

## The Effect of Corporate Governance and Leverage on Financial Distress Measured by G-score

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### ABSTRACT

This study aims to analyze the effects of corporate governance and leverage on financial distress. During the COVID-19 pandemic many companies encountered financial distress which could lead to bankruptcy; therefore, a study with a more focus on factors causing financial distress is needed. In contrast to previous studies, this study uses G-score which is considered more accurate to measure financial distress than other models. The study population of this research is mining companies listed on the Indonesia Stock Exchange during the period 2015 to 2019. A purposive sampling method was used and data of 200 companies was collected. A multiple regression analysis was used to test the hypothesis. The results of the study show that the independence of board of commissioners has a negative effect on financial distress. However, the size of board of directors has a positive effect on financial distress. Meanwhile, audit committee, ownership structure, and leverage have no effects on financial distress. The findings of this study also suggest that independent board of commissioners and small size of board of directors can reduce the likelihood of financial distress.

Keywords: Corporate governance, financial distress, leverage.

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### 1. INTRODUCTION

COVID-19 was declared a global pandemic in early 2020, and it delivered a heavy blow to the world economy (Yang & Zhang, 2022). The COVID-19 pandemic has left a tremendous impact on various aspects of life, not only health, but also economy. In the second quarter of 2020, Indonesia even experienced an economic growth of  $-5.32\%$  (BPS, 2020). Large companies were also affected, including General Motors which suffered a loss of IDR 11.1 trillion in the second quarter of 2020 (Liputan 6, 2020). A company may experience financial distress when the company cannot meet the schedule of debt repayment to the creditors. If not anticipated, it can be a harbinger of bankruptcy. Platt and Platt (2002) define financial distress as a stage of deterioration in financial condition that occurs before bankruptcy or liquidation. Brédart (2014) states that financial distress occurs when a company has lost its market value due to poor performance, inefficient production, high financial influences, and cash flow problems. In a managerial context, companies tend

to be more sensitive to economic changes but survive in deteriorating economic conditions (Bhattacharjee & Han, 2014). Hofer (1980) and Whitaker (1999) state that financial distress occurs when a company suffers losses for several years.

Companies experiencing financial difficulties can be seen from several indicators, including layoffs, negative dividends, and lower cash flows compared to long-term debt. In addition, other conditions that can indicate financial difficulties include negative operating profit margins for two years and inability to pay dividends for more than one year (Juniarti, 2013). Financial distress occurs in three stages: financial difficulty incubation, fund flow deficit, and financial distress. Studies in Europe uses bankruptcy criteria to define financial distress (Zheng, 2015) and show that bankruptcy criteria are defined as financial distress (Zheng, 2015). To anticipate financial distress, it is necessary to develop an early warning system, which may benefit a company's internal and external parties. Both the internal and external parties of the company can then take fast action or make decisions accordingly to improve the company's financial condition.

In the past several years, a number of Indonesian companies have been suffering from financial distress, including mining companies. Most of the mining companies, including PT Aneka Tambang Tbk (ANTM) or Antam, recorded a slow financial growth due to decreasing global commodity prices. This government-owned mining company recorded a loss of IDR 775.28 billion in 2014. If the financial loss continues, it can bring detrimental consequences to the company (Neraca.co.id, 2015). Recent data shows that the COVID-19 pandemic hit the mineral and coal sectors quite hard. The investment target in this sector was US\$ 7.75 billion by October 2020, but the realization as of October 2020 only reached US\$ 2.89 billion. This shows that investment realization in the mineral and coal mining sectors as of October 2020 only reached 37.3% of this year's target. The COVID-19 pandemic was the main cause of the drop in investment in these sectors that year, and as a result, several projects were halted due to the outbreak (CNBC Indonesia, 11 November 2020).

