

# Financial distress and its prediction: A case study of the textile and garment industry

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## ABSTRACT

**Aims:** The objective of this research is to glance at the projections of financial distress in the textile and garment sub-sectors listed on the IDX.

**Methodology:** The case study method is used in this study to employ the descriptive quantitative method approach. While the IDX is the source of the case study data, the purposive sampling method was used on the financial statements of textile and garment sub-sector companies in 2019 and the first quarter of 2020. While the cross-sectional method is used for case study analysis, or by comparing the Z-score (multiple discriminant analysis) that has been performed between one company and the standard zone that has been carried out simultaneously.

**Result:** This study discovered that the case study using multiple discriminant analysis models in the first quarter of 2020 shows a significant impact of Covid-19 on the financial condition of companies listed on the IDX in the textile and garment industry, with 88 percent of companies in a stress zone. This study also shows that both internal and external factors can lead to a company's demise. As a result, corporate financial management decision-making must consider the company's liquidity, debt proportion, and the efficient use of working capital.

**Implication/Applications:** The findings of this study can be useful not only for researchers, but also for practitioners who are interested in financial distress cases.

**The originality of the study:** One of the study's limitations is that the sample is still limited to the research scope, which only covers the two sectors. Furthermore, this study only employs a single model of financial distress. As a result, it is hoped that in the future, research will be conducted with various types of company sectors and using various financial distress models.

*Keywords: financial distress, textile and garment sector, case study*

## 1. INTRODUCTION

Today, financial ratio analysis is a popular managerial tool as well as a tool for determining a company's economic activity (1–4). In a nutshell, this prediction is based on a functional correlation calculation between the financial ratio and a number of dependent variables. This model is commonly used by investment analysts for a variety of purposes, including predicting profitability, predicting a company's failure, assessing potential risks, and assisting in credit rating. In general, the analysis seeks the most useful financial ratios that provide significant information about future events to be used in models for predicting financial distress or bankruptcy (5,6).

As a sector that is extremely important to the national economy. Economists frequently focus on the garment and textile industries, particularly their financial performance (7,8). This sector is becoming increasingly interesting to study, particularly in light of the Covid-19 pandemic, which is thought to have impacted a company's financial distress in most sectors (9,9–11). Previously, the textile and garment market conditions were quite depressed as a result of recent trade wars and pressure from producers from other countries, which resulted in price wars. In fact, the textile and garment sector, like other sectors (12), deteriorated during the Covid-19 pandemic, with the imposition of various activity restrictions and social distancing. However, this industry can make a comeback by repurposing its products as PPE (Personal Protective Equipment).

Twelve companies with positive working capitals are listed on the Indonesia Stock Exchange (IDX) in the textile and garment sub-sector (see table 1). This means that their assets are currently sufficient to pay their current debts. Meanwhile, the other four companies have negative working capital, which means that their assets cannot currently pay their current debts.

