Financial Ratio, Board Diversity and Financial Distress: Evidence from Indonesia

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Abstract. The goal of starting a business is to be able to maximize the wealth of the shareholders as well as the value of an institution. A company's financial condition is critical to be appropriately managed because if the company experiences economic instability, the company will experience difficulties resulting in bankruptcy. This study aimed to identify manufacturing sector companies participating in financial distress predictors of independent commissioners, solvency, profitability, liquidity, institutional ownership and managerial ownership. The method used is a quantitative descriptive method. The population for this research is manufacturing sector companies listed on the IDX for 2020–2021. The purposive sampling technique is the technique used in sampling in this study. The results of this study indicate that the independent board of commissioners, profitability, liquidity, institutional ownership structure and managerial ownership structure have a negative effect on financial distress. In contrast, solvency has no positive impact on financial distress.

Keywords: Financial distress · independent commissioners · profitability · liquidity · solvency · institutional ownership and managerial ownership

1 Introduction

The importance of the financial condition of a company to be managed properly so that the company experiences stability so that the company does not experience bankruptcy. In starting a business, a company determines its goals. The goal in starting a business is to maximize the finances or wealth of the shareholders and the value of the institution. A corporate organization has resources to process and use to achieve predetermined goals. Companies need to improve their financial performance capabilities and organizational management in order to compete with multinational companies [1].

The company's organization achieves profits that are used to maintain stability in order to compete with other companies. If an organization is not competitive, then the company's organization will experience negative profits that can affect the bankruptcy of a company organization [2]. However, companies dealing with economic turmoil need to process their resources properly. The industry cannot measure global growth

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by strengthening fundamental management which will lead to company shrinkage and eventually bankruptcy [3].

Several factors can result in a company suffering bankruptcy. That is, inability to fulfill obligations that must be met, the company's total assets are less than the amount of obligations that must be fulfilled, and result in bankruptcy or financial difficulties. Losses or gains can be seen from the overall results. Changes in profit levels can be caused by factors other than the company's business activities during the period, referred to as overall results [4].

Companies experience financial difficulties and unhealthy financial performance because a company's survival and financial health determine its stakeholders' prosperity. A company's financial health is not only for management but also for various stakeholders such as investors and creditors. Therefore, the performance of an organization, especially profit, has stable control over the wealth of prospects and added value for the company [5]. Investors would not invest when an organization is experiencing financial difficulties if the organization was delisted on the IDX at that time. Financial problems characterized by negative returns make it impossible for companies to pay dividends, and many investors hesitate to allocate shares to companies suffering from delisting. Companies that do not meet the minimum shareholder quota will be listed on IDX.

This research discusses more about how important financial distress is to be reviewed. Financial difficulties can be experienced by all companies around the world, so it is necessary to measure the financial condition of a company to find out whether the company is in good financial condition or is experiencing financial difficulties. This measurement is also used to maintain and manage finances within the company so that bankruptcy does not occur and so that the company's financial condition is always stable. Financial distress problems can be identified as early as possible by checking periodically in the annual financial reports [6]. In this study, there are independent commissioner variables, profitability, liquidity and managerial ownership that have a negative effect on financial distress. Meanwhile, solvency and institutional ownership have no effect on financial distress.

The phenomenon in recent years has been that many companies have been delisted from IDX. During 2020–2021 period, a total of 7 companies were delisted. Some consequences can result in an institution being delisted from the Indonesia Stock Exchange and facing financial difficulties. Factors for bankruptcy are the total debt that is greater than profits, a lack of available capital, interest expense levels and a decrease in company profits due to the Covid-19 pandemic. Including a decline in business performance, this will cause a fiscal reduction in early 2020. Sri Rejeki Isman Tbk posted a net loss, this means that the company is in a definite financial decrease. This factor makes the company unable to maintain adequate cash flow, the company's finances are terrible, and as a result, the company's bottom line is unable to meet its obligations.

Based on the phenomena that have occurred by previous researchers that have been described. There are still some inconsistent results, so further research is interested in re-examining the control of the independent board of commissioners, analysis of financial statements and ownership structure on the possibility of a decline in financial conditions. Variables that can be used to predict financial distress are the board of commissioners, solvency, profitability, liquidity, institutional ownership and managerial ownership.

