CHAPTER IV

DATA ANALYSIS AND DISCUSSION

In this chapter, it presented the description of the research object, the result of the analyzed data and the data discussion. Data analysis presented in this research are descriptive statistical analysis, the classical assumption test, logistic regression analysis method and hypothesis testing. The data in this research were collected and processed by using a computer program IBM SPSS Statistics 16 2019.

4.1.Population and Sample

The data used for this research were obtained from Indonesian Stock Exchange (IDX). The population in this research is Mining Companies during 2015-2017. The sample of this research determined by using purposive sampling method with some criteria as follows:

1. Mining company
2. Listed in BEI during 2015-2017
3. Audited annual financial reports that can be accessed directly during 2015-2017

Based on those criteria, 20 companies fulfilled the criteria so they can include as the sample of this research.

4.2. Descriptive Analysis

Mudrajad Kuncoro (2009: 192) says that one form of analysis is the activity of inferring large amounts of raw data so that the results can be interpreted. Grouping or separating the relevant components or parts of the whole data, is also one form of analysis to make data easily managed. Setting, sorting, or manipulating data can provide descriptive information that will answer the questions in the definition of the problem. All forms of analysis try to describe consistent patterns in the data, so the results can be studied and interpreted in a concise and meaningful way.

Table 4.1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MANOWN	60	.00	.60	.0809	.15558
INSOWN	60	.28	.93	.6085	.15724
AUCOM	60	1.00	4.00	3.0000	.52076
INDEPCOM	60	.10	.76	.4033	.14771
FIRMSIZE	60	5.51	11.84	8.1557	1.57529
SALESGROWTH	60	-11.53	.70	-.2017	1.55094
FD	60	.00	1.00	38.74	179.5857
Valid N (listwise)	60				

Source: Data processed using SPSS 16,2019

From the table descriptive above, the conclusions are as follows:

1. The minimum value of financial distress is 0, meaning that the company is experiencing financial distress. While the maximum value financial distress is 1, meaning that the company is not experiencing financial distress (health company). The mean value of company's financial distress is 38.74 which also showed that the number of companies experiencing financial distress is 3,874%. The standard deviation value is 179.5857 which is above the mean value so that it can be concluded the data is heterogeneous.
2. The minimum value of managerial ownership is 0, meaning the company has the managerial ownership below 5% while the maximum value of managerial ownership is 0.60 which means the company having the managerial ownership is above 5%. The mean value of the managerial ownership is 0.0809, showing that the number of companies experiencing financial distress is 8.09%. The standard deviation value is .15558 which is above the mean value so it can be concluded that the managerial ownership is heterogeneous
3. The minimum value of institutional ownership is 0.28, which belongs to PT Toba Bara Sejahtera Tbk in the year 2015. While the maximum value is 0.93 which belongs to PT Toba Bara Sejahtera in the year 2016 & 2017 meaning the company has the highest institutional ownership with total of 93%. The mean value of the institutional ownership is 0.6085 or 60.85%. The value of standard deviation is 0.15724 which is below the

mean value. So, it can be concluded that institutional ownership is homogeneous.

4. The minimum value of audit committee is 1.00. It belongs to PT. Borneo Lumbung Energi Dan Metal Tbk, which means the company has the fewest audit committee. The maximum value is 4.00, it belongs to PT. Aneka Tambang Tbk, which means the most audit committee compared to other companies. The mean value of audit committee is 3.0000 or can be interpreted as 3% where there is 3 audit committee inside the company. The value of standard deviation is .52076 which below the mean value. Thus, it can be concluded that audit committee is homogeneous.
5. The minimum value of independent commissioner is 0.10. It belongs to PT. Bukit Asam Tbk, which means the company has the fewest independent commissioner. The maximum value is 0.76, it belongs to PT. Golden Eagle Energy Tbk, which means the most independent commissioner compared to other companies. The mean value of independent commissioner is 0.4033 or can be interpreted as 40.33% where the level of independent commissioner already complied with the regulation which is 1/3 of the number of independent commissioners. The value of standard deviation is .14771 which below the mean value. Thus, it can be concluded that independent commissioner is homogeneous.

