**The Effects of Liquidity, Leverage, and Profitability on Financial Distress: A Case Study of Textile and Garment Companies Listed on the Indonesia Stock Exchange (2022–2024)**

ABSTRACT

This study aims to determine and analyse the effect of liquidity, leverage, and profitability on financial distress in textile and garment companies listed on the Indonesia Stock Exchange for the period 2022-2024. The research sample used was 4 textile and garment companies. This study uses the analysis tools Current Ratio, Debt Equity Ratio, Return on Equity and the Altman Z-Score model. The results of the analysis using the Altman Z-Score model obtained a Z-Score. The data required are quarter 1 to 3 of 2022, 2023, 2024. The results of this study indicate that simultaneously liquidity, leverage, and profitability affect financial distress. Liquidity has no effect partially but any increase in leverage and profitability will increase the chance of financial distress.

***Keywords***: *Liquidity, Leverage, Profitability, Financial distress, Stock exchange*

INTRODUCTION

The economy is growing rapidly around the world, which has led to fierce competition. This has led to increasingly fierce competition. Competitors can be domestic or from foreign companies that have entered the domestic market. Companies are required to be able to maintain their business continuity with various efforts in various conditions for a long period of time. The industrial era 4.0 is an industrial process that is digitally connected and coloured by artificial intelligence, supercomputers, super computers, and coloured by artificial intelligence, super computers, genetic engineering, nano technology, automated cars, and innovation. Changes that occur at this exponential speed will have an impact on the economy, industry, government, politics and make the current era look like a global village. Textile companies are companies engaged in the production industry fabric or other textile production industry, while garment companies are companies engaged in the industry of manufacturing ready-made clothing or textile products. Companies that are considered appropriate because these companies tend to experience a decline in performance from year to year.

“Based on the Central Bureau of Statistics that in the 2021 period textile companies and garment companies experienced a contraction of 4.08% caused by the impact of impact of the COVID-19 pandemic which affects domestic and export demand, the 2022 showed a performance recovery of 5.87%, this increase was driven by increased domestic and export market demand along with the easing of social restrictions, the 2023 period saw the company's performance decline again by 2.43%, in 2024 there was another contraction of 0.03%” [1]. Indotextiles [2] stated that “there were around 15,114 layoffs this year and several companies were declared bankrupt due to this contraction, one of which was PT Sri Rejeki Isman. The Sri Rejeki Isman Tbk (Sritex) company is one of the largest textile companies in Southeast Asia which has employed more than 50,000 workers, but debts reaching Rp. 25 trillion have made the Sritex company declared bankrupt because it is considered unable to pay debts and is considered negligent in fulfilling payment obligations to the petitioners. Kompasiana”[3] stated that for several years before 2020 PT Sritex had carried out massive aggressive expansion by increasing production capacity and making investments to expand international distribution networks which on the other hand also also increased the debt burden. When the COVID-19 pandemic hit the demand for textile products dropped dramatically which resulted in a decrease in revenue and at the same time the price of raw materials fluctuated, competition from imported goods and high operational costs further complicated PT Sritex's finances. This bankruptcy situation not only affected the national textile industry, but also the economic stability and social welfare in the region where PT Sritex operates [4].

MATERIALS and METHODS

In this quantitative study, the population applied is all textile and garment companies listed on the Indonesian stock exchange in 2022-2024, totalling 22 textile and garment companies. The sample is part of the number and characteristics possessed by the population, because the population is large, the sampling in this study is purposive sampling. By using criteria or considerations determined by the researcher. The following criteria are the determining factors in this research sample:

1. Actively listed as a Textile and Garment Company on the Indonesia Stock Exchange period 2022-2024

2. Textile and Garment companies that publish quarterly financial reports 1-3 for the period 2022-2024

3. Textile and Garment companies that have negative EPS values for the last two years or more in the 2022-2024 period.

Based on the criteria, 4 companies were obtained as samples. The data collection technique used in the study was obtained through library research, namely the collection of secondary data in the form of information on company profiles, information on stock prices, shares outstanding and quarterly financial reports of Textile and Garment Companies Listed on the Indonesia Stock Exchange for the period 2022 to 2024. Data obtained from the Indonesia Stock Exchange, official website [www.idx.co.id](http://www.idx.co.id).