**Table 1: Financial Condition of Textile and Garment Sub-Sector**

| No | Code | Name                            | Working Capital     | Retained Earnings   | EBIT             | Equity Market Value | Book Value of Accounts Payable | Sales           | Total Asset       |
|----|------|---------------------------------|---------------------|---------------------|------------------|---------------------|--------------------------------|-----------------|-------------------|
| 1  | BELL | Trisula Textile Industries Tbk. | 127.632.625.516     | 93.379.714.796      | 5.298.165.687    | 152.252.316.799     | 342.455.321.568                | 157.718.886.380 | 623.415.338.649   |
| 2  | ERTX | Eratex Djaja Tbk.               | 2.363.255           | 10.028.584          | 781.508          | 20.141.658          | 54.947.538                     | 25.857.349      | 75.089.196        |
| 3  | ESTI | Ever Shine Tex Tbk.             | 2.478.019           | - 68.752.787        | - 314.357        | 13.242.371          | 44.552.056                     | 7.874.088       | 57.794.427        |
| 4  | HDTX | Panasia Indo Resources Tbk.     | - 255.163.118.000   | - 1.885.029.188.000 | - 31.818.676.000 | 38.641.899.000      | 380.770.657.000                | 3.106.084.000   | 419.412.556.000   |
| 5  | INDR | Indo-Rama Synthetics Tbk.       | 37.948.667          | 222.442.805         | 4.473.343        | 375.755.541         | 409.685.745                    | 183.414.950     | 785.441.286       |
| 6  | MYTX | Asia Pacific Investama Tbk.     | - 1.079.688.000.000 | - 2.790.736.000.000 | - 1.488.000.000  | 393.767.000.000     | 3.976.403.000.000              | 556.344.000.000 | 4.370.170.000.000 |
| 7  | PBRX | Pan Brothers Tbk.               | 451.860.472         | 104.863.229         | 577.386          | 264.785.076         | 358.934.916                    | 121.655.179     | 623.719.992       |
| 8  | POLY | Asia Pacific Fibers Tbk.        | - 964.421.693       | - 2.197.054.069     | 5.036.195        | - 937.041.585       | 1.175.393.696                  | 87.430.962      | 238.352.111       |
| 9  | RICY | Ricky Putra Globalindo Tbk.     | 234.122.745.885     | 53.782.545.864      | - 41.311.399.615 | 414.198.450.722     | 1.164.853.938.605              | 321.101.134.959 | 1.579.052.389.327 |
| 10 | SRIL | Sri Rejeki Isman Tbk.           | 734.588.589         | 425.663.319         | 30.595.135       | 622.213.737         | 964.227.176                    | 316.615.378     | 1.586.440.913     |
| 11 | SSTM | Sunson Textile Manufacture Tbk. | 103.601.114.061     | - 158.702.126.267   | 4.829.720.353    | 203.912.975.724     | 254.294.612.854                | 103.379.499.739 | 458.207.588.578   |
| 12 | STAR | Star Petrochem Tbk.             | 489.592.894.190     | 10.186.266.478      | 171.018.912      | 490.187.186.456     | 90.160.937.202                 | 507.489.524     | 580.348.123.658   |
| 13 | TFCO | Tifico Fiber Indonesia Tbk.     | 83.991.014          | - 1.135.800         | 162.449          | 289.722.387         | 20.767.158                     | 46.146.147      | 310.489.545       |
| 14 | TRIS | Trisula International Tbk.      | 350.717.840.963     | 93.919.539.165      | 9.622.432.981    | 667.326.876.574     | 591.202.232.510                | 344.044.704.395 | 1.258.529.109.084 |
| 15 | UNIT | Nusantara Intri Corpora Tbk.    | - 583.833.331       | 26.625.473.166      | 325.321.502      | 246.979.605.182     | 117.068.678.736                | 39.799.921.556  | 364.048.283.918   |
| 16 | ZONE | Mega Perintis Tbk.              | 123.708.594.686     | 123.095.971.790     | - 4.353.662.417  | 287.000.016.096     | 326.224.476.162                | 107.930.377.662 | 613.224.492.258   |

**Source:** The author's own study, 2020

The company's health is important for increasing efficiency in running its business so that the ability to earn profits can be increased while avoiding the possibility of bankruptcy (liquidation) in the company. The occurrence of liquidation or bankruptcy in several companies will, of course, result in a number of issues involving the owners and employees who lose their jobs.

This phenomenon encourages researchers to investigate financial distress predictions in the textile and garment sub-sectors listed on the IDX (idx.co.id, 2020). The findings of this study are expected to provide a comprehensive picture of Indonesia's financial distress, particularly in the textile and garment sub-sector. Furthermore, this paper can be used as a reference for practitioners who want to know what approaches and methods academics and practitioners can use to predict financial distress in Indonesian companies.

## 2. LITERATURE REVIEW

### 2.1 Financial management and financial distress

Financial management is all activities or company activities related to how to obtain working capital funding, use or allocate funds, and manage assets owned to achieve the main goals of the company (13,14). The main purpose of financial management is to maximize the value owned by a company or to add value to the assets held by the shareowner (15–17). Predicting the survival of the company is very important for management and company owners to anticipate the possibility of potential bankruptcy(18–20). Financial distress itself is a condition in which the company's finances are in an unhealthy state or a crisis that occurred before bankruptcy. Bankruptcy itself is usually defined as a situation or situation where the company fails or is no longer able to fulfill the debtor's obligations because the company experiences insufficient and insufficient funds to run or continue its business (21–24). The financial distress model needs to be developed because knowing the company's financial distress from an early age is expected to take actions to anticipate that it will lead to bankruptcy.