6. The minimum value of firm size is 5.51. It belongs to PT. Atlas Resources Tbk, which means the company has the lowest firm size compared to others. The maximum value is 11.84, it belongs to PT. Golden Eagle Energy Tbk, which means the highest firm size compared to other companies. The mean value of firm size is 8.1557, which means the level of firm size that measured using total asset of the companies is Rp. 32,130,753,524. It means several companies included in big companies because the total assets above 10 billion related in *Undang – Undang No.20 Tahun 2008* about firm size clarification. The value of standard deviation is 1.57529 which below the mean value. Thus, it can be concluded that independent commissioner is homogeneous.
7. The minimum value of sales growth is -11.53. It belongs to PT. Indika Energy Tbk, which means the company has the lowest sales gwoth. The maximum value is 0.70, it belongs to PT. Goldern Eagle Energy Tbk, which means the highest sales growth compared to other companies. The mean value of sales growth is -0.2017 or can be interpreted as -20.17%. The value of standard deviation is 1.55094 which is above the mean value. Thus, it can be concluded that sales growth is heterogeneous.

4.3.Classical Assumption Test

4.3.1. Normality Test

Normality test used to test in regression between dependent variable and independent variable have normal distribution (unbiased regression) or unnormal distribution (bias regression) (Ghozali,2011:19) cited by (Ayuwardani,2018). The t-test and F test assume that the residual value follows the normal distribution, if this assumption is violated then the statistical test becomes invalid for a small number of samples. There are two ways to detect whether residuals are normally distributed or not, namely graphical analysis and statistical tests. The data normality test in this study uses the Kolmogorov-Smirnov non-parametric statistical test (K-S) by making a hypothesis (Sugiyono, 2008: 147-152):

1. Ho: accepted if the probability is greater than 0.05 (> 0.05), i.e. the residual variable is normally distributed.
2. Ha: accepted if the probability is less than 0.05 (<0.05), i.e. the residual variable is abnormal distributed.

The reason for using the significance level of 0.05 (5%) is to believe that 95% of the research results can be trusted.

Tabel: 4.2

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		60
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	3.33604421
Most Extreme Differences	Absolute	.100
	Positive	.073
	Negative	-.100
Kolmogorov-Smirnov Z		.777
Asymp. Sig. (2-tailed)		.582

a. Test distribution is Normal.

Source: Data processed using SPSS 16,2019.

Based on the table above, the Asymp. Sig. (2-tailed) value is 0.582 which is greater than 0.05, it can be concluded that the residual data are normally distributed.

4.3.2. Multicollinearity Test

According to Ghozali (2011:105) cited by Ayuwardani (2018), A Multicollinearity test is used to know whether any relation between the independent variable in the regression model. A good regression model there is no correlation between independent variables. Multicollinearity test can be seen from (1) tolerance value and, (2) Variance Inflation Factor (VIF). Cut off values commonly used to indicate the presence of multicollinearity are Tolerance values> 0.10 or equal to VIF values <10 (Ghozali, 2010: 105).

Tabel: 4.3

Tolerance Values and VIF

Model	*Collinearity Statistics*	
	Tolerance	**VIF**
Managerial Ownership	.857	1.166
Institutional Ownership	.831	1.203
Audit Committee	.906	1.104
Independent Commissioner Board	.839	1.192
Firm Size	.958	1.044
Sales Growth	.990	1.010

Source: Data processed using SPSS 16,2019.

The lowest tolerance value is Institutional ownership which is equal to 0.831. Therefore, none of the tolerance values of the independent variable is higher than 0.10. While the value of the variant inflation factor (VIF) is highest in the variable Institutional ownership which is equal to 1.203. Thus, it can be concluded that there is no multicollinearity between independent variables in the regression model, because none of the independent variables has a tolerance value higher than 0.10 and a VIF lower than 10.

