INDUSTRY TYPE AS A CONTROL VARIABLE BETWEEN COMPANY SIZE, CAPITAL STRUCTURE, AND PROFITABILITY RATIO TO FINANCIAL DISTRESS

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Abstract
Financial distress is a condition of a company experiencing financial difficulties. Therefore, companies need to ensure and maintain that financial conditions are always healthy so predictions are needed to see the current and future conditions of the company's financial health. This study aims to determine the effect of firm size, capital structure, and profitability ratios on financial distress with the control variable for the type of industry. This research was conducted on manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2017 – 2020. The sample used was purposive sampling and obtained 46 manufacturing companies. The analysis used is multiple linear regression and data processing using SPSS program. The results of the study are company size has a negative effect on financial distress (financial distress) of the company, capital structure has a negative effect on financial distress in manufacturing companies, profitability ratios have a positive effect on financial distress, and company size, capital structure, and profitability ratios. have a simultaneous effect on financial distress.

Keywords: financial distress, company size, capital structure, profitability ratio, manufacturing company

Introduction
In the midst of current economic development and progress, there are several companies experiencing bankruptcy and financial difficulties, one of which is the manufacturing industry. Such companies such as PT. Garuda Indonesia, PT. Pan Brothers, PT. Sri Fortune Isman, and others. The company went bankrupt as reported by Tempo, namely PT Sri Rejeki Isman with PKPU status after the Semarang District Court granted CV Prima Karya's application (Tempo.2021). This situation is getting worse with the global problem, namely the COVID-19 pandemic. Bankruptcy (liquidation) is a condition where a company is unable to fulfill all its short-term, long-term, operational obligations, and is declared bankrupt by the court. This condition is a condition that is avoided by company owners, potential investors, creditors, and management. Meanwhile, before the company goes into bankruptcy (liquidation) the company will first experience financial difficulties.

Financial distress is a process in which the company is unable to meet operational needs, short-term obligations or experiences limitations in use(Sari et al., 2018). In addition, there is another definition where financial distress is a condition of a company that is unable to obtain funds to
pay obligations that are due (Andualem, 2015). And it can also usually arise when companies fail to honor their financial obligations to suppliers and creditors (Eboiyehi and Ikpesu, 2017).

Difficulties experienced by companies such as difficulty paying obligations, both short-term obligations and long-term obligations. In addition, the company's operational activities will be disrupted such as decreased production, difficulty in getting suppliers, difficulties in obtaining funding (creditors), difficulties in meeting employee and management salaries. This condition makes the company's situation not conducive so that the company is constrained to achieve the targets that have been set.

All parties or elements of the company both inside and outside who have an interest do not want the company to experience financial distress (financial distress). Therefore, predictions are needed to see the company's future to find out future projections/prospects that are good or not good about the company's financial health. Predictions that can be used to see the possibility of a company experiencing financial difficulties are firm size, capital structure, and profitability ratios.

Company size is the size of the funds owned by the company to meet operational needs. In addition, there is another opinion, namely the size of the company is a large-scale company that can be measured and seen from total assets, log size, stock market value, and others. (Suryani, 2020). The bigger the company, the company has large resources or assets so that the company has broad opportunities to develop the company. Company development can be done such as increasing the amount of production, opening company branches, and others. With large resources, the company is also able to accelerate in achieving the targets desired by the company. So that the larger the company will avoid financial difficulties.

Another factor that predicts financial health is capital structure. Capital structure is the composition of the company's sources of funds originating from capital and debt. The same thing is explained that the capital structure is a description of the form of the financial proportion of a company between capital originating from long-term debt and own capital which is a source of financing for a company. (Ningsih & Utami, 2020). The structure that is owned will determine the direction of the company's management policies. This is because the larger the company uses debt, the greater the cost risk than if the company uses its own capital. The risks that will be faced when using debt are returning the loan principal, paying interest and potential late fees. This risk certainly has an impact on reducing company profits or increasing company losses. It is different if the company relies more on the capital it has. So that if the company uses debt more than capital, the company will have a great potential to experience financial distress (financial distress) and vice versa.

