FINANCIAL DISTRESS: MODEL GROVER MANUFACTURING COMPANY IN INDONESIA

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ABSTRACT
This study aims to determine whether the Manufacturing Companies in the Basic and Chemical Industry Sector that experienced negative profits or losses for two consecutive years in the 2018-2020 period were in good health or even experienced financial distress when viewed from financial statement data using the Grover model analysis (G-Score). This study uses a quantitative descriptive method. The data used are the financial statements of each manufacturing company in the basic and chemical industry sectors that experienced negative profits or losses for two consecutive years in the 2018-2020 period in the form of balance sheets and profit/loss reports which will then be analyzed using the Grover model (G-Scores). The results showed that of the 8 basic and chemical industrial manufacturing companies that experienced negative profits or losses for two consecutive years, when viewed from the average score, there were 5 companies that were in the category of experiencing financial distress. While the other 3 companies are still in the healthy category, but 2 of them are still in an unstable condition and 1 of them shows an increase every year when viewed from the annual score.

Keywords:Financial Distress, G-Score, Manufacturing Company

1.INTRODUCTION

The development of the times followed by technological developments and changes in the economic cycle caused the business world to also experience changes. Each company is established with the aim of generating profits and continuing to grow and develop in the short and long term so that the company is not expected to experience liquidation and can operate in the long term. However, in reality, these assumptions are not completely in line with the expectations that occur in companies, even companies that have been established and operating for a certain period of time are forced to disband or be liquidated because they are experiencing financial difficulties which if allowed to drag on can result in financial distress. and lead to bankruptcy.

Indonesia has become the largest manufacturing industrial base in ASEAN with a contribution of 20.27% to the national economy. In addition, the manufacturing industry is considered to be more productive and can provide wide-ranging effects so that it can increase the added value of raw materials, increase workforce, generate the largest foreign exchange source, and contribute the largest taxes and customs.

Bank Indonesia (BI) noted that the sluggish growth of the national manufacturing economy has become one of the obstacles to Indonesia's economic growth which as a result, the economic growth rate is always stuck at the level of around 5 percent every year. This is related to the global economic slowdown which has actually been going on since 2015 which had a bad impact on the performance of the country's manufacturing industry throughout 2019, which was further exacerbated by the United States (US) - China trade war in 2018. It did not stop until there, the trade war got worse in 2019, marked by the imposition of 25% tariffs by the US on US$200 billion worth of Chinese products. The Bamboo Curtain country also launched the same attack by announcing an increase in import duties of 5%-25% for various US products worth US$ 60 billion. This will further

slow down the global supply chain. The flow of trade, including capital goods around the world is increasingly sluggish. This is also what is happening in Indonesia.

The Central Statistics Agency (BPS) noted that the production growth of large and medium manufacturing industries in the second quarter of 2019 decreased by 1.91% compared to the first quarter of 2019. However, when compared to the second quarter of 2018, there was an increase of 3.62 percent. The reason is because the performance of the metal goods industry, not its machinery and equipment, has fallen drastically. One of the causes of the slowdown was the decline in production in a number of manufacturing industries. Head of the Central Statistics Agency (BPS) Suhariyanto said the industry that experienced the largest decline in production was the metal goods industry, not machinery and equipment, which was 21.46 percent compared to the second quarter of last year. The non-metallic minerals industry also weakened, the decline reached 13.46 percent. Furniture industry growth fell 12.40%,

If this condition is allowed to continue, it is feared that it will trigger delisted from stock trading on the Indonesia Stock Exchange (IDX). Preventive actions need to be taken by companies to prevent bankruptcy, one of which is by making early predictions. This is also done to prevent delisting from the stock trading list of the Indonesia Stock Exchange (IDX), which is often interpreted by investors as bankrupt. Therefore it is necessary to have an early warning regarding the possibility of bankruptcy. The earlier the signs of bankruptcy are known, the better for the company's management so that the company can develop strategies to anticipate and overcome it.

Bankruptcy is a condition where a company is no longer able to operate the company properly because the financial difficulties experienced by the entity are already very severe. Before a company is declared bankrupt, the company will usually experience unhealthy financial conditions (financial distress). Financial distress is a condition in which the company has difficulty funding to cover the company's obligations or liquidity difficulties, namely if the debt is greater than the assets of Handajani in (Hastuti, 2015). Meanwhile, according to Whitaker in (Hastuti, 2015) a company can be said to be in financial distress or a problematic condition if the company experiences negative net profit for several years.