Several studies have discussed financial distress, including those conducted in Indonesia by Juniarti (2013), Herlina (2012), Triwahyuningtias and Muharam (2012), and Napisah (2020). Meanwhile, research about financial distress from outside Indonesia was conducted by Al-Tamimi (2012), Brédart (2014), Ming (2014), Darrat, *et al.* (2014), Cruz (2014), Iwasaki (2014), Zheng (2015) and Miglani *et al.* (2015). These studies have shown that financial distress is influenced by several factors although some studies have also shown some inconsistencies in the results. Darrat *et al.* (2014) found that independent commissioner negatively significant affect the likelihood of financial distress, but they are not significant according to Cruz (2014) and Brédart (2014). To detect the presence of financial distress, financial statement analysis can be employed. Andre (2013) used leverage and found that it affected financial distress. By contrast, Putri (2014) showed that leverage had no effect on financial distress.

Research by Iwasaki (2014), Al-Tamimi (2012), Darrat *et al.* (2014), Ming (2014), and Miglani *et al.* (2015) found that the board of directors can be a potential cause of financial distress. However, this differs from the findings of Cruz (2014), Juniarti (2013), and Brédart (2014). Audit committee could also significantly influence the likelihood of financial distress according to Miglani *et al.* (2015); however, this finding is contrary to that of Juniarti (2013). Iwasaki (2014) and Zheng (2015) showed that ownership structure is a significant factor in financial distress, while Juniarti (2013) and Madrid (2014) argued the opposite. Juniarti (2013) found that NPM was significant, whereas Herlina (2012) states that profitability ratio significantly affects financial distress. The audit committee shows a significant influence on financial distress according to Iwasaki (2014) and Miglani *et al.*

(2015), while according to Juniarti (2013), it is insignificant. Scholars hold different views about the influence of ownership structure on the likelihood of financial distress, which Zheng (2015) and Iwasaki (2014) consider significant, but not according to Juniarti (2013) and Cruz (2014). Liquidity and leverage ratios do not significantly affect financial distress in Herlina's (2012) research; however, Septiani (2019) has found that leverage has a significantly negative effect on financial distress. Board of commissioners is not significant to the occurrence of financial distress (Ming, 2014; Triwahyuningtias & Muharam, 2012).

The results of previous research show some inconsistencies, which are likely due to limited variables used to examine the possibility of a company experiencing financial distress. For example, the research conducted by Juniarti (2013) only used audit committee and ownership structure as the independent variables, while Iwasaki (2014) argues that it is necessary to add independent board of commissioners as one of the variables.

As regards to the aforementioned background and prior studies, we found a gap in the results of the existing research; therefore, financial distress is an important issue to be addressed. In previous studies, different proxies were used among researchers to determine financial distress. In this study, Grover's model is used because based on the result of Amirulloh's (2018) research, this model is more accurate than of Altman, Zmijewski, and Springate models. Another difference from previous research is the use of mining companies listed on the Indonesia Stock Exchange during the period 2015 to 2019 as study population. Mining economies have suffered since 2015 (PwC, 2016).

## 2. LITERATURE REVIEW

### 2.1. Agency Theory

In the agency theory, Jensen and Meckling (1976) stated that agency relationship is the relationship between principals and agents. Principals are shareholders who delegate responsibility to agents (management) according to the agreement stated in the employment contract. Agency problems arise due to conflicts of interest between the principals and the agents. The principals or shareholders want maximum profit, while the management as an agent expects adequate compensation for their performance.

### 2.2. Hypothesis Development

A board of directors has the duty and responsibility to manage the company. Members of the board of directors carry out their respective duties and authorities. According to Fama and Jensen (1983), the board of directors has two main functions: (1) as a management decision maker (short-term corporate strategies, investment and financial policy), and (2) as a decision controller (managerial compensation, supervision of capital allocation).