Another factor used to predict the possibility of financial difficulties is the profitability ratio. The profitability ratio is a ratio that describes the size of the profit obtained from operating activities from the source of funds owned by the company (Industry et al., 2011). The greater the profit earned means the company has a better ability to meet short-term and long-term obligations. In addition, the large profits obtained will increase the confidence of creditors, investors, and internal companies. This condition is expected so that the company avoids financial difficulties. Based on the explanation reviewed above, this research is entitled "The Influence of Company

This study has the aim of knowing the effect of company size, capital structure, and profitability ratios on financial distress in manufacturing companies simultaneously or partially. Then after this research is expected to provide benefits to investors, banks, management, and other parties assist in predicting the company's financial health from company size, capital structure, and profitability ratios.

Theory & Hypothesis Development

The research design used in this research is quantitative research. The population in this study were 192 manufacturing companies listed on the Indonesia Stock Exchange (IDX). Then the method of determining the sample used is purposive sampling. After determining the sample in accordance with the criteria determined on the population, the research sample was 46 companies. The data used in secondary data research in the form of financial reports obtained from www.idx.co.id and from the website address (web) of each company.

Analysis of the data used in this study using multiple linear regression analysis. Before analyzing the data, it is necessary to test the classical assumptions in the form of a normality test; multicollinearity test; autocorrelation test; and heteroscedasticity test. The normality test is a test carried out to ensure the data is normally distributed (Ghozali, 2011). The normality test used is the Kolmogorov-Smirnov. Furthermore, the multicollinearity test is a test that aims to ensure that each independent variable has no relationship/correlation (Ghozali, 2011). The multicollinearity test used is using the tolerance value or variance inflation factor (VIF). Furthermore, the classical assumption test used is the autocorrelation test. The autocorrelation test aims to examine the internal relationship between elements in observations arranged in a series of space and time (Ghozali, 2011). The autocorrelation test used was the Durbin Watson test (DW Test). And the last classic assumption test is the heteroscedasticity test which aims to test the level of variance of inequality from one observation to another observation (Ghozali, 2011). Heteroscedasticity test is needed because the research period used is in a row. After the classical assumption test was carried out, it was continued with multiple linear regression test. Multiple linear regression test formula:

\[ Y = + 1X_1 + 2X_2 + e \] (Ghozali, 2016)

After the regression test was performed, then a significance test was conducted to determine whether the independent variable had an effect on the independent variable. The significance test used in this research is t test, f test, and R2 test (R Square). In doing the regression test and classical assumptions using the SPSS program.

Hypothesis

Company Size and Financial Distress

Company size is a large and small company that can be measured by various methods such as total assets, total sales, production capacity, and others. The larger the company, the company has strong resources to carry out the company's operational activities. With the resources owned, the company can have more opportunities to be used in developing companies that aim to
improve financial performance so as to reduce the risk of financial distress in the company. This condition is in accordance with the results of previous research (Angela Girman. 2020), namely the size of the company has a negative effect on the company's financial distress. The same thing was also done by Setyowati and Sari (2019) and Susilawati, Sofianty and Sukarmanto (2017), who prove that company size has a negative effect on financial distress. So that in this study the first hypothesis was formulated:
H1: Firm size has a negative effect on financial distress in manufacturing companies listed on the IDX.

**Capital Structure and Financial Distress**
The capital structure is a balance of the composition of the company's sources of funds consisting of debt and capital. The composition of the company's debt and capital will determine the policy direction of the company's policy makers. This is because if the company has a debt composition greater than the company's own capital, the company has an obligation to return the principal loan and interest expense to creditors. Interest expense in the books is recorded as a cost so that it will affect the company's profit and loss. The greater the debt used compared to capital, the greater the company will be faced with financial difficulties. This condition is in accordance with the results of research from (Mesisti Utami.2012) where the capital structure has a positive influence on financial distress in manufacturing companies. The same thing is also produced by (Dedy Samsul Arifin.2021) where leverage has a positive and significant effect on financial distress in real estate companies. So that in this study the second hypothesis was formulated:
H2: Capital structure has a positive effect on financial distress in manufacturing companies listed on the IDX.