4.3.3. Heteroscedasticity Test

This test aims to test whether the regression model occurs variance from one observation residual to another observation (Ghozali,2011:139) cited by (Ayuwardani,2018). If there is no existence of variance, it was called homoscedasticity and the other one is called

heteroscedasticity. A good regression model is a regression model of homoscedasticity or heteroscedasticity does not occur because this data collects that represent various values.

According to Ghozali (2013: 142), one way to detect the presence or absence of heteroscedasticity is to do a Glejser test. The Glejser test proposes to regress the absolute value of residuals to the independent variables. The probability result called significant if the significance value is above the 5% confidence level. Heteroscedasticity test results are as follows:

Table: 4.4

Heteroscedasticity Test

Variable	Limit ation	Significant
Managerial Ownership	0.05	.393
Institutional Ownership	0.05	.921
Audit Committee	0.05	.097
Independent Commissioner Board	0.05	.285
Firm Size	0.05	.742
Sales Growth	0.05	.732

Source: Data processed using SPSS 16,2019.

Table 4.4 above shows that the correlation value of all independent variables with Significance value has a more than 0.05, it can be concluded that there is no heteroscedasticity problem in the regression model.

4.3.4. Autocorrelation Test

Table: 4.5

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.503[a]	.253	.168	3.51982	2.168

a. Predictors: (Constant), X6, X3, X5, X2, X1, X4

b. Dependent Variable: Y

Source: Data processed using SPSS 16,2019.

The durbin-watson (d) value of 2.168 is greater than the upper limit of 1.8082 (dw table) and less than (4-du) 4-18082. = 2.1918. So, as the basis for decision making in the Durbin Watson test above, it can be concluded that there are no problems or symptoms of autocorrelation.

Thus, the multiple linear regression analysis to test the above research hypothesis can be done.

4.4.Multiple Regression Analysis

Jonathan Sarwono (2006: 128) said that the function of multiple linear regression is to estimate the magnitude of the coefficients resulting from a linear equation, which involves two independent variables, to be used as a means of predicting the value of the dependent variable. The multiple linear regression equation is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

Where:

Y = Financial Distress

α = Constant

β = Regression Coefficient

X_1 = Managerial Ownership

X_2 = Institutional Ownership

X_3 = Audit Committee

X_4 = Independent Commissioner Board

X_5 = Firm Size

X_6 = Sales Growth

e = Error

From the results of multiple linear regression analysis obtained the results of the regression coefficient, and p-value. The results of the linear regression analysis can be shown as in Table 4.6.

Table: 4.6

Multiple Regression Analysis

Model	B	Sig
(Constant)	-239	.955
Managerial Ownership	10.682	.001
Institutional Ownership	7.046	.032
Audit Committee	-.176	.850
Independent Commissioner Board	-9.013	.010
Firm Size	.075	.801
Sales Growth	.229	.443

Based on the table above, the results of the calculation of multiple linear regression produce the following equation:

$$\mathbf{Y = -0.239 + 10.682}X_1 \mathbf{+ 7.046}X_2 \mathbf{- 0.176}X_3 \mathbf{-9.013}X_4 \mathbf{+ 0.075}X_5 \mathbf{+ 0.229}\ X_6$$

Based on the table, the following conclusions are obtained:

1. Constant variable value of -0.239. Means that if the variables are valued at 0, then the financial distress variable is -0.239.
2. The contribution of managerial ownership variables to the level of financial distress variables is 10,682, assuming other variables are constant.
3. The contribution of institutional ownership variables to the level of variable financial distress is 7,046, assuming other variables are constant.

4. The contribution of audit committee variables to the level of financial distress variables is -0.176, assuming other variables are constant.
5. The contribution of the independent commissioner variable to the level of financial distress variable is -9,013, assuming other variables are constant.
6. The contribution of firm size variables to the level of financial distress variable is 0.075, assuming other variables are constant.
7. The contribution of sales growth variable to the level of financial distress variable is 0.229, assuming other variables are constant.

