Determinants of Financial Distress of Mining Sector Companies: Indonesia Evidence

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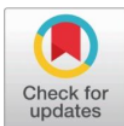
Determinants of Financial Distress of Mining Sector Companies: Indonesia Evidence

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Abstract

Research aims: This study aims to examine the effect of the size of the board of commissioners, board of directors, audit committee, profitability, and sales growth on the financial distress of mining sector companies listed on the Indonesia Stock Exchange (IDX).

Design/Methodology/Approach: This research applied a quantitative approach by choosing the type of associative research. The data were in the form of financial documentation of companies listed on the IDX between 2015 and 2019.

Research findings: The results showed that profitability and the audit committee positively affected the low potential of financial distress. Therefore, the greater the profitability of the company and the audit committee could minimize the company experiencing financial distress. On the other hand, sales growth, the board of directors, and the board of commissioners had no significant effect on financial distress.

Theoretical contribution/Originality: The results provide an empirical explanation that profitability and the size of the audit committee are essential variables in avoiding financial distress. In addition, other theoretical contributions are the use of agency, signaling, and resource dependency theories to explain the phenomenon of financial distress.

Research limitation: This study has several limitations. The population was only mining sector companies, and the types of independent commissioners/boards of directors were not separated. Therefore, this study provides recommendations for future research, i.e., expanding the population, including moderating and/or control variables to avoid bias in the results and include other factors triggering financial distress.

Keywords: Audit committee size; Profitability; Good corporate governance; Financial distress

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Introduction

The Indonesian economy is highly dependent on fossil fuels, such as oil, coal, and natural gas, which meet more than 80% of national energy needs (World Bank, 2022). Rapid economic growth, increasing demand for energy, and increased use of fossil fuels have also led to a substantial increase in CO_2 emissions in Indonesia. Besides, the country is genuinely concerned about rising emissions, especially from the energy sector (Raihan et al., 2022). In this case, mining is no stranger to harsh climates; many industries already operate in unsustainable conditions, and the mining sector faces pressure from governments, investors, and the public

to reduce emissions and is responsible for 4 to 7% of greenhouse gas (GHG) emissions globally (Delevingne et al., 2020). The green economy movement and zero emissions by countries in the world also both cause mining sector companies to experience turmoil and pressure, impacting mining operations (Cao et al., 2021). In addition, many countries are starting to oppose coal mining commodities and oil since they are not environmentally friendly, even though coal is one of the highest revenue contributors to mining companies and contributes to Indonesia's economic growth in exports (Raihan et al., 2022). Moreover, regional governments are undertaking various economic reform plans and development strategies to transform the green economy and renewable energy. This event can then increase regional companies' financial distress risk (ElBannan, 2021).

The impact of the green economy campaign and the movement toward zero emissions will decrease sales of mining sector companies. On the one hand, companies will incur inflated costs to make the energy transition from fossil to renewable energy for mining operations (Fattahi et al., 2021; Igogo et al., 2021). The decline in financial conditions and the swelling of operational costs are symptoms of financial distress. The company's financial crisis could also be caused by severe liquidity problems that could not be fixed without changing the size or structure of its operations (Dwijayanti, 2010). Therefore, applying the agency theory principle, where there is a division of authority between the manager and the company owner, is expected to prevent bankruptcy because the power is handed over to those with expertise in their fields (Li & Li, 1999). In addition, this financial distress information can be used as an early warning sign of bankruptcy and allows management to take timely action to avoid problems before they become problems (Yati & Patunrui, 2017).

Several studies have highlighted numerous factors causing the possibility of financial distress, including problems with cash flow, substantial liabilities, the occurrence of losses in the company's operations, and poor good corporate governance (GCG) (Rohmadini et al., 2018). Helena and Saifi (2018) noted that the board of directors could affect the occurrence of financial distress. Likewise, the study by Munawar et al. (2018) revealed that the audit committee had a significant influence on financial distress. Besides, Rohmadini et al. (2018) explained that ROE had a negligible impact on financial difficulties. Meanwhile, Wijarnarto and Nurhidayati (2016) found that ROE had a negative effect on financial distress. Based on several previous studies, it has been proven that there are still inconsistencies in the results of each variable. This inconsistency could be because the samples involved in earlier research were diverse. Therefore, context-specific studies are needed to find more focused empirical evidence. Thus, this study aims to re-examine the determinants of financial distress in only one sector, mining companies.