A large-sized board of directors can benefit a company (Al-Tamimi, 2012, Darrat *et al.*, 2014; Iwasaki, 2014; Miglani *et al.*, 2015; Ming, 2014;). This could directly benefit the resource management, which may also impact the company's profit; therefore, the company can avoid financial distress. Thus, the hypothesis can be formulated as follows:

*H1: The size of board of directors negatively affects financial distress.*

An audit committee is formed to supervise the process of financial reporting and external audits. The audit committee has a role and responsibility for checking the suitability of financial statements with accounting standards and company policies. The audit committee also monitors audits of financial statements. Monitoring is carried out to assess service quality and the fairness of external audit fees. The audit committee plays an important role in assisting the board of directors to monitor the financial statements

reporting and control the systems. This is to prevent frauds that can lead to financial losses and to minimize financial distress.

The audit committee members of a company may affect the company's performance (Iwasaki, 2014, Miglani *et al.*, 2015). The audit committee can support the company's performance and reduce the likelihood of financial distress. Therefore, the hypothesis proposed is as follows:

*H2: Audit committee negatively affects financial distress.*

Ownership structure consists of institutional ownership and managerial ownership. Institutional ownership can be defined as share ownership by legal entities. Meanwhile, managerial ownership is share ownership by the company's internal parties. Research conducted by Zheng (2015) and Iwasaki (2014) revealed a negative effect between ownership and financial distress. Therefore, the hypothesis can be proposed as follows:

*H3: Ownership structure negatively affects financial distress.*

An independent board of commissioners is a member of the board of commissioners from outside the company. The independent board of commissioners has collective duties and responsibilities for supervising and providing recommendations to the board of directors. The independent board of commissioners is also tasked with ensuring that the company implements good corporate governance. An independent board of commissioners is needed to oversee and control opportunistic behavior of directors (Jensen & Meckling, 1976). Independent commissioners ensure that the preparation of financial statements is free from personal interest. Thus, the financial reports can be properly prepared (Puspaningsih & Ristya, 2022). The existence of an independent board of commissioners can reduce agency costs, thus preventing financial distress.

Research conducted by Iwasaki (2014), Darrat *et al.* (2014) and Ming (2014) have suggested that the independent board of commissioners has a negative effect on financial distress. Thus, the hypothesis proposed is as follows:

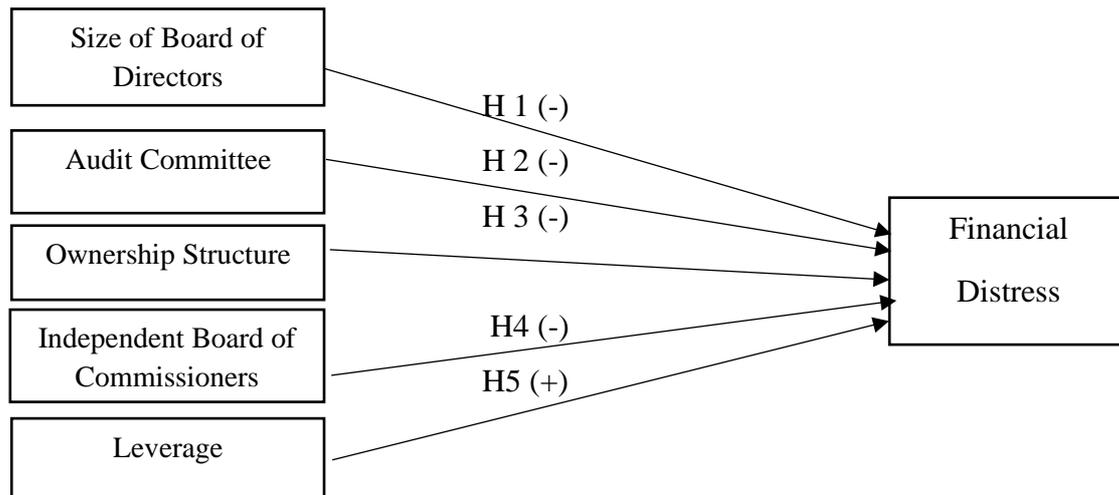
*H4: The board of independent commissioners has a negative effect on financial distress.*