### 2.2 Multiple discriminant analysis

Altman's Multivariate Analysis (1968) pioneered a statistical method known as multiple discriminant analysis (MDA), which is based on a linear combination of financial ratios that distinguishes between two groups of companies: bankrupt and non-bankrupt. The Z-Score analytical method predicts the occurrence of company bankruptcy by determining a standard count that indicates the likelihood of the company's bankruptcy (21,25,26).

## 3. METHODOLOGY

The descriptive quantitative method approach (27) is used in this study by adopting the case study method (28). While the case study data source comes from the IDX, using the purposive sampling method (29,30) on the financial statements of the textile and garment sub-sector companies in 2019 and the first quarter of 2020. The data used can be categorized as secondary data with internal data sources, namely Financial Statements. On the other hand, data collection techniques use document review techniques.

The descriptive analysis method used in this study aims to analyze the data by describing the collected data rather than pulling personalized conclusions or making broad generalizations. Researchers use this analysis to describe sample data when they do not want to reach conclusions that apply to the population from which the sample was gathered. While the cross-sectional method is used for case study analysis, or by comparing the Z-score (multiple discriminant analysis) that has been performed between one company and the standard zone that has been carried out simultaneously. The form of the Z-score function (25,26) consisting of 5 coefficients, are:

$$Z = A_1 T_1 + A_2 T_2 + \dots + A_n T_n$$

$$Z = 0.717 T_1 + 0.847 T_2 + 3.107 T_3 + 0.420 T_4 + 0.998 T_5$$

Where:

Z is the value used to classify or predict the firm into one of the groupings.

$A_1, A_2, \dots, A_n$  are the discriminant coefficients.

$T_1$  = working capital/total assets.

$T_2$  = retained earnings/total assets.

$T_3$  = earnings before interests and taxes/total assets.

$T_4$  = market value of equity/book value of total debt.

$T_5$  = sales/total assets.

Z zone:

$Z > 2,9$  = Safe Zone

$1,23 < Z < 2,9$  = Gray Zone

$Z < 1,23$  = Stress Zone

## 4. RESULT AND DISCUSSION

### 4.1 Case study of financial distress prediction in textile and garment sector

A multiple discriminant analysis of 16 companies in the textile and garment industry reveals that the Covid-19 pandemic has a significant impact on their financial conditions, as shown in table 2.

**Table 2: Analysis of Z-score value in First Quarter of 2020**

| No | Code | Name                            | T1      | T2      | T3      | T4      | T5    | Z        | Zone          |
|----|------|---------------------------------|---------|---------|---------|---------|-------|----------|---------------|
| 1  | POLY | Asia Pacific Fibers Tbk.        | - 4.046 | - 9.218 | 0.021   | - 0.797 | 0.367 | - 10.612 | Distress Zone |
| 2  | HDTX | Panasia Indo Resources Tbk.     | - 0.608 | - 4.494 | - 0.076 | 0.101   | 0.007 | - 4.429  | Distress Zone |
| 3  | ESTI | Ever Shine Tex Tbk.             | 0.043   | - 1.190 | - 0.005 | 0.297   | 0.136 | - 0.733  | Distress Zone |
| 4  | MYTX | Asia Pacific Investama Tbk.     | - 0.247 | - 0.639 | - 0.000 | 0.099   | 0.127 | - 0.550  | Distress Zone |
| 5  | RICY | Ricky Putra Globalindo Tbk.     | 0.148   | 0.034   | - 0.026 | 0.356   | 0.203 | 0.406    | Distress Zone |
| 6  | SSTM | Sunson Textile Manufacture Tbk. | 0.226   | - 0.346 | 0.011   | 0.802   | 0.226 | 0.463    | Distress Zone |
| 7  | ERTX | Eratex Djaja Tbk.               | 0.031   | 0.134   | 0.010   | 0.367   | 0.344 | 0.666    | Distress Zone |
| 8  | BELL | Trisula Textile Industries Tbk. | 0.205   | 0.150   | 0.008   | 0.445   | 0.253 | 0.739    | Distress Zone |
| 9  | ZONE | Mega Perintis Tbk.              | 0.202   | 0.201   | - 0.007 | 0.880   | 0.176 | 0.838    | Distress Zone |
| 10 | INDR | Indo-Rama Synthetics Tbk.       | 0.048   | 0.283   | 0.006   | 0.917   | 0.234 | 0.910    | Distress Zone |
| 11 | TRIS | Trisula International Tbk.      | 0.279   | 0.075   | 0.008   | 1.129   | 0.273 | 1.034    | Distress Zone |
| 12 | UNIT | Nusantara Intri Corpora Tbk.    | - 0.002 | 0.073   | 0.001   | 2.110   | 0.109 | 1.059    | Distress Zone |
| 13 | SRIL | Sri Rejeki Isman Tbk.           | 0.463   | 0.268   | 0.019   | 0.645   | 0.200 | 1.089    | Distress Zone |
| 14 | PBRX | Pan Brothers Tbk.               | 0.724   | 0.168   | 0.001   | 0.738   | 0.195 | 1.169    | Distress Zone |
| 15 | STAR | Star Petrochem Tbk.             | 0.844   | 0.018   | 0.000   | 5.437   | 0.001 | 2.905    | Safe Zone     |
| 16 | TFCO | Tifico Fiber Indonesia Tbk.     | 0.271   | - 0.004 | 0.001   | 13.951  | 0.149 | 6.200    | Safe Zone     |