In previous studies, many have examined financial distress or what is often referred to as financial difficulties. However, previous research has yet to explain it fully, researchers offer new variables that can differentiate it from previous research. From the phenomenon above, the problems to be examined are whether the influence of the independent board of commissioners, profitability, liquidity, solvency, institutional ownership structure and managerial ownership structure influence the occurrence of financial distress in manufacturing companies. In general, the purpose of this study is to empirically show the effect of an independent board of commissioners, solvency, liquidity, profitability, institutional ownership and managerial ownership on the possibility of financial distress in manufacturing companies at IDX.

2 Literature Review

2.1 Agency Theory

Agency theory states that an agency relationship is a relationship that exists between a person or more principal who orders the agent to perform a service on behalf of the principal. According to this theory, there is a separation between a company's management and ownership, which can cause problems [7]. In agency theory, there is a separation between the agent and the principal, which leads to conflict due to the company's financial position, so some mechanism or corporate governance is needed to ensure that there is no conflict between the agent and the principal to create added value for all interested parties [8]. The cause of agency conflict is that the related parties are shareholders, and the primary fund management does not have the same interest. If all of these parties act according to their wishes to increase their utility and have different motives, the view that management only sometimes works at the request of other party's agent assignments may be practical [9].

2.2 The Influence of the Independent Board of Commissioners on Financial Distress

The independent commissioner acts as one of the representatives and has a position in the shareholder. Independent commissioners have the role of supervisory managers in the implementation of governance in a company. The existence of an independent commissioner in a company can be used as a balancing and review mechanism in a company. The main role of independent commissioners is to monitor the performance of directors related to finances that can harm the company. The greater the proportion of independent commissioners, the lower the financial distress [10, 11].

H1: The Board of Commissioners has a negative effect on financial distress.

2.3 The Effect of Profitability on Financial Distress

Profit also profitability ratios are used to measure the ability of a company to generate profits at the level of sales, assets and shares of specific stocks. The higher the profit generated, the higher the return on assets. This means the company uses its assets more effectively to generate profits [12].

H2: Profitability has a negative effect on financial distress.

2.4 Effect of Liquidity on Financial Distress

The liquidity ratio is a ratio that represents the company's ability to pay its short-term debt. The liquidity ratio refers to the time it takes for inventory to turn into cash. Cash is the most liquid asset that can be used to meet the company's short-term debt. Companies with high liquidity can protect themselves from financial difficulties because of their good performance. The higher the value of the liquidity ratio, the lower the financial distress in the company [13, 14].

H3: Liquidity has a negative effect on financial distress.

2.5 The Effect of Solvency on Financial Distress

The solvency ratio is a ratio that is useful for calculating how much the cost of debt must be an obligation on a company to fulfil assets. The solvency ratio is used to find out how much ability or company assets are funded using debt. That is, how much of the company's burden is borne by the company with its assets [15].

H4: Solvency does not affect Financial Distress.

2.6 Effect of Institutional Ownership on Financial Distress

Institutional ownership is needed to increase good security on organizational governance achievements to minimize agency burden, and governance ownership can mitigate agency problems in an institution. The institutional ownership structure of a company is the size of a surplus of shares owned by a company from the total number of outstanding shares. The amount of institutional ownership $>5\%$ will bequeath an excellent monitoring ability [16]. Institutional ownership is a share owned by an investor from all shares of a company [17]. Institutional ownership in companies functions as monitoring, where institutions will be more stringent in monitoring through management performance. Share ownership by larger institutional parties will help in influencing management policies through voting. Institutional ownership is a share ownership by financial institutions, mutual funds, foreign institutions and other institutions [11]. Institutional ownership of more than 5% will make managers' supervision and control tighter. Increasing institutional ownership in a company will result in efficient use of company assets, so that opportunities for financial distress in a small company. The higher institutional share ownership, the lower the occurrence of financial distress in a company [18].

H5: Institutional ownership has a negative influence on reducing financial distress.

2.7 The Effect of Managerial Ownership on Financial Distress

The managerial ownership structure is a shared ownership owned by the management, the board of commissioners and even the board of directors. The existence of governance ownership can be needed to minimize agency problems that arise from a company [19]. Managerial ownership is how large the number of company shares owned by the management and investors of a company. Ownership by management can increase control over the management of a company itself [20]. High managerial share ownership will lead to good financial performance even when the company is experiencing difficulties, because managers have good control over resources and can facilitate monitoring during financial downturns. Ownership of many management shares will result in the management of a company becoming stronger [21].