Practically, the results of this research are expected to be an input for mining companies to mitigate the risks of financial distress that may occur due to the zero-emission carbon movement and the green economy. In addition, this study is expected to add to the discussion on the issue of financial distress in the specific sector, i.e., mining, which has

the potential for financial difficulties due to future renewable energy issues, as discussed earlier.

Literature Review and Hypotheses Development

According to Yati and Patunrui (2017), financial distress refers to a company's financial situation when it experiences severe liquidity problems and cannot carry out normal activities. This aspect becomes a term describing the case, i.e., the company is in a state of bankruptcy, where the company cannot pay off debt, failure in cash management, inability to pay off debt, and violation of agreements with creditors that lead to legal action. Meanwhile, the GCG variables are vital to study in financial distress issues, including the board of commissioners as a part that plays a crucial role in a company. The board of commissioners is obliged collectively to conduct a supervisory role on the company's policies and supervise its running by providing recommendations to its directors. Meanwhile, the board of directors is a person who, together with other members of the board of directors, must decide or usually make decisions in determining the appropriate action. Then, the audit committee is based on the definition given by the Indonesian Audit Committee Association, which is a group of experienced and independent people who play a role in supporting and improving the supervisory functions of the commissioners, such as in the process of preparing company financial reports, risk management, audit implementation, and implementation of good corporate governance.

According to Manzaneque et al. (2015), the board of commissioners impacts financial distress. Although previous studies often found that the size of the board of commissioners did not influence financial distress, based on the theory, the board of commissioners affects financial distress. The research results of Sastriana and Fuad (2013) wrote about the independent board of commissioners, which negatively influenced the financial distress of the banking industry listed on the Indonesia Stock Exchange from 2009 to 2012. Meanwhile, Permana and Serly's (2021) research suggested that the board of commissioners negatively influenced the occurrence of financial distress in state-owned enterprises in Indonesia. Likewise, the study by Hanifah and Purwanto (2013) showed that the board of commissioners had a negative effect on the occurrence of financial distress in manufacturing companies that have gone public on the Indonesia Stock Exchange.

H₁: The size of the board of commissioners has a significant influence on financial distress.

In the GCG mechanism, the board of directors appropriately controls and manages the company's resources to pursue results. The board of directors is also tasked with formulating the company's vision and mission. Aside from setting values, another function is to devise and propose long or short-term programs to be discussed at the General Meeting of Shareholders so that the board of commissioners can approve them. The increasing number of the board of directors is expected to improve its performance in

managing a company. The performance of the board of directors that continues to improve then increases the company's profits, which in turn can minimize the occurrence of financial distress. A study by Apriliana (2021); Helena and Saifi (2018) informed about the board of directors, which partially had a positive and significant effect on financial distress. Meanwhile, in their research, Hanifah and Purwanto (2013) and Sastriana and Fuad (2013) uncovered that the board of directors's size negatively affected financial distress.

H₂: The size of the board of directors has a significant influence on financial distress.

The task of the audit committee is to assess, review, and provide direction to the board of commissioners on the effectiveness of the internal control system, the effectiveness of the external auditor's duties, and the performance of the internal audit function. A large number of audit committees are expected to be able to carry out their duties as supervisors and decision makers even better. By implementing the right supervisory and decision-making strategy, the board of directors can prevent financial distress. This hypothesis is formulated based on Munawar et al.'s (2018) study, containing information about audit bodies that significantly affected financial distress. More technically described by Haziro et al. (2017), Christian (2017), and Masak and Noviyanti (2019), in their research, the audit committee had a positive influence on financial distress. It indicates that the larger the size of the audit committee can affect the condition of financial distress. It is also mentioned that the audit body is one of the fundamental units of the company that helps oversee and regulate the company's management. Even less strong company management has the potential to cause financial distress.

H₃: The size of the audit committee has a significant influence on financial distress.

According to Rohmadini et al. (2018), companies with high profits reflect the level of success in carrying out the company's operational activities and the success rate in terms of the ROE ratio obtained. Thus, the greater the ROE, the less financial distress will occur. This hypothesis is formulated based on research by Ayu et al. (2017) and Rohmadini et al. (2018), stating that ROE partially had a positive effect on financial distress. On the other hand, the research results of Wijarnarto and Nurhidayati (2016) wrote that ROE significantly negatively affected estimating the occurrence of financial distress in companies.