The analytical tool in this study aims to analyse the effect of liquidity, leverage and profitability on financial distress of textile and garment companies listed on the Indonesia Stock Exchange in 2022-2024. garment companies listed on the Indonesia Stock Exchange in 2022-2024.

1. Liquidity Ratio

The liquidity ratio formula according to [5] is as follows:

2. Leverage Ratio

The leverage ratio formula according to Fitri & Syamwil [6] is as follows:

3. Profitability Ratio

The profitability ratio formula according to Fitri & Syamwil [6] is as follows:

4. Financial Distress

The financial distress formula uses the Altman Z-Score model according to Sholikah & Khoiriawati [5] as follows: Return on Equity = Net profit After Tax Total Own Capital

Zi = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.99X5

X1 = (Current Assets - Current Debt) / Total Assets

X2 = Retained Earnings / Total Assets

X3 = Earnings Before Interest and Taxes / Total Assets

X4 = Market Value of Equity / Total Debt

X5 = Sales / Total Assets

Table 1: Interpretasi Model Z-Score [5]

|  |  |
| --- | --- |
| **Z-Score** | **Criteria** |
| Z > 2.99 | Healthy |
| Z>1.81 | Grey |
| Z< 1.81 | FD |

5. Multinomial Logistic Regression Analysis

Multinomial logistic regression equation according to Hadi & Andayani [7] in Anza [8] as follows:

Logit FIN\_DIS = 𝛃0 + 𝛃1 Lik + 𝛃2 Lev + 𝛃3 Prof

Table 2: Logistic Equation Description [8]

|  |  |
| --- | --- |
| **Variable** | **Description** |
| Logit FIN\_DIS | DIS Dummy variables, namely: healthy is worth 1, grey area is worth 2, financial distress is worth 3 |
| 𝛃0 | Constant |
| Lik | Liquidity |
| Lev | Leverage |
| Prof | Profitability |

RESULTS AND DISCUSSION

**A. Result**

1. Descriptive Statistical Analysis

Descriptive statistical analysis to see the distribution of 36 sample data, where researchers use the average value (mean), maximum value, minimum value and standard deviation which are used to describe each indicator in each variables to make it easier to understand.

Table 3: Descriptive Statistics Test Results

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Minimum** | **Maximum** | **Mean** | **Standard Deviation** |
| X1 | 1.07 | 6.09 | 2.2183 | 1.06967 |
| X2 | 0.20 | 13.27 | 2.1667 | 3.28159 |
| X3 | 0.63 | 0.09 | 0.0390 | 0.12274 |
| Y | 1 | 3 | 2.31 | 0.887 |

2. Multicollinearity Test Results

The multicollinearity test aims to test whether the regression model finds a correlation between independent variables.

Table 4: Multicolonierity test results

|  |  |  |
| --- | --- | --- |
| **Model** | **Tolerance** | **VIF** |
| X1 | 0.805 | 1.243 |
| X2 | 0.440 | 2.275 |
| X3 | 0.485 | 2.062 |

Based on the results of the multicollinearity test, it is known that between the independent variables there is no multicollinearity in the regression model because the calculation results do not have a tolerance value for the independent variable that is less than 0.1 and the magnitude of the VIF value of the independent variable is not more than 10.

3. Hosmer and Lemeshow's Goodness of Fit Test

Hosmer and Lemeshow's test of fit is used to test whether the data obtained is suitable or not with the logistic regression model.

Table 5: Goodness-of-Fit Test Results

|  |  |  |
| --- | --- | --- |
| Chi-Square | df | Significan |
| 55.905 | 64 | 0.754 |

Based on the results of this test, it is known that the logistic regression model produced is able to match the data well (Model FIT) because the Chi-Square is 55.905 with a sig value. 0.754 > 0.05.