H6: Managerial ownership has a negative influence on financial distress conditions

3 Research Methods

3.1 Population and Sample

The unit of analysis of this research is the manufacturing sector company from 2020 to 2021 with 177 observations. The reason for choosing a manufacturing company is because this sector is most affected by the Covid-19 pandemic after the financial industry. We assess whether the sector can survive in a pandemic condition and avoid financial distress. The sampling technique chosen was purposive sampling, with certain conditions. The sample criteria determined in this survey are:

1. Manufacturing companies listed on IDX for the 2020–2021 period.
2. Companies reporting information in annual reports consistently in 2020–2021.
3. There is managerial and institutional share ownership in the company.
4. Companies that are not experiencing financial distress and companies that are experiencing financial distress.

After selecting according to the criteria, the sample used can be seen in Table 1.

Table 1. Sample criteria

Company Indicators	Total
Manufacturing companies listed on the IDX for the 2020–2021 period	170
Companies that do not consistently report their financial statements on the IDX for the 2020–2021 period	56
Manufacturing companies that do not have complete data related to research	55
The total sample of companies is	**59**
Total observations (3x59)	**177**

Table 2. Independent Variable Measurement

Variable	Variable Measurement
Financial Distress	Z = 0,717X1 + 0,847X2 + 3,107X3 + 0,420X4 + 0,998X5 Where: Z = Index X1 = Working Capital / Total Assets X2 = Retained Earnings/ Total Assets X3 = Profit before interest and tax/ Total Assets X4 = Capital market value/ Total Liabilities X5 = Sales/ Total Assets
Board Diversity	
Independent Commissioner	$\frac{\text{Total independent commissioners}}{\text{Total board of commissioners}}$
Institutional Ownership	$\frac{\text{Total shares owned by institutions}}{\text{Total shares outstanding}}$
Managerial Ownership	$\frac{\text{Total of shares owned by manager}}{\text{Total shares outstanding}}$
Financial Ratios	
Profitability	$\frac{\text{Profit before tax}}{\text{Total assets}} \times 100\%$
Liquidity	$\frac{\text{Current ratio}}{\text{Current liabilities}} \times 100\%$
Solvability	$\frac{\text{Total liabilities}}{\text{Total Assets}} \times 100\%$

This study uses the dependent variable; financial distress risk. Independent variable; solvency, profitability, independent commissioners, liquidity, managerial ownership and institutional ownership. The Altman Z-score model measured the financial distress risk variable in this study. This method was developed by Edward Altman in 1967 and is considered better than other models in measuring financial distress for crisis conditions [22] (Table 2).

Data analysis used multiple linear regression to predict the variation of variables by regressing more than one independent variable with the dependent variable simultaneously. Linear regression was chosen because it can reduce multicollinearity and estimation bias, control individual heteroscedasticity, and identify time-varying relationships between dependent and independent variables. The analytical tool used is SPSS 26. The research model in this study is:

$$\begin{aligned} \text{FD} = & \alpha + -10620.936(\text{KI}) - 0.052(\text{Prof}) - 0.540(\text{Lik}) + 1.982(\text{Sol}) \\ & - 73932.654(\text{KINS}) - 6175.636(\text{KM}) + \text{e} \end{aligned} \tag{1}$$

Notes: FD is financial distress, KI is independent commissioner, Prof is profitability, Lik is liquidity, Sol is Solvency, KINS is institutional ownership, KM is managerial ownership, α is a constant, and e is an error.

4 Result and Discussion

The objects of this research are manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) in the 2020–2021 period. During the study period, there were 170 samples to be tested. This sample was taken by purposive sampling. In determining the type of sample used in this study, a purposive sampling technique was used; namely, the sampling method was carried out with specific criteria. Based on the sampling criteria, the number of samples used in this study was 59 manufacturing companies.This section contains the results of data analysis, hypothesis testing, answering research questions, findings and interpretation.

4.1 Descriptive Statistical Analysis

Descriptive statistics are research data that can be converted into a tabulation that can facilitate understanding and interpretation by researchers. This analysis has the purpose of being able to explain quantitative data before multiple linear regression analysis is carried out. This analysis describes the characteristics or phenomena of the data without providing an overview of the various factors that affect financial distress.

From Table 3, describe the independent commissioner variable data has a relatively small distribution of data, evidenced by a standard deviation of 0.90965, which is smaller than the average of 2.4237 and the average manufacturing company has a shallow independent board. This is evidenced by an average almost the same as the minimum value. Profitability has a relatively high data distribution, evidenced by the standard deviation of 5318245174, which is greater than the mean of -5136.8544. In medium-sized manufacturing companies, profitability has increased, evidenced by a relatively far average with a minimum value. Manufacturing companies in recent years experienced a decline in even negative profits. Liquidity has a relatively high data distribution, and this is due to a standard deviation of 11330,70038 from an average of 6669,9831. The manufacturing sector has a somewhat declining liquidity value, evidenced by a similar average. as the minimum value. Solvability has a relatively increased data distribution, seen from the standard deviation of 7208.73271, which is greater than the average of 3506.1339.