H₄: Profitability has a significant influence on financial distress.

Sales growth reflects a company's capability to increase its sales in each period. According to Rani (2017), if it is against an organization with a negative growth rate, a company with positive and robust sales progress will be more likely to survive and minimize the risk of financial problems. Sales growth that tends to increase is expected to increase profit acquisition to reduce the occurrence of financial distress. As the research results obtained

by Hosea et al. (2020), Aprian et al. (2019), and Sutra and Mais (2019), the increase in sales had a positive influence related on the relationship with financial distress that occurred in companies engaged in the mining sector listed on the Indonesia Stock Exchange in 2015-2017, retail trading sub-sector companies on the Indonesia Stock Exchange, and automotive and component manufacturing sub-sectors companies listed on the Indonesia Stock Exchange from 2012 to 2016. However, there was a negative effect on sales growth related to financial distress, as researched by Wulandari and Fitria (2019).

H₅: Sales growth has a significant influence on financial distress.

Research Method

This associative study examined the causal relationship among variables using hypothesis testing (Singarimbun & Effendi, 2012). The variables studied were the size of the board of commissioners (X1), the size of the board of directors (X2), the size of the audit committee (X3), profitability (X4), sales growth (X5), and financial distress (Y). This quantitative research approach utilized secondary data in the form of numbers obtained from financial reports published by mining companies on the Indonesia Stock Exchange from 2015 to 2019. Thus, the population in this study was mining sub-sector companies for the 2015-2019 period listed on the Indonesia Stock Exchange (IDX), totaling 46 companies. Meanwhile, the samples were selected using purposive sampling involving 11 companies with criteria: first, as a company engaged in the mining sector and on the 2015-2019 BEI list; second, experiencing a loss or decrease in sales at least two times in the observation period.

Variable Measurement and Operation

Financial distress was the dependent variable in this study, referring to the financial condition of the company that faces severe liquidity problems, causing difficulties in operating the company (Yati & Patunrui, 2017). According to Ayu et al. (2017), companies experiencing financial problems can be characterized by ownership of an interest coverage ratio of less than 1. The measurement of the dependent variable using the ICR (Interest Coverage Ratio) functioned to estimate the company's ability to pay interest on its debt to avoid bankruptcy. Thus, the increasing ICR causes the company to be better able to pay its interest expense (Andreas et al., 2009; Atina & Rahmi, 2019; Hidayat & Meiranto, 2014; Permata & Juliarto, 2021).

The next is the size of the board of commissioners. As an integral unit, the board of commissioners is responsible for carrying out management control and providing recommendations to the board of directors. According to Thesarani (2017), the size of the board of commissioners could be seen in the company's number of boards of commissioners in that period. Regarding the size of the board of directors, Sukandar and Rahardja (2014) explained that the existence of the board of directors is crucial to determine where the policy direction is and how the short- and long-term resource strategy is used by the company.

In addition, the size of the audit committee. The audit committee is an independent body that acts as an intermediary between external auditors and corporations; besides that, it also plays a role in supervising the board of commissioners and internal auditors (Surya & Yustiavanda, 2006). This variable was assessed based on the number of audit bodies in the corporation (Wardoyo & Veronica, 2013).

Furthermore, Return on Equity (ROE) measures the company's profitability concerning shareholder equity. The higher the ROE, the more efficient the company's management generates profits and growth from equity financing. In line with that (Boubaker et al., 2018; Widati, 2015; Van Horne & Junior, 2012), ROE was used as a measure of profitability in explaining financial distress. The last variable was sales growth. Kasmir (2016) asserted that sales growth proves the company's ability to optimize its sales in each period. With the increase in sales, the company's assets (cash and/or accounts receivable) are expected to increase and prevent financial distress.

Data Analysis

The data analysis method in this study went through six stages, and the first was residual normality. Residual normality is a term that refers to the normal state of data. According to Ghozali (2006), this test is used to identify whether the research variables in the regression model are normally distributed. Normal or near-normal data distribution is a sign of a good model. If the Asymp. sig (2-tailed) value of the Kolmogorov-Smirnov model exceeds 5%, the requirements are met.

