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THE CHARACTERISTICS OF THE BOARD OF COMMISSIONERS, COMPANY CHARACTERISTICS AND FINANCIAL DISTRESS AT FERTILIZER COMPANIES IN INDONESIA

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ABSTRACT

The purpose of this study is to analyze the impact of the corporate governance which are represented by the board of commissioners' characteristics and company characteristics which are the main parameters of its financial ratios on the possibility of financially distressed at fertilizer companies in Indonesia. This observe involves five fertilizer companies which has dominant market in Indonesia by using secondary data's taken from the business enterprise's financial statements in 2012 to 2021. The logistic regression showed that the adoption of corporate governance especially the qualification of commissioners can improve company's performance and allow to avoid the possibility of financial distress. This study also indicates that liquidity and profitability have a strong negative impact on the possibility of financial distress. On the other hand, solvency has a strong positive impact on the possibility of corporate financial distress.

1. INTRODUCTION

In Indonesia, the market size of fertilizer dominated by state owned companies namely PT Pupuk Indonesia Group. Fertilizer produced by PT Pupuk Indonesia Group is strategic commodity protected by the government to attain resilience programs of domestic food. The Companies earn profit from production and distribution of fertilizer in accordance with tasks assigned by the government. Companies must provide fertilizer stock with sufficient amount and time in each region of Indonesia accordingly with applicable conditions. The obligation of companies for ensuring the sufficient fertilizer stock will raises capital costs in the form of accounts high receivable. Therefore, the companies must provide sufficient capital including debt to run the production and distribution. During ten years lastly, companies' debt amount has experienced an increasing trend which mainly to cover working capital needs. When companies use debt for its capital, they will riskier to facing financial distress compare to company without debt. According to Sawir, 2018) addition debt will enlarge the finance risk of the company. Debt will cause a fixed expenses to the company in the form of debt and its interest. the higher the debt owned by the company will pose a risk of increasing financial distress (Yuliana et all., 2017). In this study, the level of financial distress is measured using the Almant Z-score method. Based on the company's annual report for the period 2012 to 2020, the trend of the Z-score has decreased which indicates the company's health is declining and the potential for financial distress is increasing.

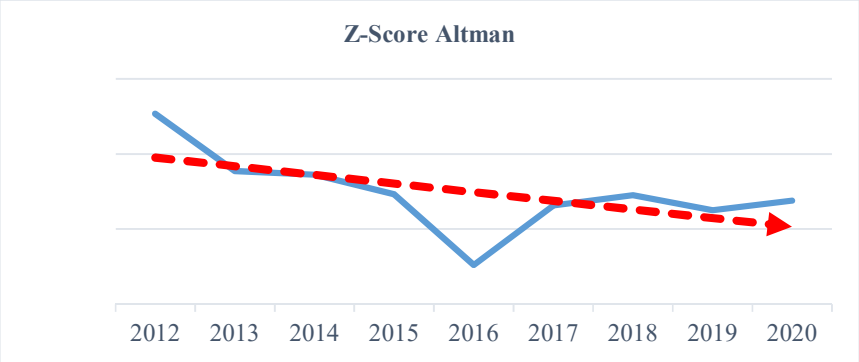

Figure 1. Pupuk Indonesia Group's Average Health Trend

Therefore, in this study it is expected to understand the influence of the characteristics of the board commissioners and the characteristics of the company in the form of financial performance on the probability of financial distress. This financial performance is the result of the financial policies adopted by the company. This research is expected to know the determinants of financial distress that make companies survive.

2. LITERATURE REVIEW

Financial Distress

According to Kamaludin (2015), financial distress is a condition in which a company is experiencing financial problems which, if not addressed immediately, will end in bankruptcy. Financial distress is also triggered due to congestion in cash flow which if it occurs in a prolonged period will result in bankruptcy. Financial distress is a condition in which a company is unable to meet its financial obligations. Based on Lee et al. (2011) and [1] Financial difficulties can be interpreted as a condition where financial obligations cannot be fulfilled or fulfilled with great difficulty. Financial distress is a condition in which a company is unable to pay its existing obligations and occurs continuously until it experiences liquidity [2]. From the definition above it can be concluded that financial distress is a condition of a company experiencing financial difficulties which can lead to total bankruptcy in a company.

Prediction Methods of Financial Distress

The first generation to develop a method for reading an organisation's financial distress was. Many models had been advanced through experts to recently for analyzing and predicting the bankruptcy of organizations, with its personal strengths and weaknesses, and it's miles proving challenging to select which techniques to use empirically. Have all verified the validity of prediction models which can be completely based on accounting, marketshare, and risk (or dangers). Profitabilitysratios [3] and liquidityyratios have been recognized based on the accounting side as accounting indicators that can affect financial distress.