4.5. Hypothesis Test

Jonathan Sarwono (2006: 65) stated that the hypothesis can be as a temporary answer to the problem being studied. Hypothesis can be derived from theories relating to the problem we will examine. The hypothesis is a temporary truth that still needs to be tested. Therefore, the hypothesis functions as a possibility to test the truth of a theory. If the hypothesis has been tested and proven true then the hypothesis becomes a theory. Thus, a hypothesis is derived from an existing theory, the possibility of being tested for truth and finally bringing forth a new theory.

1. Simultaneous Significance Test

According Ghozali (2010: 98) F statistical test basically shows whether all the independent variables intended in the model have a simultaneous influence on the dependent variable. Tests carried out using significance level 0.05 ($\alpha = 5\%$). With the following equation:

Ha: Managerial ownership, institution ownership, audit committee, independent commissioner board, firm size, and sales growth have a significant positive effect on financial distress Mining companies listed on the IDX 2015-2017

The hypothesis tested are:

3) Ho: if the significant value > 0.05, Ho is accepted. It means that all independent variables together are not significant variables for the dependent variable.
4) Ha: if the significant value <0.05 then Ha is accepted. It means that all independent variables together are a significant variables for the dependent variable.

The results of the simultaneous significance tests (F test) can be seen in the table below:

Table: 4.7

F Test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	222.131	6	37.022	2.988	.014[a]
	Residual	656.622	53	12.389		
	Total	878.753	59			

a. Predictors: (Constant), X6, X3, X5, X2, X1, X4

b. Dependent Variable: Y

Source: Data processed using SPSS 16,2019.

Based on the results of the analysis above, a significance probability value of 0.014 <0.05 is obtained. it means that the regression

model used in this research significant and can predict the financial distress.

2. Determination coefficient

The quality of the regression equation can be seen from the value of determination (R2). Mathematically, the value of determination was the square of the correlation coefficient (r). Because the value of R2 was often overestimated, some statistical software will calculate the corrected R2 (adjusted R2). The value of determination provides information on how big the role of the independent variables were in determining the dependent variable. The value of determination was between 0% to 100%. The closer to 100% the better the determination of the regression equation (Dahlan, 2013). To find out the percentage change in the dependent variable (Y) caused by the independent variable (X) can be seen in the table below:

Table 4.8

Determination Coefficient Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.503[a]	.253	.168	3.51982	2.168

a. Predictors: (Constant), X6, X3, X5, X2, X1, X4

b. Dependent Variable: Y

Source: Data processed using SPSS 16,2019.

Based on the table above obtained the coefficient of determination of 0.253. It means that the percentage change in the

dependent variable (Y) caused by the independent variable (X) is 25.3%, while the remaining 74.7% is influenced by other variables outside this study.

3. Partial Significance Test (t test)

According to Ghozali (2010: 98), the statistical test (t) basically shows how far the influence of one independent variable individually in explaining the dependent variable. This test was used to determine the level of influence between each independent variable partially on the dependent variable. According to Sugiyono (2014: 257) that (t-test) the results of this calculation compare with t_{tables} using an error rate of 0.05. The criteria used are as follows:

- H_0 was accepted if the $t_{value} \leq t_{table}$ or the value of sig> α
- H_0 was rejected if the $t_{value} \geq t_{table}$ or the value of sig <α

If the acceptance of Ho occurs, it can be concluded that there was no significant effect, whereas if Ho was rejected, it means that there was a significant influence. As for the hypothesis in this study are:

- Ho: β = 0: there was no significant influence
- Ha: β ≠ 0: there was a significant influence

Table 4.9

T Test

Model	B	Sig
(Constant)	-239	.955
Managerial Ownership	10.682	.001
Institutional Ownership	7.046	.032
Audit Committee	-.176	.850
Independent Commissioner Board	-9.013	.010
Firm Size	.075	.801
Sales Growth	.229	.443

Source: Data processed using SPSS 16,2019.