There have been many studies discussing predictive models, such as in the study (Sudrajat & Wijayanti, 2019) which compared the Altman, Zmijewski, and Grover models in predicting financial distress in manufacturing companies in the basic and chemical industry sectors. The result states that the Grover model (G-Score) is the most accurate model for predicting bankruptcy (financial distress). Furthermore (Hastuti, 2015) conducted research on comparative analysis of financial distress prediction models Altman, Springate, Grover, and Ohlson in manufacturing companies listed on the Indonesia Stock Exchange for the period 2011-2013. The result is that Grover's model is the most accurate predictive model applied to manufacturing companies listed on the Indonesia Stock Exchange (IDX). Then in research (Margali, Rate, &

Based on the explanation of the problems described above regarding the data and thoughts, the authors are interested in conducting research on the possibility of financial distress in manufacturing industrial companies based on the analysis of the company's financial statements with the Grover model (G-Score) because it is relevant to the discussion of the theme. research that will be presented with the title "**Financial Distress: Model Grover Manufacturing Company In Indonesia".**

Based on the description of the background above, the main formulation of this problem is What is the financial condition of a manufacturing company using the Grover model (G-Score)?

The author limits the discussion of the problem regarding Financial Distress with the Grover model (G-Score), namely "In manufacturing companies in the basic and chemical

industrial sectors listed on the Indonesia Stock Exchange (IDX) in 2016-2018 that experienced negative net income or losses in 2 consecutive years. come along." The purpose of this research is to find out how the financial condition of manufacturing companies with the Grover model (G-Score).

2.LITERATURE REVIEW

Financial distress

*Financial distress*is a condition in which the company experiences difficulty in funds to cover the company's obligations or liquidity difficulties, namely if the debt is greater than the assets of Handajani in (Hastuti, 2015). On the other hand, according to Platt in (Rahayu, Suwendra, & Yulianthini, 2016) financial distress is the stage of decreasing the financial condition of a company before bankruptcy or liquidation occurs. Continuing with Agusti's opinion in (Muflihah, 2017) which defines financial distress as a decrease in the financial condition experienced by an entity that occurred before it went bankrupt. Meanwhile, according to Wintaker in (Hastuti, 2015) a company can be said to be in financial distress or a problematic condition if the company experiences negative net profit for several years.

According to (Mamduh & Halim, 2012) financial distress information can be useful for several parties, namely as follows:

1. Lenders (Such as Banks); Bankruptcy information can be useful for making decisions for parties who will lend, and then useful for monitoring policies on existing loans.
2. Investors; shares or bonds issued by a company will certainly be very interested in seeing the possibility of bankruptcy or not the company that sells the securities. Investors who adopt an active strategy will develop a bankruptcy prediction model to see signs of bankruptcy as early as possible from the possibility.
3. Government Party; In some corporate sectors and sub-sectors, government agencies have the responsibility to oversee the running of the business. In addition, the government has an interest in seeing signs of bankruptcy early so that necessary actions can be taken early.
4. Accountant: Accountants have an interest in information on the continuity of a business because the accountant will assess the going concern ability of a company.
5. Management: Bankruptcy means the incurring costs associated with bankruptcy and these costs are quite substantial. A study shows the cost of bankruptcy can reach 11-17% of the value of the company. If management can detect this bankruptcy early, then savings measures can be taken, for example by conducting mergers or financial restructuring so that bankruptcy costs can be avoided.

According to Rodoni and Ali in (Carolina & Pratama, 2017) When viewed from the point of view of financial conditions, there are three conditions that cause financial distress, namely the factor of insufficient capital or lack of capital, the amount of debt and interest expenses, and suffering losses. According to Lizal in (Rahayu, 2016) the causes of financial distress are as follows:

1. **Neoclassical models**; Financial distress occurs when the allocation of resources is not appropriate. Estimating the difficulty is done with balance sheet and income statement data.
2. **Financial models**; Financial distress is characterized by the wrong financial structure and causes liquidation constraints (liquidity constraints). This means that although the company can survive in the long term, it must also go bankrupt in the short term.