Company performance can be measured from financial performance. Financial performance can be analyzed using financial ratio analysis (Susan *et al.*, 2022). Companies require capital, raised from the sale of shares or loans, for its operational activities. Leverage arises because of loans. Previous studies by Seoki *et al.* (2010), Triwahyuningtias (2012), and Andre (2013) have shown that leverage has a positive effect on financial distress. This suggests that high leverage is likely to cause financial distress. Therefore, the hypothesis can be given as follows:

*H5: Leverage has a positive effect on financial distress.*

### **2.3. Research Model**

The research model used in this study is as shown in Figure 1.



### 3. RESEARCH METHODOLOGY

#### 3.1. Population and Sample

The population of this study are mining companies listed on the Indonesia Stock Exchange between 2015 and 2019. During this period the mining companies experienced financial difficulties. Sample was selected using purposive sampling with the following criteria: a) the mining company was listed on the Indonesia Stock Exchange (IDX) before January 1, 2015, b) the company was not delisted from the IDX during the period 2015 to 2019, c) the mining company published complete financial reports.

#### 3.2. Research Variables and Measurement

Financial distress is the dependent variable in this study. Financial distress was measured using the Grover's model, which is more accurate than the Altman, Zmijewski, and Springate models (Amirulloh, 2018). Financial distress measured with Grover's model is calculated using the following formula:

$$G - \text{Score} = 1.650 X1 + 3.043 X3 + 0.016 \text{ROA} + 0.057$$

where:

$X1$  = working capital/ total assets

$X3$  = EBIT/ Total assets

ROA = net income / total assets

Grover's model categorizes a company into a state of insolvency if its score is less than or equals  $-0.02$  ( $G \leq -0.02$ ), and the value for a company categorized in a non-bankrupt state is greater than or equals  $0.01$  ( $G \geq 0.01$ ). A company with a score between the upper limit and the lower limit is categorized into the gray area.

There are five independent variables in this study: 1) size of board of directors, 2) audit committee, 3) ownership structure, 4) independent board of commissioners, and 5) leverage.

The size of board of directors is the number of people that are appointed as directors. A director has full power to lead the operating activities within an enterprise. The size of board of directors was measured by the total number of directors on the board.

The audit committee is a committee formed by the board of directors. The committee is in charge of carrying out independent supervision of the process of financial

statements reporting and external audits. The audit committee variable in this study was measured by the number of the members of the audit committee in a company.

Ownership structure consists of institutional ownership and managerial ownership. Institutional ownership is expressed as a percentage of shareholding owned by legal entities. Managerial ownership is the ownership of existing shares by internal parties within the company. The ownership structure was measured by summing the managerial ownership and institutional ownership, then divided by the total outstanding shares.

$$\frac{\text{Managerial ownership} + \text{Institutional ownership}}{\text{Total shares}} \times 100 \%$$

The independent board of commissioners is a member of the board of commissioners from outside the company. Companies listed on the stock exchange must have at least 30% of independent commissioners of the total number of members of the board of commissioners. Independent commissioner in this research was measured using the proportion of independent commissioners to the total number of members of the board of commissioners in a company.

Leverage is a ratio to measure a company's ability to pay off its debts (Rudyawan & Badera, 2008). In this study, the leverage is measured using the debt ratio, which compares total liabilities with total assets (Sartono, 2001: 121).

$$\text{Leverage} = \text{total liabilities} / \text{total assets}$$

## 4. RESULTS AND DISCUSSION

### 4.1. Research Samples

The population is 49 mining companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2019. The companies had been registered by January 1, 2015 and had never been delisted during research period. We used purposive sampling in this study. The following is a sample determination table.