1. Managerial Ownership & Financial Distress

The first hypothesis shows that Managerial ownership has negative influence towards financial distress. From table 4.9 the relation between managerial ownership and financial distress is 10.682 and significance value is 0.001. Based on the criteria, so the regression coefficient is significance (0.001<0.05). Thus, managerial ownership has positive significance influence towards financial distress. So, first hypotheses is not supported.

2. Institutional Ownership & Financial Distress

The second hypothesis shows that Institutional ownership has negative influence towards financial distress. From table 4.9 the relation between managerial ownership and financial distress is 7.046 and

significance value is 0.032. Based on the criteria, so the regression coefficient is significance (0.0032<0.05). Thus, institutional ownership has positive significance influence towards financial distress. So, second hypotheses is not supported.

3. Audit Committee & Financial

The third hypothesis shows that Audit Committee has negative influence towards financial distress. From table 4.9 the relation between audit committee and financial distress is -0.176 and significance value is 0.850. Based on the criteria, so the regression coefficient is not significance (0.850>0.05). Thus, Audit committee does not influence on financial distress. So, the third hypotheses is not supported.

4. Independent Commissioner Board & Financial Distress

The fourth hypothesis shows that Independent commissioner board has negative influence towards financial distress. From table 4.9 the relation between independent commissioner board and financial distress is -9.013 and significance value is 0.010. Based on the criteria, so the regression coefficient is not significance (0.010<0.05). Thus, independent commissioner board has negative significance influence towards financial distress. So, the fourth hypothesis is supported.

5. Firm size and Financial Distress

The fifth hypothesis shows that Firm size has negative influence towards financial distress. From table 4.9 the relation between firm size and financial distress is 0.075 and significance value is 0.801. Based on

the criteria, so the regression coefficient is not significance (0.801>0.05). Thus, firm size does not influence on financial distress. So, the fifth hypothesis is not supported.

6. Sales Growth & Financial Distress

The sixth hypothesis shows that sales growth has negative influence towards financial distress. From table 4.9 the relation between sales growth and financial distress is 0.229 and significance value is 0.443. Based on the criteria, so the regression coefficient is not significance (0.443>0.05). Thus, sales growth does not influence on financial distress. So, the sixth hypothesis is not supported.

4.6. Discussion

4.6.1. Managerial Ownership and Financial Distress

The result of this study proved that managerial ownership has a positive significant influence on financial distress, meaning that managerial ownership affecting the condition of financial distress. The greater managerial ownership will increase financial distress.

Managerial ownership is the amount of share ownership by the management of all the company's share capital that is managed. With the ownership of shares by management, there will be an oversight of the policies that will be taken by the company's management. Managerial ownership of the company is closely related to control and monitoring of management behavior, as a consequence of agency conflict. Managerial ownership can help to align management interests with shareholders. The

manager will be careful in every decision making because every decision taken will directly affect the managers.

In this result, greater managerial ownership will increase financial distress. It is because there is a conflict between the managers that have ownership in the company. If a manager has big control, the manager will tend to have incentives to gain personal profit. In line with the agency, the theory is the assumption about human behavior that is selfish (self-interest).

And the existence of managerial ownership is not carried out good in monitoring the management functions and the management does not aware towards the shares that invested in company. So, the management does not take decision carefully and financial distress cannot be minimized.

This result in accordance with the statement of Ellen & Juniarti (2013) that proved that the managerial ownership is only symbolic and the implementation of good corporate governance in a firm is only a formality which is not supported by an efficient performance.

4.6.2. Institutional Ownership and Financial Distress

The result of this study proved that the institutional ownership has positive significant influence on the financial distress, meaning that the greater of institutional ownership, the greater financial distress.

Based on the principal of agency theory, institutional ownership is able to monitor the agents through the effective monitoring process. Monitoring functions performed by institutional owners would make the firm more efficient in the use of firm assets as resources in its operation. A percentage of shares owned by the institution can control and encourage the managers to be more focused on the company performance in order to reduce the financial distress. Institutional ownership has ability to reduce the opportunities which have done by management so that the financial distress can be reduced.