3. **Corporate governance model**; Financial distress according to the corporate governance model is when a company has the right asset structure and a good financial structure but is poorly managed.

Factors Causing Bankruptcy

According to (Ben, 2015) there are two factors that cause bankruptcy, namely, external factors (economic conditions, political conditions, and natural disasters) and internal factors (company performance, company policies, and corporate culture). According to (Firdausia, 2017) there are three factors that cause bankruptcy or company failure, namely:

1. Companies that are technically insolvent, if the company cannot pay off its debts that will mature and the value of the company's assets is lower than the debt.
2. Companies that are legally insolvent, if the total assets of the company are lower than the total debts of the company.
3. Companies that face bankruptcy are when the company is no longer able to pay off its debts and is declared bankrupt by the court.

Financial statements

Financial reports are basically tools that are needed by internal and external parties in obtaining information about the financial position of Margaretha and Ramadhani's company in (Wayan, 2014). According to IAI in Statement of Financial Accounting Standards No. 1 states that the financial report is a structured presentation of the financial position and financial performance of an entity (IAI, 2018). On the other hand, according to (Farid & Siswanto, 2013), financial statements are also information that can help users to make financial economic decisions. The next thing was also expressed by (Harahap, 2015) who said that financial statements are accountability reports by management entrusted to him. Then from the point of view (Hery,

In (IAI, 2018) the purpose of financial statements is to provide information about the financial position, financial performance, and cash flows of an entity that is useful to most users of financial statements in making economic decisions. The objectives of financial statements according to (Kasmir, 2012) are as follows:

1. Provide information about the type and amount of assets (assets) currently owned by the company.
2. Provide information about the types and amounts of liabilities and capital owned by the company at this time.
3. Provide information about the type and amount of income earned in a certain period.
4. Provide information about the amount of costs and types of costs incurred by the company in a certain period.
5. Provide information about changes that occur to the company's assets, liabilities and capital.
6. Provide information about the company's management performance in a period.
7. Provide information about the notes to the financial statements.
8. Other financial information.

Financial Ratio Analysis

Ratio analysis is one of the most widely used financial analysis tools, where the calculation of this ratio uses simple arithmetic calculations that can be interpreted, where each ratio calculation will be much more useful when compared to the results of the previous year's ratio calculation (Hery, 2012). Meanwhile, according to (Hery, 2015) ratio analysis is an analysis carried out by connecting various estimates in the financial statements in the form of financial ratios. Analysis using various ratios will provide an

overview of the company's financial performance and condition rather than analyzing only financial data.

Financial Ratio Analysis in his opinion (Hery, 2014) is a process of analysis and assessment that helps in answering questions that are reasonably asked, so it is a tool to achieve goals. By using an analytical tool in the form of this ratio, it will be able to explain or provide an overview to the analyst about the good or bad condition or financial position of a company, especially if the ratio number is compared with the comparison ratio number which is used as a standard in financial ratios. (Munawir, 2014)

Grover Model Analysis (G-Score)

According to Grover in (Manousaridis, 2017), the Grover model is a model produced by redesigning and reassessing the Altman Z-Score Model. According to Prihatini and Sari in (Sudrajat & Wijayanti, 2019), Jeffrey S. Grover used a sample according to the Altman Z-Score model in 1968, by adding thirteen new financial ratios. The sample used as many as 70 companies with 35 companies that went bankrupt and 35 companies that did not go bankrupt in 1982 to 1996. Jeffrey S. Grover produces the following function:

G-Score = 1.650 X1 + 3,404 X3 - 0.016 ROA + 0.057

Where:
X1= Working Capital / Total Assets
= Current Assets – Current Liabilities / Current Assets + Non-Current Assets

This ratio is used to measure the company's ability to generate net working capital from the total assets it owns and is one of the financial benchmarks to evaluate the company's ability to pay short-term debt (solvency). This ratio is calculated by dividing net working capital by total assets. Net working capital is obtained by means of current assets minus current liabilities.