Table 1: Research Sample

No	Criteria	Sum
1	Number of all mining companies listed on IDX between 2015 and 2019	49 (7)
2	Mining companies listed on IDX listed after January 1, 2015	
3	Mining companies delisted	(2)
4	Mining companies with incomplete data to support the research	(0)
5	Number of sample companies	40
6	Years of observation (2015-2019)	5
7	Number of sample companies during years of observation	200

### 4.2. Descriptive Statistical Analysis

Descriptive statistics are used to describe the data in a study. The average value (mean), minimum value, maximum value, and standard deviation provide information on the dependent and independent variables, as shown in Table 2.

Table 2: Results of Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Size of board of directors	200	2.00	10.00	4.5512	1.58534
Audit committee	200	0.00	5.00	3.0634	0.67944
Independent board of commissioners	200	0.00	1.00	0.3809	0.12906
Leverage	200	0.00	632.64	6.2901	58.41866
Financial distress	200	-7.16	4.77	0.2455	0.99428
Valid N (listwise)	200				

### 4.3. Tests of Classical Assumptions

A normality test is carried out to determine whether the variables show indications of normality or abnormality in the residual distribution. This study used one sample Kolmogorov Smirnov test.

Table 3: Result of Kolmogorov Smirnov Test

	Asymp. Sig.(2-tailed)	Description
Unstandardized Residual	0.07	Normal

The result of the normality test with a total sample of 200 showed that the residual data were normally distributed.

Multicollinearity test is carried out to determine whether the regression model shows the correlations among independent variables of the study. The result of the multicollinearity showed that the VIF value of all independent variable  $< 10$ , which proved no occurrence of multicollinearity.

Autocorrelation test is performed to ensure that the regression model used is free of the correlation. This study employed Durbin-Watson test to determine the autocorrelation.

Table 4: The Result of Autocorrelation Test

DW	dL	dU	4-dU
2.084	1.7279	1.8094	2.1906

From the autocorrelation test, Durbin-Watson value of 2.084 was obtained. With  $n=200$ ,  $k=5$  and  $\alpha=5\%$ , dL value obtained was 1.7279; meanwhile, dU value was 1.8094, and the value of 4-dU was 2.1906. Moreover, the results showed that the dU value (1.8094)  $< DW$  (2.084)  $< 4-du$  (2.1906), which means that there was no autocorrelation in this regression model.

Heteroskedasticity test is performed to examine the variance inequality in the regression model. Glejser test was used in this study to test heteroscedasticity. If the significance value is  $> 0.05$ , the regression model contains heteroscedasticity.

Table 5: Results of Heteroscedasticity Test

Variable	Sig.	Description
Size of board of directors	0.127	Free of heteroscedasticity
Audit committee	0.780	Free of heteroscedasticity

Ownership structure	0.136	Free of heteroscedasticity
Independent board of commissioners	0.948	Free of heteroscedasticity
Leverage	0.541	Free of heteroscedasticity

The results of the detection of heteroscedasticity using Glejser Test showed that the research model was free of heteroscedasticity. The regression model is said to be free of heteroscedasticity if each independent variable has significance value  $> 0.05$ .

#### 4.4. Multiple Linear Regression Test

The coefficient of determination (adjusted  $R^2$ ) test is carried out to determine the extent to which the independent variables are able to explain the dependent variable in the study. The coefficient of determination test will result in the adjusted R squared value as seen in Table 6.

Table 6: Results of Coefficient of Determination Test

Model	R	R Square	Adjusted R Squared	Std. Error of the Estimate
	0.348 <sup>a</sup>	0.121	0.099	0.94358

The results showed the adjusted R squared value of 0.99 which means that the dependent variable, namely financial distress, could be explained by the independent variables, consisting of size of board of directors, audit committee, ownership structure, independent board of commissioners, and leverage by 9.9%. The remaining 90.1% could be explained by other variables not included in the study.

The F test aims to determine whether the regression model used is fit. The basis of decision making is the value of significance. If the significance value is  $< 0.05$ , the regression model is feasible to use. The result of F test is presented in Table 7.