This research proved that the grater institutional ownership will increase financial distress. It was due to the institutional stock ownership is majority and centralized ownership. Centralized ownership can lead to lack of transparency in the use of funds in the firm as well as an appropriate balance between interest that exist. For example, between the shareholders and firm management.

Centralized institutions no longer perform its function to encourage the improvement of supervision on management. Institutional parties as shareholders indicated could easily control the management of the firm by the existence of such large shareholdings.

This result accordance with the statement of Ellen & Juniarti (2013), Witiastuti & Suryandari (2016), that proved, that is because in a firm is often the institutional ownership is merely a formality and is not intended to meet good corporate governance. So, the supervision on the

management in carrying out its operational activities are not actually carried out by the institution.

4.6.3. Audit Committee and Financial Distress

The result of this study proved that the audit committee does not influence financial distress, meaning that the audit committee will not affect the condition of financial distress in the company.

The competency of the audit committee should enable control matters relating to company finances early on so that the audit committee can make corrections of the company's financial condition to avoid the company from financial distress. The primary job of the audit committee is to audit the financial statement and giving the result to the management. The management needs to follow up the result for take a decision and make a new policy (if necessary) related to the result of the auditor. If the management does not follow up the auditor's report for take a decision based on the result of the auditor so it will not effective and it will make financial distress because there is no new policy by the management.

This result is in accordance with the research by Hanifah & Purwanto (2013), Masak & Noviyanti (2019) that the audit committee does not influence financial distress. The audit committee is a corporate governance mechanism that able to reduce the agency problems arising inside the company. If the problems are continuing, it will arise financial distress in the company.

4.6.4. Independent Commissioner Board and Financial Distress

The result of this study proved that the Independent commissioner board has negative significant influence on financial distress, meaning that the independent commissioner board will affect the condition of financial distress.

The function of the commissioner independent in supervising performance the board of directors in terms of controlling regarding financial problems. Then it will avoid the detrimental action to the company, and Independent commissioner board has an important role. So that the company can be minimized financial distress. thus, the higher proportion of independent commissioners will be very influential to the lower the probability a company experiences financial distress.

This result is in accordance with the research by Hanifah and Purwanto (2013) stated that the Independent Commissioner board has negative significant influence on financial distress.

4.6.5. Firm Size and Financial Distress

The result of this study proved that the Firm size does not influence financial distress, meaning that the firm size will not influence the condition of financial distress.

There are no different companies between assets in big companies and assets in small companies. It can be seen through their investor. The investors are investing in big companies or small companies

to help companies in the financial sector. If the investors are investing in a big money to a small company, it will avoid the company from financial distress. In the same way, if the investors are investing in the big company to give capital to the company, it will overcome financial distress.

This result is in accordance with the research by (Cinantya & Merkusiwati, 2015), Sastriana & Fuad (2013), Kurniasanti & Musholifah (2018) that firm size does not influence financial distress.

4.6.6. Sales Growth and Financial Distress

The result of this study proved that Sales growth does not influence financial distress, meaning that the sales growth will not affect the condition of financial distress.

Sales growth does not influence financial distress because of the market. Trading companies have a big relation to the market in order of sales especially mining companies. Several factors influence the market such as availability. Availability means the product that offers to the market is difficult to be found or there is a lot of product that sells in the market. If the product is difficult to be found in the market so the price will higher. On the other words, if the product is sold in the market so the price will be lower.

Thus, if the sales are higher it will not influence financial distress because it will only increase the net income obtained by the company. And if the sales are lower it will not influence financial distress because it will only decrease the net income obtained by the company.

This result is in accordance with the research by Aini & Purwohandoko (2019), Widarjo & Setiawan (2009) stated that sales growth does not influence on financial distress. And the result is in contrast with the research conducted by Merkusiwati and Widhiari (2015) which proved that growth sales has negative significant effect on financial distress.