Source: The author's own study, 2022

PT. Trisula Textile Industries Tbk. has a positive working capital, which means the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company is only

producing 21% of its working capital from the total of assets utilized by the company for its operations. T2 shows that the company can only generate retained earnings of 15% of total assets used by the company for its operations. T3 shows real productivity, which shows that the use of total assets capable of generating profit for the current period before tax is only 8%. Whereas T4 shows that the company is only able to fulfill its obligations of only 45%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 25% of their total sales of total assets. PT. Trisula Textile Industries Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 0.739 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Trisula Textile Industries Tbk. in the first quarter of 2020 is in a distress zone.

PT. Eratex Djaja Tbk. has a positive working capital, which means the current assets are sufficient to cover their current debt. In addition, as seen from the T1 value, the company is only producing 3% of its working capital from the total of assets utilized by the company for its operations. T2 shows that the company can only generate retained earnings of 13% of total assets used by the company for its operations. T3 shows real productivity, which shows that the use of total assets capable of generating profit for the current period before tax is only 1%. Whereas T4 shows that the company is only able to fulfill its obligations of only 37%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 34% of their total sales of total assets. PT. Eratex Djaja Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 0.667 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Eratex Djaja Tbk. in the first quarter of 2020 is in a distress zone.

PT. Ever Shine Tex Tbk. has a positive working capital, which means the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company is only producing 4% of its working capital from the total of assets utilized by the company for its operations. T2 has a negative score which indicates that the company is not able to generate a retained profit from the total of assets used for its operations. T3 has a negative score that shows real productivity, which shows that the use of total assets is not capable of generating retained profit for the current period before tax. Whereas T4 shows that the company is only able to fulfill its obligations of only 30%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 14% of their total sales of total assets. PT. Ever Shine Tex Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of -0.733 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Ever Shine Tex Tbk. in the first quarter of 2020 is in a distress zone.

PT. Panasia Indo Resources Tbk. has a negative working capital, which means the current assets are not sufficient to cover their current debt. In addition, as seen from the T1 value, the company has a negative score; this means that the total assets used by the company for its operations cannot generate working capital. T2 has a negative score which indicates that the company cannot generate retained profit from the total assets used by the company for its operations. T3 has a negative score that shows real productivity, which shows that the use of total assets is not capable of generating retained profit for the current period before tax. Whereas T4 shows that the company is only able to fulfill its obligations of only 10%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 1% of their total sales of total assets. PT. Panasia Indo Resources Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of -4.429 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Panasia Indo Resources Tbk. in the first quarter of 2020 is in a distress zone.

PT. Indo-Rama Synthetics Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 5% of the working capital of the total assets used by the company for its operations. T2 shows that the company is only able to generate retained profit of 28% of the total assets used by the company for its operations. T3 has a negative score that shows real productivity, that is, the use of total assets capable of generating profit for the current period before tax is only 1%. Whereas T4 shows that the company is only able to fulfill its obligations of 92%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 23% of their total sales of total assets. PT. Indo-Rama Synthetics Tbk. produces a Z-Score value based on calculations using the

Altman Z-Score method of 0.910 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Indo-Rama Synthetika Tbk. in the first quarter of 2020 is in a distress zone.