**Profitability Ratios and Financial Distress**
Profitability ratio is a ratio that describes the achievement of the company's performance in generating profits with available sources within the company. The greater the profitability ratio illustrates the greater the profit earned by the company with available sources. With the condition that the company has a large profit, the company will be able to fulfill the company's obligations and operating costs so that the smaller company is faced with financial distress conditions (financial difficulties). This statement is supported by previous research, namely Khotimah and Yuliana (2020) and Chrissentia and Syarief (2018), which prove that profitability has a negative effect on financial distress. So that in this study the third hypothesis was formulated:
H3: Profitability ratios have a negative effect on financial distress in manufacturing companies listed on the IDX.

**Company Size, Capital Structure, Profitability Ratios, and Financial Distress**
The bigger the company, the more opportunities it has to expand its business. This opportunity can be used to expand the business or grow the business. This opportunity will be better if the composition of capital is dominated by capital used rather than debt so that it is more independent in meeting operational needs or does not depend on other parties. This situation will reduce costs and have an impact on greater profits. The high and low profits earned make it easy
for the company to carry out and carry out plans, especially those related to activities for the progress of the company such as investment, opening branches, and others. In addition, the obligations and expenses of the 18 companies can also be fulfilled smoothly and according to maturity. This good condition will strengthen the company's financial condition. Thus making the company will avoid financial difficulties (financial distress). Based on the description above, the researcher makes a fourth hypothesis:

H4 : Company size, capital structure, and profitability ratios have a simultaneous effect on financial distress in manufacturing companies listed on the BEI

**Figure 1. Framework 1**

**Method**

The variables used in this study are independent variables, dependent variables, and control variables. The independent variables include company size, capital structure, and profitability ratios. Furthermore, the dependent variable is financial distress, and the control variable is the type of industry. In the control variable, the type of industry consists of several categories, namely basic materials, consumer cyclicals, consumer non-cyclicals, and industrials.

The sample in this study were 46 companies. The sample was obtained because of certain characteristics required in this study. For the determination of the sample can be seen in the table below:
Table 1. Sampling

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Number of Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IDX-listed manufacturing company</td>
<td>192</td>
</tr>
<tr>
<td>2</td>
<td>Manufacturing companies listed on the Stock Exchange after 2016</td>
<td>(49)</td>
</tr>
<tr>
<td>3</td>
<td>Manufacturing companies that do not report complete financial statements from 2017 – 2020</td>
<td>(55)</td>
</tr>
<tr>
<td>4</td>
<td>Manufacturing companies that use currencies other than rupiah (IDR)</td>
<td>(1)</td>
</tr>
<tr>
<td>5</td>
<td>Manufacturing companies that have a Z-Score &lt; 2.99</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Company Sample</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Research Sample (46 x 4 years)</td>
<td>184</td>
</tr>
</tbody>
</table>

Finding and Discussion

After knowing the sample in accordance with the specified characteristics. The sample summary is known as follows:

Table 2. Data Description Statistics 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Average</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Size</td>
<td>184</td>
<td>25.22</td>
<td>32.73</td>
<td>28.60</td>
<td>1.39</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>184</td>
<td>-2.89</td>
<td>23.92</td>
<td>1.70</td>
<td>2.32</td>
</tr>
<tr>
<td>Profitability Ratio</td>
<td>184</td>
<td>-1.05</td>
<td>0.18</td>
<td>0.00</td>
<td>0.10</td>
</tr>
<tr>
<td>Financial Distress</td>
<td>184</td>
<td>-5.54</td>
<td>2.96</td>
<td>1.45</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Source: SPSS 22 Data Processing

Based on table 2, it is known that the smallest value (minimum), the largest value (maximum), and the average value (mean) of each variable such as company size, capital structure, profitability ratios, and financial distress. The minimum value of the company size variable is 25.22, which means the smallest asset value owned by the company in this sample is Rp. 89,327,328,853. Then the maximum value of assets owned is 32.73 or Rp. 163,136,516,000,000. And the average value of assets owned by the company is 28.48 or Rp. 7,600,509,357,653.

Furthermore, the capital structure variable has a minimum value of -2.89 or -289%. Furthermore, the maximum value is 23.92 or 2392%. Meanwhile, the average value of the company's capital structure is 1.80 or 180%. This value shows that the majority of the company's capital structure comes from debt.