Table 7: Results of F Test

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	24.493	5	4.899	5.502	0.000
Residual	177.179	194	0.890		
Total	201.672	199			

The results of the F test showed that the significance value of the model was 0.000, or smaller than 0.05. Thus, the regression model of this study was suitable for use or fit.

The multiple linear regression analysis was carried out in this study to model the linear relationships between the independent variables and financial distress as the dependent variable. Table 8 summarizes the results of the analysis.

Table 8: Results of Multiple Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.105	0.485		-0.218	0.828
Size of board of directors	0.129	0.044	0.206	2.954	0.004
Audit committee	-0.038	0.101	-0.026	-0.375	0.708

Ownership structure	0.007	0.004	0.123	1.795	0.074
Independent board of commissioners	-1.496	0.518	-0.194	-2.885	0.004
Leverage	-0.002	0.001	-0.099	-1.478	0.141

Referring to the results of the multiple linear regression analysis, a regression equation can be formulated as follows:

$$\text{FINC\_DIS} = -0.105 + 0.129 \text{ BD} - 0.038 \text{ AUD\_COMM} + 0.007 \text{ OWN} - 1.496 \text{ IBC} - 0.002 \text{ LEV} + e$$

where:

FINC_DIS	: Financial distress
BD	: Size of board of directors
AUD_COMM	: Audit committee
OWN	: Ownership structure
IBC	: Independent board of commissioners
Lev	: Leverage

#### 4.5. Discussion

The hypothesis test on H1 showed that size of board of directors had a regression coefficient of 0.129 and significance level of 0.04. This suggests that the size of board of directors has a positive effect on financial distress, and thus H1 is not supported. This result is not in line with that of previous studies conducted by Al-Tamimi (2012), Ming (2014), Iwasaki (2014), Darrat *et al.* (2014), and Miglani *et al.* (2015) which states that a large number of members of board of directors can benefit a company because of better resource management which may have an impact on the company business profit. This way, the company could avoid financial distress. In this study, however, it is not proven. There are two main problems associated with a large-sized board of directors. The first is agency problems, such as problems with communication and board coordination (Humairoh & Nurulita, 2022). The second problem is members of the board may produce policies that are more favorable or fulfill their particular interests. This could be detrimental to the general interests of the company as getting involved in its members' business strategy issues may have a negative impact on business performance.

The hypothesis test on H2 showed that audit committee had the regression coefficient of -.038 and significance value of 0.708. This suggests that audit committee has no effect on financial distress, and thus H2 is not supported. The number of members of the audit committee within a company affects the company performance (Iwasaki, 2014; Miglani *et al.*, 2015), hence reducing the possibility of financial distress. The audit committee variable in this study was measured by the number of the members of the audit committee in a company. The findings of the current study indicated insignificant result because audit committees with large numbers of members tend to lose focus and are less engaged in resolving agency problems. It is increasingly difficult for the members of the audit committee to reach a shared agreement on certain decisions (Humairoh & Nurulita, 2022)

The result of the hypothesis test on H3 showed that ownership structure had a regression coefficient of 0.007 and significance value of 0.74 which indicates that ownership structure has no effect on financial distress. Thus, H3 is not supported. This result is contrary to that of the research conducted by Zheng (2015) and Iwasaki (2014) which found a significant and negative relationship between ownership and financial

distress because the amount of share ownership can reduce financial distress. Therefore, ownership structure has an important role to maintain the stability and control of a company.

The hypothesis test on H4 showed that independent board of commissioners had a regression coefficient of -1.496 and significance level of 0.04 which means that independent board of commissioners negatively affects financial distress. Thus, H4 is supported. The agency theory states that an independent board of commissioners is needed to supervise and control opportunistic behavior of directors (Jensen & Meckling, 1976). In this research, our finding suggests that independent board of commissioners has a negative effect on financial distress. This result supports that of the research conducted by Ming (2014), Darrat *et al.* (2014), and Iwasaki (2014) which found that independent board of commissioners negatively influences financial distress. Darrat *et al.* (2014) argue that boards with greater independence are more effective in monitoring the board. An independent board is a strong board, which is able to reduce the possibility of opportunistic behavior of management or controlling shareholders to act in their own interests and take wealth from other shareholders. This may reduce the possibility of financial difficulties.