X3 = Earning Before Interest and Taxes / Total Assets

This ratio is used to show the company's ability to manage total assets to get profits before interest and taxes. This ratio is one of the comprehensive financial analysis techniques because it can measure the efficiency of using working capital, sales and production efficiency. Earnings before interest and taxes are obtained from the income statement, and total assets are obtained from the company's balance sheet.

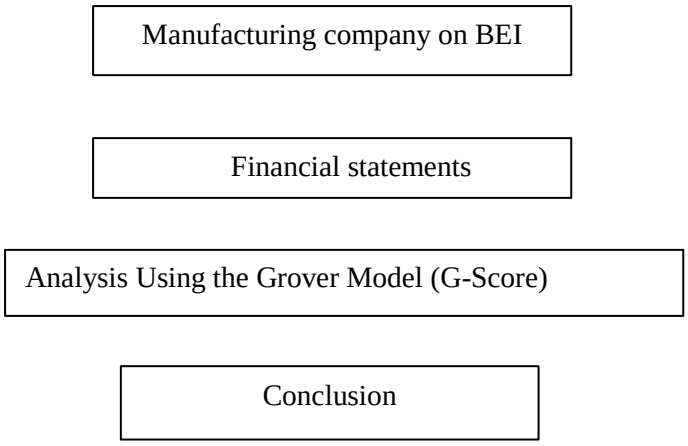
ROA = Net Income / Total Assets

ROA is a ratio that compares profit after tax with its total assets. This ratio shows how well the company uses its invested assets to seek profit. This ratio provides information on the level of management effectiveness of a company. Profit after tax is obtained from the income statement, and total assets are obtained from the balance sheet. Grover's model categorizes a company as potentially bankrupt if the score is less than or equal to -0.02 (G -0.02) and the company is said to have no bankruptcy potential, that is, if the score is greater than or equal to 0.01 (G 0, 01).

Framework

Based on the description of the research literature review, the framework proposed in this study can be shown through the following figure:

Figure 1. Framework



Source: Concept developed for research, 2021

3.DATA AND RESEARCH TECHNIQUE ANALYSIS

Types of research

This study uses a quantitative descriptive method which is a research method that seeks to describe the object or subject under study according to what it is, with the aim of systematically describing the facts, characteristics of the object being studied appropriately (Syahrir, 2017).

Data Type

The type of data in this study is secondary data. According to (Sugiyono, 2018) secondary data is data that refers to information collected from existing sources. The source of data taken in this study is secondary data in the form of financial reports whose collection is based on time units (periodic data). Periodic data in this study are financial reports on manufacturing companies in the basic and chemical industry sectors that experienced negative profits for two consecutive years listed on the IDX during the period 2016 to 2018 sourced from www.idx.com. The advantage of secondary data is that the time and cost required for research, problem classification, and data evaluation tends to be less.

Population and Sample

According to (Sugiyono, 2013b) population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. The population in this study were manufacturing companies in the basic and chemical industrial sectors that experienced negative net profits or losses for two consecutive years which were listed on the Indonesia Stock Exchange (IDX) in 2016-2018, namely as many as 14 companies.

The sampling method used is the purposive sampling method. According to (Sugiyono, 2013b) Purpose Sampling is a sampling technique with certain considerations. This method is used in order to get a representative sample in accordance with the considerations and criteria that have been determined. This

sampling was carried out based on the following criteria:

1. Manufacturing companies engaged in the basic and chemical industry sectors on the Indonesia Stock Exchange (IDX) during the 2016-2018 period.
2. Companies that publish complete financial statements for the 2016-2018 period.
3. companies that present financial statements in rupiah currency during the 2016-2018 period.

Based on data obtained from the Indonesia Stock Exchange (IDX) website, there are 8 companies that meet the sample criteria to be used. The following are manufacturing companies in the basic and chemical industrial sectors that meet the focus sampling criteria:

Table 1. Sample List

NO	COMPANY NAME	COMPANY CODE
1	Asiaplast Industries	APP
2	Saranacentral Bajatama	STEEL
3	Central Proteina Prima	CPRO
4	Eterindo Wahanatama	ETWA
5	Jakarta Kyoei Steel Works	JKSW
6	Basuki Rachmad Indonesia's Paper	Embassy of the Republic of Indonesia
7	Indonesian Ceramics Association	TEACHING
8	Solutions to Build Indonesia	SMCB

Source: Results of Criteria Screening in Determining Sampling

4.RESULT AND DISCUSSIO N

The Indonesia Stock Exchange (IDX) or Indonesia Stock Exchange is an exchange where all companies in Indonesia gather. The Indonesia Stock Exchange as one of the existing capital markets in Indonesia is a stock exchange that can provide investment opportunities and sources of financing in an effort to support national economic development. The Indonesian stock exchange also plays a role in building a large and solid local capital to create a stable Indonesian capital market.

