, which confirms that a capital structure dominated by external debt is one of the crucial determinants in mapping the risk of financial distress in the textile and garment industry.

The t test results show that the operating cash flow variable has a coefficient of -140.5743 with a significance value of 0.2499, far above the threshold of 0.05. Thus, operating cash flow is not proven to have a significant effect on financial distress, so it can be confirmed that the second hypothesis is officially rejected.

Viewed from the perspective of signaling theory, cash flow from operating activities actually acts as a supply of crucial information for investors and creditors to measure the company's real capability in accumulating liquidity through its main business activities. Nevertheless, the empirical documentation in this research confirms that the operating cash flow indicator does not yet have sufficient signal strength to intervene or explain fluctuations in the issuer's Z-Score value. This reality can be escalated because the manifestation of the financial distress phenomenon is not solely triggered by operating cash turnover, but is influenced simultaneously by the portion of the debt structure, the availability of working capital, the accumulation of retained earnings, the efficiency of asset utilization, and the level of the corporation's ability to settle its short-term obligations. Furthermore, in the dynamics of the garment and textile industry, the cash flow circulation of operating activities is also susceptible to experiencing sharp volatility due to the intervention of changes in sales volume, movements in trade receivables, inventory management, and swelling manufacturing expenses.

These scientific findings strengthen the empirical documentation presented by Fitriani et al (2023) and Saputra et al (2025), which confirm the lack of significance of the impact of operating cash flow on financial distress vulnerability. Thus, the analysis output in this research indicates that in the scope of textile and garment corporations, the capital structure dimension has a much stronger capacity to detect potential financial distress when compared with the operating cash flow component. This reality

is clearly reflected in the results of previous tests, where the leverage variable was proven to have a significant impact, while the operating cash flow indicator showed insignificant results.

Table 7. Simultaneous Test (F-Test) and Coefficient of Determination Results

Indicator	Mark	Information
Prob(F-statistic)	0.000001	< 0.05, significant
R-squared	0.349282	34.93%

Source: Data processed using EViews 14

When evaluated simultaneously, leverage and operating cash flow have a significant effect on financial distress risk. This result is indicated by a Prob(F-statistic) value of 0.000001, which is below the 0.05 significance threshold. The adjusted R-squared value of 0.349282 indicates that the two independent variables jointly explain 34.93% of the variation in financial distress, while the remaining 65.07% is attributable to other determinants outside the research model.

Overall, the conclusion of this research confirms that leverage instruments have a much more dominant contribution than operating cash flow in mapping the potential for financial crisis (financial distress) in the national garment and textile industry. The use of debt that is too expansive carries a big risk of putting acute pressure on the issuer's financial stability as well as degrading the Modified Altman Z-Score score. On the other hand, the circulation of operating cash flow has not shown a direct impact on the escalation of financial distress. This series of findings underscores the urgency for company management to make governance and debt control a top priority in order to secure long-term financial resilience.

Conclusion

Through a series of analysis procedures that have been implemented, this research produces the conclusion that the leverage variable is proven to have a real influence on the level of financial distress, while the Operating Cash Flow Ratio indicator is proven not to influence corporate financial distress conditions. The high portion of leverage reflects that the issuer has a massive level of dependence on external debt-based funding schemes to support its asset ownership. This debt concentration risks exacerbating the accumulated burden of financial obligations and eroding corporate financial stability if it is not balanced with the company's efficiency in collecting profit margins and maintaining liquidity resilience. Because the testing in this research adopts the Modified Altman Z-Score model, the negative sign of the leverage coefficient confirms that the acceleration of the debt portion has implications for a decline in the company's Modified Z-Score score. The lower the score, the greater the risk exposure of the business entity to falling into a financial crisis phase (financial distress).

Meanwhile, the Operating Cash Flow Ratio component has not been statistically tested to have adequate signal strength in detecting or explaining variations in financial distress conditions in garment and textile subsector companies throughout the observation time horizon, even though this proxy has been standardized on total assets in order to increase comparability between companies. Simultaneously, these two independent variables were proven to have an influence on financial distress, with their capacity to explain variations in financial distress of 34.93%.