The second was the multicollinearity test. According to Ghozali (2006), this test is vital to see whether the regression model or path analysis identifies a correlation between independent variables. There should be no correlation between the independent variables in a good model. To determine whether there is multicollinearity, the value of VIF (Variance Inflation Factor) was looked at. If the value is < 10, there is no multicollinearity. The third test was heteroscedasticity. In Sujianto (2009), one way to check heteroscedasticity is to observe the spread of variance contained in the scatterplot graph of the SPSS output.

The fourth was autocorrelation. To test the relationship between one residual and another observation residual, one of the assumptions in the use of the OLS (Ordinary Least Square) model is that there is no autocorrelation, stated as E (ei, ej) 0 and i≠j, whereas if there is autocorrelation, it is denoted E (ei, ej) 0 and i j (Winarno, 2015). The fifth was multiple regression. This multiple-regression technique was used to comprehensively understand the relationship between the independent and dependent variables. Then, the use of multiple regression analysis or 2 tailed in this study aimed to test whether the independent variables had a positive or negative sign.

Moreover, the dependent variable in this study was financial distress (Y), while the independent variables were the size of the board of commissioners (X1), the size of the board of directors (X2), the size of the audit committee (X3), profitability (X4), and sales growth (X5). Finally, hypothesis testing with a t-test is an individual test to determine the effect of each cause variable on the effect variable. The first, second, third, fourth, and fifth hypothesis

tests were conducted, and the partial testing was by comparing the significant t-test value with =5% (Ghozali, 2006). The hypothesis will be accepted if the significance of t is less than or equal to 5%. On the other hand, it is rejected if the probability value is > 5%. In addition, concerning simultaneous testing (F-Test), Sujianto (2009) explained that the F-test is to determine the contribution of all independent variables together to the dependent variable.

Result and Discussion

The test results on the variables of the board of commissioners, directors, audit committee, profitability, sales growth, and financial distress proved that the data could be distributed normally, indicated by the Asymp. Sig. (2-tailed) value of 0.200 higher than the level of significant (α) 0.05. Therefore, the data of this study were normally distributed. This test also proved whether the regression model had a strong relationship between independent variables since there should be no relationship or no symptoms of multicollinearity. In addition, the test results found no signs of multicollinearity, evidenced by the tolerance value. The VIF values of the board of commissioners' size variable, the board of directors' size variable, the audit committee size variable, the profitability variable, and the sales growth variable were more significant than 0.10 and less than 10.00. Then, the independent variables were unrelated, or the independent variables were free from multicollinearity. In addition, this research was free from the assumption of autocorrelation and heteroscedasticity, so the study was BLUE (Best Linear Unbiased Estimator) and could proceed to the multiple regression test stage (Table 1).

Table 1 Regression Analysis Results

Variable	Coefficients	t	Sig.
Size of Board of Commissioners	-0.005	-0.023	0.982
Size of Board of Directors	0.048	0.234	0.816
Size of the Audit Committee	0.310	2.036	0.049*
Profitability	0.379	2.592	0.013*
Sales Growth	-0.080	-0.516	0.609

Dependent variable: Financial distress - Proxy: ICR (Interest Coverage Ratio)

Furthermore, the t-test was conducted to examine the effect of each independent variable on the dependent variable. The results confirmed that the variable size of the audit committee had a significant value of 0.049, more diminutive than 0.05. Also, it had a standard regression coefficient of 0.310 or a positive notation. It indicates that the size of the audit committee had a positive and significant effect on ICR. In other words, the size of the audit committee was positively associated with minimal risk of financial distress. This study is in accordance with previous studies from Munawar et al. (2018) and Helena and Saifi (2018). Thus, the hypothesis, "audit committee size has a significant influence on financial distress," was tested.

Additionally, the t-test results of the profitability variable had a significant value of 0.013, smaller than 0.05. It denotes that profitability had a substantial effect on ICR. Besides, the standard regression coefficient of the profitability variable had a positive sign of 0.379. In other words, profitability also positively affected the low risk of financial distress. This

result contradicts Erayanti (2019), Rohmadini et al. (2018), Ayu et al. (2017), and Wijarnarto and Nurhidayati (2016). Hence, the hypothesis "profitability has a significant effect on financial distress" was tested.