Altman Z-score 's methodology

Edward Altman did research financial distress after Beaver pioneered it in 1966. Altman carried out the multivariate analysis that advised at the end of his paper. Altman's method eventually became the most generally used tool for predicting economic or financial distress. The Z-Score is the name of the method. In his study, Altman used the step-sensible multivariatesdiscriminant analysis (MDA) methodology.

This statistical methodology, like logistic regression, is commonly used to make methods using a qualitative dependent variable. The MDA methodology produces a linear equation's that might distinguish among two dependent variable states. Altman's sample of the study consisted of 66 companies over a 20-year period (1946-1965). The sample's grouped into two categories, with 33 companies considered bankruptcy and 33 companies not considered bankruptcy. Companies which have filed for financial disaster or bankruptcy below Chapter X of the National Bankruptcy Act are considered bankrupt. Altman's enterprise was exclusively withinside the manufacturing enterprise. The motive for this, as stated, is that the only statistics to be had is from Moody's Industrial Manual, which most effective presents statistics concerning manufacturing companies [4]. Altman applies matched-paid methods withinside the choice of samples, as determined by the recent of samples. Altman's matched-pair method, uses criteria: enterprise and corporation size (overall assets). However, unlike Beaver, who compared the whole assets of the 2 sample corporations one by one, Altman simply looked at the common distinction among the 2 organizations.

Initially, Altman's studies accrued 22 corporation ratios that can be useful in predicting economic or financial distress. Tests are carried out on those 22 ratios to decide which ratios could be applied withinside the model. The statistical importance of the ratio, the correlation among ratios, the accuracy to expect ratios, and the researchers' judgment are all used in the testing. The results of the ratio test determine which 5 ratios need to be applied as variables withinside the technique. An examination of the technique used to expect the likelihood of financial distress in Indonesian fertilizer companies. The formulation for calculating the Altman Z-Score for a non-public organisation is as follows:

$$Z = 0{,}717\ X1 + 0{,}847\ X2 + 3{,}107\ X3 + 0{,}420\ X4 + 0{,}998\ X5$$

X1 = operating capital / overall assets
X2 = retained profits / overall assets

X3 = profits earlier than interest and taxes / overall assets
X4 = Book cost equity / Total Equity
X5 = Sales / Total assets

Companies with a Z-scores more than 2.90 (Z > 2.90) are categorized as safe zone (healthy organizations), whereas companies with a Z-score less than 1.23 (Z < 1.23) are classified as potential distress possibilities. The companies which in the gray zone are classified as having a score between 1.23 and 2.90.

Agency Theory

Agency theory pays attention to two problems that occur in agency relationships; it is a principal and agent conflict and a risk-sharing problem because the two have different attitudes towards risk [5]. Agency theory argues that management actions are taken to serve the best interests of shareholders, especially when ownership is highly dispersed [6].

Agency theory explains that related to differences in motivation between managers and investors or owners, this conflict of interest can actually harm one party. Therefore, agents and principles mutually influence each other to achieve their motivation [7]. This difference results in asymmetric information (information gaps) provided by managers that are not in accordance with the needs of external parties.

Corporate Governance

Corporate governance practices are the norms and procedures followed to ensure investors receive returns on capital invested in companies [8], which are an integral part of shareholder protection supported by agency theory [9]. Agency theory highlights the conflict that arises when management (agents) act in their own interests rather than the interests of the owners (principals) [9]. Driven by the separation of ownership controls [10]. This practice also causes the agent to have more company information than the principal, which leads to information asymmetry. Asymmetric information can be used opportunistically by agents (managerial commit opportunism) for self-benefit or fraud, often to the detriment of companies and society. Therefore, the role of the board of commissioners as a supervisory board appointed by the shareholders is expected as a mechanism to control this conflict. Given the importance of the supervisory board in overseeing the company's business processes, it is expected to improve company performance and reduce the possibility of financial distress.

The effect of the number of commissioners has been explored [11], who suggest that a smaller number of commissioners is more efficient and has lower productivity costs during the coordination process. This argument is then supported by [12] in their empirical results. However, [13] found that having a larger number of boards will reduce the risk of financial distress for complex companies with diverse business segments. It is believed that the number of commissioners will strengthen the monitoring of company performance because more aspects of the company can be monitored and help increase diversity. In this study it is expected that the number of commissioners has a negative effect on the company's financial distress.

Gender diversity can reduce conflict and make companies more resilient and risk averse [14]. One of the benefits of diversity is that people with different backgrounds may have different points of view. Consistent with the argument that companies with more gender diverse boards can improve firm performance is new evidence in [15] that gender diverse boards of commissioners appear to be more robust monitors. Women and men are intrinsically different, so the presence of women can have a long-term effect on corporate decision making. Gender diversity identified as the percentage of female boards on the Board of Commissioners is thought to have a negative effect on the company's financial distress.