Then the profitability ratio variable has a minimum value of -1.05 or -105%. Then the maximum value is 0.18 or 18% and the average value is 0.04 or 4%. This value indicates that the average rate of return on assets on profits is very small, namely 4%.

Furthermore, the financial distress variable has a minimum value of -5.54 which means the company is experiencing financial difficulties because the value is below (<) 1.8. The maximum
value of this variable is 2.96, which means the company is in a gray area position (prone to financial difficulties). And the average value of 1.42 which means the company is in a position to experience financial distress (financial distress) because the value is less than (<) 1.8.

Prior to the multiple linear regression test, the classical assumption test had been carried out including the normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. The results of the classical assumption test stated that the sample was normally distributed and between independent variables did not occur multicollinearity and heteroscedasticity symptoms. After the classical assumption test was carried out, a multiple linear regression test was carried out with the following results:

<table>
<thead>
<tr>
<th>Industry Type (Control Variable)</th>
<th>Company Size t-hit.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Materials</td>
<td>-2.13</td>
<td>0.04</td>
</tr>
<tr>
<td>Consumer Cyclical</td>
<td>-1.94</td>
<td>0.14</td>
</tr>
<tr>
<td>Non-Cyclical Consumer</td>
<td>-2.47</td>
<td>0.02</td>
</tr>
<tr>
<td>Industrial</td>
<td>-2.18</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Dependent Variable: Financial Distress
Source: SPSS 22 Data Processing

**Company Size and Financial Distress**

The first hypothesis test of company size in financial distress with control variables of industry type (basic material, cyclical consumer, non-cyclical consumer, industrial) is known to have a significant value (0.04; 0.14; 0.02; 0.03) and the value of t count is (-2.13; -1.94; -2.47; -2.18). Due to the significance value < 0.050, and t arithmetic > t table (1.973) and the t arithmetic value is negative (-) it can be concluded that company size has an effect and is significant on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the period 2017 - 2020. These results according to research previously (Angela Girman. 2020) that the size of the company has a negative influence on the company's financial distress. The same thing was also done by Setyowati and Sari (2019) and Susilawati, Sofiany and Sukarmanto (2017), who proved that company size had a negative effect on financial distress. However, the above results are not in accordance with the research of Christine et al. (2019) and Suryani's research (2020) where company size has no effect on financial distress.

The results above show that the size of the company affects the level of financial distress experienced. The larger the assets owned and able to be managed properly, the business conditions will improve so as to prevent the company from financial difficulties. With good financial condition, the company's operational costs and short and long term debt can be settled according to maturity. And conversely, the smaller the size of the company or company assets, the greater the potential for experiencing financial distress (financial difficulties).
Capital Structure and Financial Distress

The second hypothesis test between the capital structure, in financial distress and the control variable for the type of industry (basic material, cyclical consumer, non-cyclical consumer, industrial) is known to have a significance value (0.01; 0.01; 0.01; 0.00) and a significant value (0.01; 0.01; 0.01; 0.00) and t count is (-2.66; -2.66; -2.73; -2.89). Due to the significance value < 0.050, t count > t table (1.975) and the t count value is negative (-) it can be concluded that capital structure has a significant negative effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period. This result does not match (Mesisti Utami.2012) where the capital structure has a positive influence on financial distress in manufacturing companies. The same thing is also produced by (Dedy Samsul Arifin.2021) where leverage has a positive and significant effect on financial distress in real estate companies.

The second hypothesis is not accepted because the company is able to optimize and use its debt. In addition, these results show that companies that have greater debt than capital do not guarantee that the company will experience financial difficulties. The debt is used for operational needs and for appropriate investments so that the company is able to meet both short-term and long-term obligations. This condition creates healthy finances so that the company will increasingly avoid financial distress (financial distress).