However, the other three independent variables had a significance level greater than 0.05, i.e., 0.982 (size of the board of commissioners), 0.816 (size of the board of directors), and 0.609 (sales growth). It signifies that the three variables did not significantly affect financial distress; therefore, hypotheses 1, 2, and 5 were not supported. This result contradicts Manzaneque et al. (2015) and Helena and Saifi (2018) that the board of commissioners considerably influenced financial distress conditions. However, the results of this research align with those of Aprian et al. (2019), Perdana & Dillak (2019), and Rani (2017).

Discussion

From the perspective of resource dependency theory, a board of commissioners is essential for a company, where the board of commissioners has a role in monitoring and coordinating the duties and policies determined by the board of directors. With the board of commissioners, it is expected to minimize agency problems that occur between shareholders and the board of directors. The board of commissioners is also tasked with providing recommendations to the board of directors. However, this study's findings indicate that there was no role for the board of commissioners on the issue of financial distress. According to Anjana (2017), companies with many boards of commissioners can hinder the monitoring function. It is because more and more boards of commissioners with diverse abilities can lead to differences of opinion in providing advice to the board of directors, allowing for debate between the board of commissioners in reviewing the strategy implemented by the board of directors. Then, it can hamper the monitoring function of the board of commissioners. On the other hand, a small board of commissioners can also be less effective in overseeing the company's running.

Furthermore, the size of the board of directors was also found not to affect the company's financial distress. The results of this study are relevant to the research of Barney and Ouchi in Ikhsan and Suprasto (2008), stating that agency theory has similarities with the transaction cost perspective, which assumes self-interest and is bound by rationality. Based on agency theory, the more the board of directors, the more interested each board of directors, which can increase the conflict of objectives between the board of directors.

In addition, the audit committee is an experienced and independent committee whose mission is to maximize the commissioners' supervisory function in preparing financial reports, risk management, auditing, and implementing good corporate management (Effendi, 2009). Based on the results of this study, the audit agency had a significant influence on financial distress, meaning that the size of the audit committee could avoid financial distress. Helena and Saifi (2018) noted that the formation of the audit committee's supervisory function in the resource dependence theory depends on the number of members on the committee. According to the statement, the number of audit committees dramatically influences the course of the supervisory function. It is consistent with Salloum et al.'s (2014) finding that the audit committee significantly affected

financial distress. Thus, the better the quality of the audit committee, the company could minimize the possibility of experiencing financial distress.

Moreover, this study uncovered that profitability, as measured by ROE, had a significant effect on low risk of financial distress. These results align with Pham Vo Ninh et al. (2018) that the more asset productivity and profitability, the lower the probability of financial distress. In this case, profitability shows that management has maximized the return on investment. If the ROE is close to the value of one, the company has demonstrated effectiveness and efficiency in obtaining profits from capital (equity). Meanwhile, if the ROE value moves to zero, the company is less efficient in managing capital to earn a profit. Thus, if equity management is carried out to the maximum extent possible, the profits obtained will be even more significant and can further prevent financial distress.

Lastly, sales growth did not contribute to reducing the risk of financial distress. In this regard, sales growth reflects a company's capability to increase sales in each period. According to Aprian et al. (2019), every increase in sales does not always get a higher net profit due to the burden that also increases along with the rise in sales. As a result, the net profit obtained is minor or even negative. These small profits can then affect the company's financial condition, which may lead to financial distress.

Conclusion

Based on the study's results, it can be concluded that the audit committee and profitability significantly positively affected financial distress. However, the size of the board of directors, the size of the board of commissioners, and sales growth had no significant effect on financial distress. This research has practical implications, i.e., the audit committee's role needs to be improved because of its contribution to suppressing ICR, leading to a lower risk of financial distress. Apart from the audit committee, company profitability is also another key to reducing financial distress.

Furthermore, this study has several limitations. The population was only mining sector companies, and the types of the board of commissioners/independent directors were not separated. In addition, this study did not pay attention to implementing good corporate governance, such as ownership concentration, board competence, and others. Therefore, this study provides recommendations for future research, i.e., expanding the population, including moderating and/or control variables to avoid bias in the results and include factors triggering financial distress.

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