This research has several limitations, namely the model only involves two independent variables so that its explanatory power regarding variations in financial distress still leaves a fairly large portion (65.07%) to be explained by other factors; The sample coverage is limited to 14 companies in the textile and garment subsector so that these findings cannot necessarily be generalized to other sectors; as well as the 2020-2024 observation period which overlaps with the COVID-19 pandemic as an abnormal economic condition, so that the dynamics of the relationship between the identified variables has the potential to be influenced by these external shocks. Therefore, it is recommended that further research expand the sample coverage to other manufacturing sectors and extend the observation period, including the period before and after the pandemic. It is hoped that this can test the consistency of research results and obtain a broader picture of financial distress in various economic conditions.

Bibliography

Agus, P., & Ridha, M. H. (2025). *Machine learning implementation to predict financial distress in local*

- governments of Indonesia. <https://doi.org/10.1108/PAR-11-2024-0317>
- Annabila, N., & Rasyid, R. (2022). *Pengaruh Leverage, Likuiditas, Arus Kas Operasi, Dan Sales Growth Terhadap Financial Distress*. *Iv*(3), 1264–1272.
- Arianto, H., & Kurniasih, A. (2023). *The Influence of Financial Performance and Macroeconomic Factors on the Financial Distress of Textile and Garment Companies Listed on the Stock Exchange : Empirical Studies in Indonesia*. *06*(07), 3305–3318. <https://doi.org/10.47191/jefms/v6-i7-34>
- Azizah, R. N., Anomsari, A., Safitri, M., & Zakaria, F. (2026). *Data Pertumbuhan*. *7*(6), 4149–4167.
- Azzahra, F., Safrida, E., Situngkir, A., Napitupulu, I. H., & Syuhada, P. (2025). *Leverage , Arus Kas Operasi , dan Financial Distress : Studi Empiris Peran Moderasi Profitabilitas pada Industri Tekstil di Indonesia*. *9*, 3157–3166.
- Christy, V., & Natalylova, K. (2023). *Pengaruh Operating Cash Flow Dan Faktor Pendukung Lainnya Terhadap Financial Distress*. *15*(1).
- Chung, P., Chen, A., & Lewis, T. (2026). *The temporal effects of accounting conservatism on changes in accounting estimates*. <https://doi.org/10.1108/PAR-06-2025-0106>
- Eun, J., Park, J. P., & Wang, Y. (2023). *Employees ' perceptions and earnings benchmarks*. *35*(2), 199–217. <https://doi.org/10.1108/PAR-04-2022-0051>
- Farooq, M. (2021). *Indirect financial distress costs in non-financial firms : evidence from an emerging market*. *33*(4), 417–434. <https://doi.org/10.1108/PAR-09-2020-0127>
- Fitriani, E., Ketut, I. G., Ulupui, A., Respati, D. K., Likuiditas, P., Solvabilitas, D. A. N., & Financial, T. (2023). *Pengaruh Arus Kas Operasi , Profitabilitas Likuiditas , Dan Solvabilitas Terhadap Financial Distress Pengaruh Arus Kas Operasi .* *4*(3), 700–719.
- Ghozali, I. (2021). *Aplikasi Analisis Multivariate dengan Program IBM SPSS dan EViews*. Semarang: Badan Penerbit Universitas Diponegoro.
- Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (5th ed.). New York: McGraw-Hill.
- Hafidza, S., Yudhawati, D., & Hanifan, M. Z. (2024). *Analisis Financial Distress Menggunakan Metode Altman Dan Zmijewski (Studi Kasus Pada Perusahaan Subsektor Tekstil Dan Garment Yang Terdaftar Di Bursa Efek Indonesia Periode 2020-2023)*. *01*(02), 119–123.
- Hajji, O. (2026). *Firm ' s perception of economic policy uncertainty and earnings management practices : cross-sectional analysis in. January 2025*, 118–148. <https://doi.org/10.1108/PAR-05-2024-0107>
- IAI, I. A. I. (2022). *PSAK 207: Laporan Arus Kas*. Jakarta: Dewan Standar Akuntansi keuangan IAI.
- Islamy, A. Z., & Unggul, P. (2021). *Faktor-Faktor Yang Mempengaruhi Financial Distress Perusahaan Terdampak Covid-19 Di Asean*. *2*(3), 710–734.
- Kasmir. (2019). *Analisis Laporan Keuangan*. Jakarta: PT Raja Grafindo Persada.
- Kim, S. H., & An, Y. (2025). *Does economic policy uncertainty affect conservatism ? Evidence from Korea*. *37*(2), 141–163. <https://doi.org/10.1108/PAR-10-2023-0137>
- Kumala, R. (2025). *Analisis Pengaruh Internet Financial Reporting , Management Ownership , Institutional Ownership , dan Leverage Terhadap Financial Distress*. *4*(2), 270–281.
- Lin, W., Li, L. Z., Li, L. L., Sydney, U., & Hay, D. (2025). *Repetitive key audit matters and audit effort* (Vol. 37, Issue 2). <https://doi.org/10.1108/PAR-08-2024-0168>
- Miswaty, & Novitasari, D. (2023). *Pengaruh Operating Capacity , Sales Growth , Dan Arus Kas Operasi*. *9*(2), 583–594.
- Mufidah, S., Layla, S., & Istanti, W. (2024). *The Influence Of Company Age , Leverage , Total Cash Flow And Company Size On Financial Distress In Textile And Garment Companies Listed On The Indonesian Stock Exchange In 2019-2021*. *7*(2), 270–280.
- Mustamin, R., & Ida, I. (2025). *Determinasi Financial Distress: Peran Profitabilitas, Likuiditas, Dan Leverage Pada Industri Bahan Konstruksi*. 746–759.
- Oktapani, S., & Maryani, N. (2024). *Pengaruh Operating Cash Flow , Profitabilitas , dan Leverage terhadap Financial Distress pada Perusahaan Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia (BEI) Tahun 2018-2022*. *5*(4), 3089–3104.
- Orhun, E. (2020). *The impact of COVID-19 global health crisis on stock markets and understanding the cross-country effects*. <https://doi.org/10.1108/PAR-07-2020-0096>
- Pratiwi, A. D., & Sasongko, N. (2023). *Pengaruh Likuiditas , Operating Capacity , Sales Growth , Operating Cash Flow Dan Kepemilikan Institusional Terhadap Financial Distress (Studi Empiris Pada Perusahaan Manufaktur Sektor Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Tahun*. *4*(6), 8878–8890.
- Pratiwi, E. Y., & Sudiyatno, B. (2022). *Pengaruh likuiditas , leverage , dan profitabilitas terhadap financial distress*. *5*(3), 1317–1325.