4. Cox and Snell's R Square and Nagelkerke's R Square tests

Nagelkerke's R Square, which is a modification of Cox and Snell's R Square, ensures that the value varies from 0 to 1 by dividing the Cox and Snell's R Square value. The results of this test indicate that the ability of the independent variables to explain the dependent variable is 70.0% and the remaining 30.0% is explained by other variables not examined.

5. T test

This test is used to determine whether the independent variable regression model partially has a significant effect on the dependent variable. Based on the results of this test can be interpreted as follows:

a. The significant value of the liquidity variable is 0.058> 0.050, meaning that liquidity has no effect on financial distress.

b. The significant value of the leverage variable is 0.012 <0.05, meaning that leverage has an effect on financial distress.

c. The significant value of the profitability variable is 0.001 <0.05, meaning that profitability has an effect on financial distress.

6. F test

This test is used to determine whether the independent variables together have a significant effect on the dependent variable. From the results of this test obtained sig value. 0.000 <0.05, then H0 is rejected and Ha is accepted, meaning that liquidity, leverage, and profitability simultaneously affect financial distress.

7. Multinomial Logistic Regression Analysis Results

Multinomial logistic regression analysis is used to facilitate the interpretation of the logistic regression model, where it is known from the results of the partial parameter significance test that the independent variables significantly affect the dependent variable.

Based on the results of the analysis can be interpreted as follows:

a. Liquidity: Shows an odds ratio of 0.615 which means if there is an increase in liquidity unit, the probability of financial distress will decrease by 38.5% (1 - 1), liquidity will reduce the possibility of financial distress by 38.5% (1 - 0.615).

b. Leverage: Shows an odds ratio of 3.029, which means that any increase in leverage will increase the chance of the company being in financial distress by 202.9% (3.029-1).

c. Profitability: Shows an odds ratio of 4.361E-21 which means if there is an increase in profitability, it significantly reduces the chance of financial distress.

Based on the results of the classification table test, it is known that there are 10 quarterly periods that are declared healthy, 1 of which is predicted to experience financial distress and 3 of which will be predicted to enter a grey condition with a correctness rate of prediction rate of 60.0%. It is known that there are 5 quarterly periods that are declared grey and 1 of them is predicted to be healthy again with a prediction truth rate of 80.0%. It is known that there are 21 quarterly periods that are declared financial distress, 1 of which is predicted to be grey with a prediction truth rate of 95.0%. predicted grey with a prediction truth rate of 95.2%. Overall the percentage of model accuracy can predict correctly by 83.3%.

**B. Discussion**

Based on the analysis, further discussion will be carried out regarding the effect of liquidity, leverage, and profitability on financial distress (case study of textile and garment companies listed on the Indonesia stock exchange for the period 2022-2024) as follows:

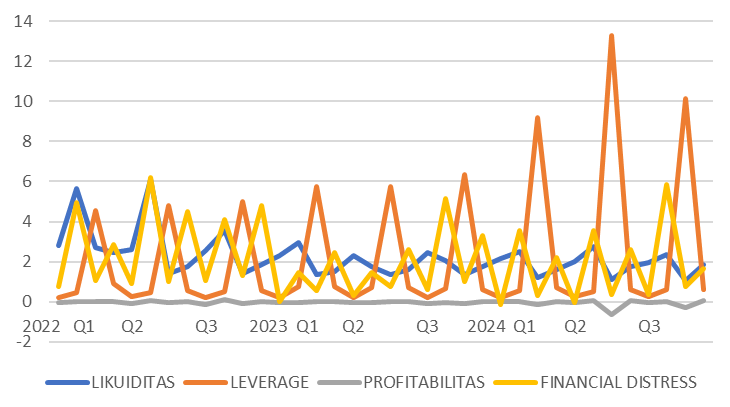


Figure 1: Financial Ratio

a. The Effect of Liquidity on Financial Distress

“Based on the test results, the liquidity variable shows results that are not partially significant at α = 0.050, namely 0.058, meaning that the hypothesis meaning that the hypothesis is rejected. The results of this study are in line with the findings of” [9, 10]. Based on Figure 1, the liquidity graph is not too far different from the financial distress graph compared to other ratios, it explains that liquidity is not too significant to financial distress because the liquidity is not very significant to financial distress because based on all the notes on the financial statements of the companies studied, it is known that all companies implement liquidity risk management which serves to maintain the adequacy of deposits to pay interest or principal debt that will be due. Based on the results of logistic regression analysis, it shows that if there is an increase in liquidity, it will reduce the potential for financial distress by 38.5%, this indicates that the liquidity ratio also affects financial distress, so it is concluded that liquidity has an effect but is not significant because companies that have a reserve of funds to pay debt that will mature.

b. The Effect of Leverage on Financial Distress

“Based on the test results of the leverage variable, it statistically shows

partially significant results at α = 0.05, which is 0.015, meaning that the hypothesis is accepted. The results of this study are supported by the findings of” [11,12]. This means that the greater the leverage ratio can increase the likelihood of financial distress. This is evidenced by the logistic regression analysis which shows that any increase in leverage will increase the chance of financial distress by 202.9%. Based on Figure 1 explains that the leverage ratio graph is the highest compared to other graphs, indicating that the company has high debt. it indicates that the company has high debt compared to profit.

c. Effect of Profitability on Financial Distress

“Based on the test results of the profitability variable statistically shows partially significant results at α = 0.05, namely amounting to 0.001, meaning that the hypothesis is accepted. The results of this study support the findings” [6,13] This means that the greater the ratio profitability ratio can reduce the possibility of financial distress, this is evidenced by the logistic regression analysis results which show that any increase in the profitability ratio will reduce the potential risk of financial distress. Based on Figure 1 shows that all companies for 3 years with quarterly counted quarters can only book low operating profits, this is mostly due to high leverage so that the profitability of the company will decrease the potential risk of financial distress.

d. The Effect of Liquidity, leverage, and Profitability on Financial distress

Based on the results of the simultaneous test analysis, the sig value is obtained. 0.000 <0.05, meaning hypothesis accepted. This shows that the three variables studied influence together in increasing the potential risk of financial distress in a company, this is also evidenced by the results of logistic regression analysis which states that the three ratios have an influence on financial distress namely liquidity affects as much as 38.5%, leverage affects as much as 202.9%, and increased profitability can reduce the potential for financial distress. It can be concluded that liquidity affects financial distress, but not significant because companies that have sufficient reserves are able to reduce the risk of financial distress even though they have able to reduce the risk of financial distress despite having short-term debt, leverage has a significant effect on financial distress, but not significant because companies that have sufficient reserves short-term debt, leverage has a significant effect on financial distress because high debt that exceeds own capital can increase the risk of default and potentially cause bankruptcy, profitability has a significant effect on financial distress because if the company has sufficient reserves, they will have difficulty paying their debts and are at risk of bankruptcy [6,8].

**CONCLUSIONS**

Based on this study, it can be concluded as follows

1. Based on the test results the liquidity variable is not partially significant due to companies that already have liquidity risk management, but based on the results of logistic regression analysis this variable has an influence.

2. Based on the results of testing the leverage variable, it is found that there is an influence partially, which means that high leverage increases the risk of financial distress.

3. Based on the test results of the profitability variable, it shows a partial it means that good profitability helps companies avoid financial distress.

4. Based on the results of the simultaneous test analysis, it is found that liquidity, leverage, and profitability simultaneously affect financial distress. This means that these three factors are interrelated in determining the likelihood the company experiences financial distress.

**Competing Interests Disclaimer:**

Authors have declared that they have no known competing financial interests or non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

**Disclaimer (Artificial intelligence)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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