Argues that companies that are supervised by a board of commissioners with a high educational background have a better chance of improving performance than companies that are supervised by a board that have a lower level of education [16]. Under the resource dependence theory, board members with higher education can provide greater access to resources through their networks. Board members must have sufficient knowledge of the company, its industry, capital and value drivers and the regulatory environment, to oversee effectively with due care and diligence. In this study it is expected that the main commissioner's education has a negative effect on the company's financial distress.

Company Characteristics

Company characteristics are the company's internal parameters as indicated by the company's financial information which is the result of financial decisions taken by the company.

Liquidity reflects the Company's ability to fulfill its obligations, especially short-term obligations [17]. Liquidity is measured by measuring current assets against current liabilities. According to Jakhotiya (2012), an illiquid company must borrow in the short term at a high interest rate. Such interest expenses wipe out the company's operating profit. In other words, earnings before interest and tax (PBIT) may be good but profit before tax (PBT) is unattractive because of interest expense. Debt will cause the company's fixed expenses in the form of interest and principal payments. Based on research conducted [18] show that liquidity has a negative effect on financial distress. In this study, it is expected that liquidity has a negative effect on the company's financial distress [19].

Leverage is the level of use of company debt to finance investment or company assets. Leverage is measured by total debt to total assets. The greater the leverage, the greater the company's financial risk, the greater the possibility that the company will experience financial distress. [15] Found evidence that financial distress will increase if leverage increases. Leverage or debt ratios occur due to obligations for company activity costs which are in the form of fixed expenses by the company [20]. Leverage is the use of loan funds from third parties in company activities, causing debt or fixed obligations to be paid, both principal and interest. In this study, it is expected that leverage has a positive effect on the company's financial distress.

Profitability is a company's ability to earn profits [21]. [22] Profitability is a ratio that refuses to measure whether or not a company can make a profit, both in terms of assets, sales activity, and share ownership. Profitability is a ratio to measure the acquisition of profit by comparing profits with capital to obtain these benefits. Profitability is reflected by Return on Sales (EBIT/Sales). Several studies using return on sales as a factor influencing bankruptcy prediction are Flag [23]. By obtaining profits, the company can pay debts and get capital to run the business, so that greater profitability can reduce the potential for company financial distress. In this study, it is expected that profitability has a negative effect on the company's financial distress.

Company size is the scale of the company's business which can be seen from the total assets, and so on. In this study, company size is measured through the natural logarithm (Ln) of total assets. Large companies tend to diversify compared to small companies. Therefore, it is more likely that large companies do not have the potential to experience financial distress, because they are seen as more capable of running their business (Christine et al., 2019). In this study, it is expected that company size has a negative effect on company financial distress.

3. METHOD

The research strategy used in this research is causal research or correlational research. Causal research is used to determine a causal relationship with one of the independent variables that can affect the dependent variable. From the research strategy, researchers are expected to be able to explain the influence of the independent variable on the dependent variable in PT Pupuk Indonesia Group.

There are 5 (five) samples of fertilizer companies that have a dominant market share in Indonesia which are members of the PT Pupuk Indonesia Group during the 2012-2021 period. the sample was selected through purposive random sampling with the criteria that the sample must have complete data related to the research variable. This study uses logistic regression because the independent variables are a combination of continuous and categorical variables. In addition, the dependent variable is financial distress, a companies having a low Altman Z-score below 1.23. The dependent variable consists of dummy variables, coded (1) if the company experiences financial distress (Z-score < 1.23) and (0) otherwise, while the independent variables consist of the number of commissioners, gender diversity of the commissioners, education of the main commissioners, liquidity, leverage, profitability and company size.

4. RESULT AND DISCUSSION

Overall fit model is used to determine whether all independent variables affect the dependent variable. The statistics used are based on the Likelihood function. Likelihood L is the probability that the hypothesized model describes the input data (Ghozali, 2018: 332). To test the null and alternative hypotheses, L is transformed into -2log likelihood. Testing is done by comparing the initial -2LL value with -2LL in the next step. The decrease (-2LogL) indicates that the regression model is better (Ghozali, 2018: 333). The simulation results show that there is a decrease in value (-2LogL) from initially 34.62 to 11.40. This shows that overall the hypothesized model is in accordance with the existing data.

Table 1. Regression Model Feasibility Test (Goodness of Fit Test)

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	1.314	8	.995

The simulation results according to table 1 above show that a significant value obtained from the model feasibility test results is 0.995 with a Chi Square value of 5.721. A significant value of 0.995 > 0.05 so that H0 is accepted, this indicates that the regression model formed is able to predict the observed values well and matches the observation data, so that the regression model used in this study is suitable for further analysis.