- Samara, A. (2021). *Pengaruh Modal Kerja Bersih Terhadap Aset , Likuiditas dan Financial Leverage terhadap Financial Distress*. 250. <https://doi.org/10.47709/jebma.v1i3.1135>
- Saputra, A. B., Mansur, F., & Hernando, R. (2025). *The Influence Of Sales Growth , Operating Cash Flow , And Profit Growth On Financial Distress Pengaruh Sales Growth , Operating Cash Flow , Dan Profit Growth Terhadap Financial Distress*. 10(01), 39–53. <https://doi.org/10.22437/Jaku.V10i01.46056>
- Saragih, R. M., Kevin, F., Pahotton, J., Panjaitan, P., Katharina, N., Seliamang, Y. M., Indonesia, U. P., & Kupang, P. N. (2024). *Analysis of factors that affect financial distress in manufacturing companies in the consumer goods industry sector listed on the bej*. 7.
- Suryani, S., & Mariani, D. (2022). *Memprediksi Financial Distress Melalui Faktor Internal Pada Perusahaan Jasa Sub Sektor Property dan Real Estate*. 10(3). <https://doi.org/10.37641/jiakes.v10i3.1441>
- Tikollah, M. R., Azis, M., & Azis, F. (2022). *Analysis of Financial Distress during the Covid-19 Pandemic*. 02(04), 489–500.
- Wang, T., Cui, W., & Jones, S. (2026). *Predicting financial distress as repeated events*. 39(1), 40–59. <https://doi.org/10.1108/ARJ-08-2025-0289>
- Wulandari, L. A., Andikasari, R. D., Najmi, N. S., Aisyah, Z. F., & Panggiarti, E. K. (2026). *Indonesia Economic Journal*. 2(1), 1243–1256.
- Yoganata, M., & Fitria, A. (2024). *Pengaruh Profitabilitas , Leverage Dan Likuiditas Terhadap*.
- Zahra, Z., Elahi, A. R., & Sohail, M. (2024). *Unraveling the effects of COVID-19 on the textile industry in South Asia region: a comparative study of major players*. <https://doi.org/10.1108/K-08-2023-1449>