Before analyzing the data, the thing that needs to be considered is collecting data. This is intended to make it easier for researchers to calculate and analyze data to be more effective and accurate. The data collected is data related to the method of financial distress analysis of the Grover model in the form of financial statements that will be taken from the financial statements of manufacturing companies in the basic and chemical industry sectors that experience negative net profits or losses for 2 consecutive years listed. on the Indonesia Stock Exchange (IDX) from 2016 to 2018.

The data obtained will then be processed and analyzed to predict whether manufacturing companies in the basic and chemical industry sectors that experience negative profits for two consecutive years for the 2016 to 2018 period have the potential to experience financial distress based on the Grover method (G-Score):

G-Score = 1.650 X1 + 3,404 X3 - 0.016 ROA + 0.057
Where :
X1= Working Capital / Total Assets
= Current Assets – Current Liabilities / Current Assets + Non-Current Assets
X3= Earning Before Interest and Taxes / Total Assets
ROA= Net Income / Total Assets
The results can be read based on the following criteria:
1. -0.02 (G -0.02) The company is in a state of Financial Distress / potentially bankrupt
2. 0.01 (G 0.01) The company is not experiencing Financial Distress / potentially bankrupt

To get the final result in the calculation of the Grover model (G-Score), the final calculation will be carried out by entering the ratio values of X1, X3, and ROA into the Grover model formula (G-Score). From the results of the calculation of each ratio entered into the Grover model formula (G-Score), the value of the annual G-Score for manufacturing companies in the basic and chemical industry sectors that experienced negative profits for two consecutive years for the 2016 to 2018 period is known. as follows:
G-Score = 1.650 X1 + 3,404 X3 - 0.016 ROA + 0.057

Table 2. Calculation Results of the 2016-2018 Grover Model of Manufacturing Company Financial Distress Analysis

No	stock code	Year			Average	Prediction
		2016	2017	2018		
1	APP	0.544	0.309	(0.073)	0.260	**Healthy**
	Annual Prediction	**Healthy**	**Healthy**	**Potentially Bankrupt**		
2	STEEL	0.201	(0.102)	(0.499)	(0.134)	**Potentially Bankrupt**
	Annual Prediction	**Healthy**	**Potentially Bankrupt**	**Potentially Bankrupt**		
3	CPRO	(1.001)	(2,558)	0.692	(0.956)	**Potentially Bankrupt**
	Annual Prediction	**Potentially Bankrupt**	**Potentially Bankrupt**	Healthy		
4	ETWA	(0.336)	(0.759)	(1,626)	(0.907)	**Potentially Bankrupt**
	Annual Prediction	**Potentially Bankrupt**	**Potentially Bankrupt**	**Potentially Bankrupt**		
5	JKSW	0.356	0.369	(0.334)	0.162	**Healthy**
	Annual Predictio	**Healthy**	**Healthy**	**Potentially Bankrupt**		

	n					
6	Embassy of the Republic of Indonesia	(0.538)	(0.545)	(1,307)	(0.796)	**Potentially Bankrupt**
	Annual Prediction	**Potentially Bankrupt**	**Potentially Bankrupt**	**Potentially Bankrupt**		
7	TEACHING	0.070	0.207	0.224	0.167	**Healthy**
	Annual Prediction	**Healthy**	**Healthy**	**Healthy**		
8	SMCB	(0.213)	(0.268)	(0.700)	(0.394)	**Potentially Bankrupt**
	Annual Prediction	**Potentially Bankrupt**	**Potentially Bankrupt**	**Potentially Bankrupt**		

Source: Data Processing Results

5. CONCLUSION

Based on the results of the previous analysis and discussion which aims to analyze the financial distress condition of manufacturing companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange (IDX) for the 2016-2018 period that experienced negative net income or losses in 2 consecutive years using the method Grover (G-Score), it can be concluded that:

1. Of the 8 basic and chemical industrial manufacturing companies that experienced losses for two consecutive years when viewed from the average score, there were 5 companies experiencing financial distress, namely PT. Saranacentrak Bajatama Tbk (BAJA), PT. Central Proteina Prima Tbk (CPRO), PT. Eterindo Wahanatama Tbk (ETWA), PT. Paper Basuki Rachmad Indonesia (KBRI), and PT. Holcim Indonesia Tbk (SMCB). And 3 other companies in good health including PT. Asiaplast Industries Tbk (APLI), PT. Jakarta Kyoei Steel Works (JKSW), PT. Keramika Indonesia Association Tbk (KIAS).
2. Of the 5 companies that have the potential to go bankrupt, when viewed from the annual score, PT. Saranacentral Bajatama Tbk (BAJA) in 2016 was in the healthy category, while in 2017 and 2018 the company experienced financial distress. PT. Saranacentral Bajatama Tbk (BAJA) continued to decline from 2016 to 2018 namely 0.201, -0.102, -0.499. The main reason is the higher price of raw materials for CRC every year which causes the cost of goods sold to increase so that the company continues to decline. Furthermore, PT. Central Proteina Prima Tbk (CPRO) in 2016 and 2017 experienced financial distress where the company continued to suffer losses caused by a decrease in sales every year due to declining shrimp production and the company was still in the period of implementing a new cultivation pattern, while in 2018 the company managed to make a profit and was included in the healthy category. Furthermore, PT. Eterindo Wahanatama Tbk (ETWA) from 2016 to 2018 experienced financial distress with a continuously decreasing score, namely - 0.336, -0.759, -1.626. The main cause is the high price of raw materials so that palm oil production is not

optimal and causes the level of sales to decrease. Furthermore, PT. Paper Basuki Rachmad Indonesia Tbk (KBRI) from 2016 to 2018 experienced financial distress with a continuously decreasing score of -0.538, -0.545, 1.307. The main cause is the lack of working capital so that the impact on the level of production is not optimal. Furthermore, PT. Holcim Indonesia Tbk (SMCB) from 2016 to 2018 experienced financial distress with a continuously decreasing score of -0. 213, - 0.268, -0.700. The main cause is the decline in the selling price of cement in the securities market due to excess supply and the increasing number of competitors producing similar products.

3. Of the 3 other companies that are in good health when viewed from the annual score, PT. Asiaplast Industries Tbk (APLI) in 2016 and 2017 was in the healthy category, while in 2018 it experienced financial distress. PT. Asiaplast Industries Tbk (APLI) when viewed from the score has decreased every year with a score of 0.544, 0.309, -0.073. Even though in 2016 and 2017 they were in good health, in 2017 the company suffered losses and in 2018 the company's losses increased sharply. The reason is high company expenses such as high material prices and increasing company expenses, namely selling expenses and admin expenses. Furthermore, PT. Jakarta Kyoei Steel Works Tbk (JKSW) in 2016 and 2017 was in the healthy category, while in 2018 the company experienced financial distress. The cause of the decline in 2018 was the increasing number of competitors who produced similar products at cheaper selling prices, causing an oversupply. With this problem, the company was forced to take a policy to stop its production which automatically had an effect on declining sales. Furthermore, PT. Keramika Indonesia Assosiasi Tbk (KIAS) in 2016 to 2018 was included in the healthy category which can be seen in the score value of 0.070, 0.207, 0.224. However, even though the company is still in the healthy category, during 2016 to 2018 the company experienced losses which every year the losses experienced continued to decline.

So, of the 5 companies experiencing financial distress, there is one company that has started to show a positive increase, namely PT. Central Proteina Prima Tbk (CPRO). And of the 3 companies that are in the healthy category, there are two companies that, although included in the healthy category, show a decline which in 2018 was included in the category of experiencing financial distress, namely PT. Asiaplast Industries Tbk (APLI) and PT. Jakarta Kyoei Steel Works Tbk (JKSW). 1 other company, namely PT. Keramika Indonesia Assosiasi Tbk (KIAS) although it shows a positive increase every year, it still continues to experience losses every year.

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