PT. Asia Pacific Investama Tbk. has a negative working capital, which means the current assets are not sufficient to cover their current debt. In addition, as seen from the T1 value, the company has a negative score; this means that the total assets used by the company for its operations cannot generate working capital. While the negative T2 score indicates that the company cannot generate retained profit from the total assets used by the company for its operations. Similar to the negative T3 score, which means that the real productivity of the company is bad, which indicates the use of total assets are not able to generate profits for the current period before tax. T4 indicates that the company is only able to fulfill its obligations of 10%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 13% of their total sales of total assets. PT Asia Pacific Investama Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 0.550 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Asia Pacific Investama Tbk. in the first quarter of 2020 is in a distress zone.

PT. Pan Brothers Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 72% of the working capital of the total assets used by the company for its operations. T2 shows that the company is only able to generate retained profit of 17% of the total assets used by the company for its operations. T3 shows real productivity, which indicates the use of total assets capable of generating profit for the current period before tax is only 0.1%. Whereas T4 shows that the company is only able to fulfill its obligations of 74%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 20% of their total sales of total assets. PT. Pan Brothers Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 1.169 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Pan Brothers Tbk. in the first quarter of 2020 is in a distress zone.

PT. Asia Pacific Fibers Tbk. has a negative working capital, which means the current assets are not sufficient to cover their current debt. In addition, as seen from the T1 score, the company has a negative score; this means that the total assets used by the company for its operations cannot generate working capital. While the negative T2 score indicates that the company cannot generate retained profit from the total assets used by the company for its operations. T3 indicates real productivity, which shows that the use of total assets capable of generating profit for the current period before tax is only 2%. T4 has a negative score which indicates that the company is not able to fulfill its obligations. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 37% of their total sales of total assets. PT. Asia Pacific Fibers Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of -10.612 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Asia Pacific Fibers Tbk. in the first quarter of 2020 is in a distress zone.

PT. Ricky Putra Globalindo Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 15% of the working capital of the total assets used by the company for its operations. T2 shows that the company is only able to generate retained profit of 3% of the total assets used by the company for its operations. T3 has a negative score which indicates real productivity, that is, the use of total assets is not able to generate profits for the current period before tax. Whereas T4 shows that the company is only able to fulfill its obligations of 36%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 20% of their total sales of total assets. PT. Ricky Putra Globalindo Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 0.406 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Ricky Putra Globalindo Tbk. in the first quarter of 2020 is in a distress zone.

PT. Sri Rejeki Isman Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 46% of the working capital of the total assets used by the company for its operations. T2 shows that the company is

only able to generate retained profit of 27% of the total assets used by the company for its operations. T3 indicates real productivity, which shows that the use of total assets capable of generating profit for the current period before tax is only 2%. Whereas T4 shows that the company is only able to fulfill its obligations of 65%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 20% of their total sales of total assets. PT. Sri Rejeki Isman Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 1.089 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Sri Rejeki Isman Tbk. in the first quarter of 2020 is in a distress zone.

PT. Sunson Textile Manufacture Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 23% of the working capital of the total assets used by the company for its operations. While the negative T2 score indicates that the company cannot generate retained profit from the total assets used by the company for its operations. T3 indicates real productivity, which shows that the use of total assets capable of generating profit for the current period before tax is only 1%. Whereas T4 shows that the company is only able to fulfill its obligations of 80%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 23% of their total sales of total assets. PT. Sunson Textile Manufacture Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 0.463 where the value is below the  $Z < 1.23$  cut-off point. This indicates that PT. Sunson Textile Manufacture Tbk. in the first quarter of 2020 is in a distress zone.

PT. Star Petrochem Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 84% of the working capital of the total assets used by the company for its operations. T2 shows that the company is only able to generate retained profit of 2% of the total assets used by the company for its operations. T3 has a score of 0 which indicates real productivity, that is, the use of total assets is not able to generate profits for the current period before tax. Whereas T4 that have a score of more than 100% indicates that the company is very capable of fulfilling its obligations. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 0.1% of their total sales of total assets. PT. Star Petrochem Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 2.905 where the value is above the  $Z < 1.23$  cut-off point. This indicates that PT. Star Petrochem Tbk. in the first quarter of 2020 is in a safe zone.