Table 5. Profitability Ratio t-test results

<table>
<thead>
<tr>
<th>Industry Type (Control Variable)</th>
<th>Profitability Ratio t-hit.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Materials</td>
<td>17.45</td>
<td>0.00</td>
</tr>
<tr>
<td>Consumer Cyclical</td>
<td>17.72</td>
<td>0.00</td>
</tr>
<tr>
<td>Non-Cyclical Consumer</td>
<td>17.54</td>
<td>0.00</td>
</tr>
<tr>
<td>Industrial</td>
<td>17.46</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Dependent Variable : Financial Distress
Source: SPSS22 data processing
Profitability Ratios and Financial Distress

The third hypothesis test of profitability ratios in financial distress with control variables of the type of industry (basic material, consumer cyclical, non-cyclical consumer, industrial) is known to have a significance value (0.00; 0.00; 0.00; 0.00) and a t-count value. of (17.45; 17.72; 17.54; 17.46). Due to the significance value < 0.050, t arithmetic > t table (1.973), and the t arithmetic value is positive (+), it can be concluded that the profitability ratio has a significant positive effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period. These results are not in accordance with previous studies such as Khotimah and Yuliana (2020) and Chrissentia and Syarief (2018) prove that profitability has a negative effect on financial distress.

The non-acceptance of the third hypothesis indicates that the greater the return on assets used by the company does not always avoid financial difficulties. These results are in accordance with Angela Girman's (2020) research, namely the profitability ratio has a positive effect on the financial distress of manufacturing companies in the basic and chemical industrial sectors listed on the Indonesia Stock Exchange in 2016-2018.

Table 4.6 F-Test Results and $R^2$

<table>
<thead>
<tr>
<th>Industry Type (Control Variable)</th>
<th>Company Size, Capital Structure, Profitability Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F-hit.</td>
</tr>
<tr>
<td>Basic Materials</td>
<td>81.49</td>
</tr>
<tr>
<td>Consumer Cyclical</td>
<td>82.88</td>
</tr>
<tr>
<td>Non-Cyclical Consumer</td>
<td>81.75</td>
</tr>
<tr>
<td>Industrial</td>
<td>80.42</td>
</tr>
</tbody>
</table>

Dependent Variable: Financial Distress
Source: SPSS22 data processing

Company Size, Capital Structure, Profitability Ratios, and Financial Distress

Test the fourth hypothesis between company size, capital structure, profitability ratios in financial distress with the control variable type of industry is known a significance value of 0.000 and a calculated f value of 81.49; 82.88; 81.75; and 80.42. Due to the significance value of 0.000 < 0.050 and f arithmetic > f table (3.05), it can be concluded that company size, capital structure, and profitability ratios have a simultaneous effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period.

The large contribution given by the size of the company, capital structure, and the ratio of profitability to financial distress with the control variable type of industry has a different value in each type of industry. The basic material industry has a contribution value of 64.6%, consumer cycicals 64.9%, consumer non-cycicals 64.6%, and industrial 64.3%. The rest of the value is other factors that affect financial distress.
Managerial Implications

Every company and especially manufacturing companies try to avoid a state of financial difficulty or bankruptcy. This condition is highly undesirable for all elements of the company, both internal elements such as management and external elements such as investors, banks, suppliers, taxes, and others. Therefore, in this study, it is known the factors that affect the company's financial health (financial distress). Company size and capital structure have a negative effect on financial difficulties, which means that the greater the assets and the greater the company's debt, the smaller the company's debt or prevent the company from financial distress.

Conclusion

This study aims to determine whether company size, capital structure, and profitability ratios have an effect on financial distress with the type of industry as a control variable. Financial distress is a process where the company is unable to meet operational needs, short-term obligations or experiences limitations in use (Ikpesu & Eboiyehi, 2018). The research period used is 2017 - 2020 and the number of samples is 46 manufacturing companies that have met the specified criteria. Based on the analysis and hypothesis testing that has been done, it can be concluded as follows:

1. Company size has a significant negative effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period.
2. Capital structure has a significant negative effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period.
3. The profitability ratio has a significant positive effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period.
4. Company size, capital structure, and profitability ratios have a simultaneous effect on financial distress in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period.

Recommendation

Financial distress a condition that every company, especially manufacturing companies, always wants to avoid. In this study, it is known that company size, capital structure, profitability ratios, and type of industry affect the company's financial health by 65.7%. This means that 34.4% of financial health is influenced by other factors and furthermore it is suggested to test other variables such as company age, good corporate governance, and portfolio which cannot be tested due to limitations. In addition, the object of research can be carried out more specifically on other types of companies such as service companies and trading companies.
References