Table 2. Coefficient Determination

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	11.400[a]	.601	.881

The test results according to table 2 above show that the Negelkerke R Square value in the regression model is 0.881, which means that the variance of the dependent variable that can be explained by the independent variables is 88.10%, while the remaining 11.90% is influenced by factors other than the independent variable.

Table 3. Simultaneous Test

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	45.905	7	.000
	Block	45.905	7	.000
	Model	45.905	7	.000

The chi square value of the test results model is 45.905 with a significant value of 0.000. Because the sig value is less than 5% (0.05) then H0 is rejected at a significance level of 5% so it is concluded that the independent variables used jointly affect the company's financial distress.

Table 4. Partial Test

No.	Variable	B coefficient	Sig.
1	Number of Commissioners (Num)	- 2,846	0.162
2	Gender Diversity of Commissioners (Gen)	-138,186	0.998
3	Education of the Main Commissioners (Edu)	-7,793	0.040
4	Current Ratio (CR)	-10,618	0.045
5	DAR (DAR)	23,758	0.044
6	RoS (RoS)	-58,903	0.047
7	Company Size (Siz)	-4,374	0.186
8	Constant	81,354	

According to table 4 above, the model can be expressed in the logistic regression equation as follows:

Ln (Financial Distress) = 81,354 - 2,846 Num – 138,186 Gen – 7,793 Edu – 10,618 CR + 23,758 DAR – 58,903 RoS – 4,374 Siz

The variable of number of commissioners has a positive but not significant effect on the company's financial distress. With the increasing number of commissioners, it can reduce the possibility of financial distress risk. It is believed that the number of commissioners will strengthen the monitoring of company performance because more aspects of the company can be monitored and help increase diversity. In the sampled fertilizer companies, there has been an increase in company complexity with increasing capacity

and number of products, however, there has been a downward trend in the number of commissioners. This is considered less supportive of the company's efforts to further improve its performance.

From the gender aspect, the variable of gender diversity has a negative but not significant effect on the possibility of company financial distress. In fertilizer companies, there has been an increase in the number of female commissioners with a composition of 17% to 33% over the past 2 years. Gender diversity can reduce conflict and make companies more resilient and risk averse [14]. One of the benefits of diversity is that people with different backgrounds will have different points of view so that it is expected to optimize monitoring of company performance.

The variable of board of commissioner's education has a significant negative effect on the company's financial distress. These results indicate that the higher the board of commissioners' education, the lower the probability of financial distress. Boards of commissioners with higher education are seen as able to provide greater access to resources through their networks and have sufficient knowledge of the company, the fertilizer industry, the capital and value drivers and the fertilizer industry's regulatory environment, to oversee effectively with care and persistence on company performance.

The variable of liquidity, namely the current ratio, has a significant negative effect on the probability of a company's financial distress. These results indicate that the higher the Current Ratio will cause the possibility of financial distress to decrease. This is in line with research conducted by [18] shows that liquidity has a negative effect on financial distress. Companies that are part of the sample have an average current ratio of 1.6 : 1 which is close to the ideal ratio of 1.5: 1 so that they are categorized as fertilizer companies that have healthy liquidity and are able to meet their current liabilities.

The solvency variable, which is represented by DAR, has a significant positive effect on the possibility of a company's financial distress. These results indicate that the higher the DAR, the higher the probability of financial distress. leverage is the use of loan funds from third parties in company activities, causing debt or fixed obligations to be paid, both principal and interest.

The profitability variable represented by Return on Sales (RoS), namely the ratio of EBIT to total sales, has a significant negative effect on the company's financial distress. These results indicate that the higher the RoS, the lower the probability of financial distress. In general, the sample companies are able to generate profits as a RoS of 11.75%. The profit generated can be used by the company to pay debt obligations or as working capital to run the business.

Company size has a negative but not significant effect on the possibility of company financial distress. Company size describes the size of the business or the total assets owned by the company. Large companies tend to diversify compared to small companies. Fertilizer companies are large companies whose products are well diversified. This is in line with the research of Christine, et al (2019) that large companies are more likely not to have the potential for financial difficulties, because they are seen as more capable of running their business [24].

5. CONCLUSION

Variable Education of the board of commissioners, liquidity and profitability have a significant negative effect on the possibility of fertilizer company financial distress. The higher the education of the main board of commissioners, the liquidity and profitability of the company can cause the probability of the company's financial distress to decrease. Leverage variable has a significant positive effect on the possibility of financial distress of fertilizer companies. The higher the company's leverage, the higher the company's financial distress probability. The number of commissioners, gender diversity of the board of commissioners and company size have a negative but not significant effect on the possibility of a company's financial distress.BFuture research can use a combination of financial variables, corporate governance and variables that indicate macroeconomic conditions. This study can also be conducted for fertilizer companies that do business outside of government assignments.

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