PT. Tifico Fiber Indonesia Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 27% of the working capital of the total assets used by the company for its operations. T2 has a negative score which indicates that the company cannot generate retained earnings from the total assets used by the company for its operations. T3 shows real productivity, that is, the use of total assets is only able to generate profits for the current period before tax of 0.1%. Whereas T4 that have a score of more than 100% indicates that the company is very capable of fulfilling its obligations. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 15% of their total sales of total assets. PT. Tifico Fiber Indonesia Tbk. produces a Z-Score value based on calculations using the Altman Z-Score method of 6.2 where the value is above the Z cut-off point  $> 2.905$ . This indicates that PT. Tifico Fiber Indonesia Tbk. in the first quarter of 2020 is in a safe zone.

PT. Trisula International Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 28% of the working capital of the total assets used by the company for its operations. T2 shows that the company is only able to generate retained profit of 8% of the total assets used by the company for its operations. T3 shows real productivity, that is, the use of total assets is only able to generate profit for the current period before tax of 1%. Whereas T4 that has a value of more than 100% indicates that the company is very capable of fulfilling its obligations. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 27% of their total sales of total assets. PT. Trisula International Tbk. produces a Z-Score value based on calculations using

the Altman Z-Score method of 1.034 where the value is below the Z cut-off point  $< 1.23$ . This indicates that PT. Trisula International Tbk. in the first quarter of 2020 is in a distress zone.

PT. Nusantara Inti Corpora Tbk. has a negative working capital, which indicates the current assets are not sufficient to cover their current debt. In addition, seen from the T1 score, the company has a negative value, meaning that the total assets used by the company for its operations cannot generate working capital. T2 shows that the company is only able to generate retained profit of 7% of the total assets used by the company for its operations. T3 shows real productivity, that is, the use of total assets is only able to generate profit for the current period before tax of 0.1%. Whereas T4 that have a score of more than 100% indicates that the company is very capable of fulfilling its obligations. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 11% of their total sales of total assets. PT. Nusantara Inti Corpora Tbk. produced a Z-Score value based on calculations using the Altman Z-Score method of 1.059 where the value was below the Z  $< 1.23$  cut-off point. This indicates that PT. Nusantara Inti Corpora Tbk. in the first quarter of 2020 is in a distress zone.

PT. Mega Perintis Tbk. has a positive working capital, which indicates the current assets are sufficient to cover their current debt. In addition, as seen from the T1 score, the company only produces 20% of the working capital of the total assets used by the company for its operations. T2 shows that the company is only able to generate retained profit of 20% of the total assets used by the company for its operations. T3 has a negative score which indicates real productivity, namely the use of total assets is not able to generate profit for the current period before tax. Then T4 shows that the company is only able to fulfill its obligations by 88%. Meanwhile, T5 shows the severity of the Covid-19 impact on company sales in the first quarter of 2020, for the company can only generate 18% of their total sales of total assets. PT. Mega Perintis Tbk. produced a Z-Score value based on calculations using the Altman Z-Score method of 0.838 where the value was below the Z  $< 1.23$  cut-off point. This indicates that PT. Mega Perintis Tbk. in the first quarter of 2020 is in a distress zone.

## 5. CONCLUSION

A case study using multiple discriminant analysis models conducted in the first quarter of 2020 reveals a significant impact of Covid-19 on the financial condition of companies listed on the IDX in the textile and garment industry, with 88 percent of companies in a stress zone. Specifically, 14 companies are included in the distress zone, with PT. Asia Pacific Fibers Tbk. having the most severe condition and the highest negative Z score. There are two companies in the safe zone, with PT. Tifico Fiber Indonesia Tbk. having the best condition and the highest positive Z score. This case study demonstrates how both internal and external factors can lead to a company's demise. As a result, corporate financial management decision-making must consider the company's liquidity, debt proportion, and the efficient use of working capital. Furthermore, companies in distress are more concerned with the proportion of debt and the balance of current assets and current liabilities. These factors are critical in generating working capital in order to increase profits, which will lead to an increase in share prices.

The case study analysis in this study is at least capable of providing a comprehensive illustration of financial distress conditions in Indonesian textile and garment sector companies. As a result, the findings of this study can be applied not only by researchers, but also by practitioners interested in cases of financial distress. One of the study's limitations is that the sample is still limited to the research scope, which only covers the two sectors. Furthermore, this study only employs a single model of financial distress. As a result, it is hoped that in the future, research will be conducted with various types of company sectors and using various financial distress models.

### DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we

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