The solvency of manufacturing companies has relatively improved, as shown in Table 3. The average is close to the minimum value. Institutional ownership has a relatively small data distribution, which can be seen from the standard deviation of 0.26735, which is smaller than the average of 0.4304. Manufacturing companies have relatively higher institutional ownership, which can be seen from the average, which is far from the minimum value. Managerial ownership has a relatively small data distribution, which can be seen from the standard deviation of 0.24261, which is lower than the average of 0.3115. Manufacturing companies have relatively high ownership, which can be seen from the average value, far from the minimum value. This can reduce conflicts between owners and managers. Financial distress has an increasing data distribution, which can be seen from the standard deviation of 93786.95782, which is greater than the mean of -8330.1717. Because this value has a low financial condition. During the observation year, almost all manufacturing companies experienced a financial decline due to the COVID-19 pandemic.

4.2 Multiple Regression Test

This research uses multiple linear analyses to determine the factors influencing financial distress. This analysis is used to assess the relationship between variables and the direction of the relationship [22]. The analytical tool used is SPSS 26.

4.3 Independent Commission

The Independent Commissioner is a means of communication in the form of procedures that are useful for maintaining and continuing the stages and directions of management [11]. Board members play an important role in financially troubled organizations. Members of the supervisory board may not come from the supervisory board, directors, or shareholders because the function of this independent commissioner is the shareholder of management. Independent commissioner is a member of the board of directors who is a party outside the company who does not have a direct relationship with the company and does not represent the shareholders [23]. Independent Trustee is one of the corporate governance mechanisms that can reduce agency theory problems known as agency problems. Due to the existence of this independent commissioner, it can avoid information asymmetry between the two parties which can lead to possible financial difficulties [24].

The results show that the Independent commissioner has a negative effect on financial distress because it has a sign of 0.002 which is smaller than 0.05. It can be concluded that independent commissioners are one of the factors that determine whether companies in the manufacturing sector will avoid financial difficulties. The results of this study are in accordance with those previously stated by [10] only. the board of auditors has a negligible negative influence in times of financial distress. However, several previous studies that are not in accordance with this study [2, 25, 26] show that independent managers do not affect the occurrence of financial difficulties. finance.

4.4 Profitability

Profitability, or income ratio, is used to measure the company's ability to earn profits with a certain turnover, assets, and number of shares [27]. Profitability ratios are metrics that determine a company's ability to generate profits over several periods and provide an overview of management's effectiveness in managing the business (Table 4).

Retun on assets reflects profitability in this study. This ratio reflects administrative efficiency. This is indicated by the profit from the sale of services and share income [12]. Results Based on the hypothesis test, the level of profitability variable proved significant at 0.036. This means that H2 is accepted because the significance level of the profitability variable is less than 0.05. From this it can be said that profitability has a negative effect on finances. The results of this study differ from research [28], which states that profitability has a positive effect on financial challenges. The results of the liquidity ratio regression show the coefficient value: -0.028 and the t-value is -0.269, with a significance below 0.05. The results showed that the coefficient value increased and had a negative effect. These results are consistent with [15, 29, 30] which also state that profitability has a negative effect on financial difficulties. However, several previous studies have agreed with [27, 31, 32] that profitability has a positive effect on financial distress.

Table 3. Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
Independent Commissioner	1.00	5.00	2.4237	.90965
Profitability	-539077.00	5990.00	-5136.8544	53182.45174
Likuidity	-4801.00	47971.00	6669.9831	11330.70038
Solvability	-798.00	38248.00	3506.1339	7208.73271
Institutional Ownership	.01	.97	.4304	.26735
Managerial Ownership	.03	.92	.3115	.24261
Financial Distress	-1018451.27	4978.91	-8330.1717	93786.95782

Table 4. Multiple Regression Test

Variable	Beta	t-statistic	Sig	R-Square
Independent Commissioner	-.093	-.871	.002	0.440
Profitability	-.028	-.269	.036	
Likuidity	-.061	-.549	.009	
Solvability	.115	1.005	.050	
Institutional Ownership	-.191	-1.637	.301	
Managerial Ownership	-.015	-.131	.005	