The board of commissioners has the responsibility and authority to supervise the board of directors, and provide advice to the board of directors if deemed necessary. The composition of the board of commissioners must be such that it allows effective, precise and fast decision making. The composition should also allow the board to act independently in a sense of not having any vested interests which can interfere with their interests in carrying out their duties independently and critically. According to the agency theory, the presence of independent commissioners may increase the effectiveness of monitoring and control over management to reduce agency problems (Fama and Jensen, 1983). Independent commissioners are considered a strategic resource because they could expand organizational knowledge for the company.

The result of the hypothesis test on H5 showed that the regression coefficient and significance level of leverage were -.002 and 0.141 respectively. The values indicate that leverage does not affect financial distress. Thus, H5 is not supported. This result cannot prove that leverage could increase the likelihood of financial distress because the financial problems of the mining companies during the research period were caused by an external problem, which was a decline in the prices of mining products, and not due to debts. The result of this study does not support those of Lee Seoki *et al.* (2010), Triwahyuningtias (2012), and Andre (2013) which have suggested that there is a positive relationship between leverage and financial distress where high company leverage could result in higher probability of financial distress to occur.

## 5. CONCLUSION, IMPLICATIONS AND SUGGESTIONS

This study aims to examine the influence of corporate governance and leverage on financial distress. Inconsistencies in the results of previous studies may occur due to the use of inaccurate measurements of financial distress. Therefore, this study used G-Score that is considered more accurate and which was used in the research of Amirulloh and Isbanah (2018). Based on our findings, it can be concluded that the size of board of directors has a positive effect on financial distress. Meanwhile, independent board of commissioners negatively affects financial distress, whereas audit committee, ownership structure, and leverage have no effect on financial distress.

The results of this study show that the size of board of directors has a positive effect on financial distress. This suggests that the larger the number of the members of the board

of directors, the higher the likelihood of financial distress. Thus, companies need to be careful in increasing the number of members of the board of directors because it might increase the potential of financial distress because of the following reasons: a) increasing salary, costs, and various facilities for the members of board of directors, and b) increasing the potential of conflicts in managerial decision-making process.

This study has also shown that independent board of commissioners could reduce financial distress, hence the need for increasing the proportion of independent members of the board of commissioners. Thus, independent commissioners may reduce the potential of financial distress better than non-independent commissioners.

Although this study provides some evidence of the effects of the size of board of directors and independence of board of commissioners on financial distress, this study is unsuccessful in showing the influence of the audit committee and ownership structure on financial distress. This suggests that audit committee (as measured by the number of committee members) as well as the ownership structure (proxied by managerial and institutional ownership) may not be effective in reducing the probability of financial distress. The mining companies need to improve the effectiveness of audit committee. Using audit committee as a variable should not only consider the number of the members of the committee, but also other factors such as independence, competence, and level of education. Future studies need to examine the roles of independence, competence, and level of education of audit committee members in reducing financial distress using the G-Score as the measurement.

The result of this study, which shows that ownership structure (managerial ownership and institutional ownership) has no effect on financial distress, suggests that the other ownership structures, such as government and foreign ownerships, might be able to reduce financial distress; however, these variables need to be examined further in future research. The study also indicates that leverage is not proven to influence financial distress, which also suggests that debt can be an alternative source of funds to compliment the capital funds. Future studies could use other governance variables, and not those observed in this study since the coefficient of determination of the variables examined in this research is very small (9.9%), while the remaining 90.1% is influenced by other variables outside this study.

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