4.5 Liquidity

Liquidity is one of the financial ratios used to measure how well a company is able to meet its current liabilities. In a company, cash is the most liquid asset to cover current liabilities. With liquidity, a company can cover its current debt by using existing current assets. A company organization can be said to have a good liquidity ratio if it can meet its short-term debt at maturity. However, if a company organization is unable to meet its current liabilities, it is said that the company is illiquid [13]. Based on the results of hypothesis testing, the significance level of the liquid variable is 0.009. This means that H3 is accepted because the significance level of the liquidity variable is less than 0.05. This shows that liquidity has a negative effect on financial distress. The results of this study are in line with research [12] which state that liquidity has a negative and significant effect on financial distress. However, several studies should be more consistent [14, 18, 19, 31] that liquidity does not affect financial distress. The results of the regression of the liquidity ratio show that the coefficient = -0.061 and the tcount is -0.549, with a significant agreement less than 0.05. The results showed that the coefficient value increased and had a negative effect.

4.6 Solvability

Solvability, the ratio used to measure how much the cost of debt must be the obligation of a company in order to fulfill assets. Solvency determines the amount of ability or assets of a company whose costs are using debt. It can be interpreted that the amount of company costs borne by the company by using its assets. The results of the discussion of hypothesis testing show that solvency has a significance value of 0.050. This can be interpreted that H4 is accepted because the significance value of the solvency variable is equal to 0.05. It can be interpreted that solvency has a positive effect on the occurrence of financial difficulties. The results of this study do not follow research [33] which states that solvency has an effect on financial difficulties. However, previous research needs to be in line[15, 34], which state that solvency affects financial distress. The regression results for the solvency ratio show that the coefficient = 0.115 and the t value is 1.005 with a significant value greater than 0.05 (0.056 > 0.05). The results showed that the coefficient value decreased and had a positive effect [35].

4.7 Institutional Ownership

The institutional ownership structure of a company is the size of a surplus of shares owned by a company from the total number of outstanding shares. The amount of institutional ownership >5% will bequeath an excellent monitoring ability [1]. Independent commissioners are members of the board of commissioners, are parties outside the company who do not deal directly with the company, and do not represent shareholders. Based on the perspective of agency theory, institutional ownership can improve the monitoring system to become stronger so that the company's performance improves. When large companies own institutional ownership, this situation will encourage more robust and effective monitoring due to the professionalism of these institutions and company evaluations that run efficiently [36]. So increasing the percentage of institutional ownership in company share ownership can cause agency costs to be lower because agency problems can be minimized [37].

The hypothesis test results show that the institutional ownership variable has a significant level of 0.301. This means that H5 is rejected because the significance level of the liquidity variable is more critical than 0.05. It can be concluded that solvency does not affect financial distress. Based on research [38], this research states that institutional ownership does not involve financial decline. This is following research [11, 18, 24, 30, 39]. Research outside this research [21, 40] state that institutional ownership has a positive effect on financial distress. The regression results for the solvency ratio show that the coefficient value = -0.191 and the t value is -1.637, with a significant value greater than 0.05. The results show that the coefficient value has decreased and has a negative effect.

4.8 Managerial Ownership

The managerial ownership structure is a shared ownership owned by the management, the board of commissioners and even the board of directors. The existence of governance ownership can be needed to minimize agency problems that arise from a company [19].

Managerial ownership is part of corporate governance and is considered very effective as a means of monitoring which can improve the quality of company reports [20]. The hypothesis test results show that managerial has a significance level of 0.005. This means that H6 is accepted because the significance level of the liquidity variable is less than 0.05. It can be concluded that solvency does not affect financial distress. Research [21] states that the government ownership structure has negative control over the decline in financial conditions. This is in line with the following research [41, 42]. Previous studies do not align with this research [43, 44], which state that managerial ownership affects financial distress. Regression results for the solvency ratio show that the coefficient value -0.015 and the t value is -0.131 with a significant value greater than 0.05. The results show that the coefficient value has decreased and has a negative effect.

5 Conclusion

From the results of the analysis and discussion that has been carried out, the researcher can conclude as follows independent commissioners, profitability, liability, solvency and institutional ownership have a negative effect on financial distress in manufacturing companies listed on the IDX. Managerial ownership structure has no impact on the financial distress of manufacturing companies on the IDX. The limitation of this research is the need for references used by researchers for certain variables so that further research can add variables that have not been studied. This study only uses the annual report as a source of data collection so that further research can use cash flow, sustainability reports, etc. The limitation of this study is that it has a low r-square value of 44% so that further research can use moderating or control variables.

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