CHAPTER III

METHODOLOGY

A. Research's Object

Object of research or population of this sample is using Indonesia Stock Exchange data for the year 2013-2017. Sample of this research is all companies listed there.

B. Type and Source of Data

Data that is used in this research is secondary data from annual report that listed in Indonesia Stock Exchange in year 2013-2017. In addition, data of Credit Rating Indonesia from PT. Pefindo from 2013-2017 (www.pefindo.com)

C. Technique of Sampling

Technique of sampling in this research is using purposive sampling method which is taking sample from determined criteria. Criteria taking sample in this research is:

1. Companies listed in Bursa Efek Indonesia (BEI) in 2013-2017 (same companies in the range of year).
2. Companies that publish the credit rating in Pefindo.
3. Companies that publish credit rating 5 years (2013-2017).
4. Companies that disclose variables fully

D. Technique of Data Collection

This research collecting the data from annual report and summary of financial statement's company that is become sample of this research. It taken from Bursa Efek Indonesia (BEI's corner) Universitas Muhammadiyah Yogyakarta, legal cite of Indonesia

Stock Exchange (IDX) that is www.idx.co.id, and Credit Rating Indonesia's data from

PT. Pefindo.

E. Variable Operational Definition of Research

1. Dependent Variable: Audit Fee

The dependent variable is the variable described or influenced by independent variables. Dependent variable of this research is using audit fee. Halim (2005) stated that audit fee is revenue that is received by auditor with vary amount that is based on some factors in audit assessment such as: size of company, audit service complexity, and audit risk that is faced by client. Hazmi and Sudarno (2013). Siskawati (2017) and Xu (2011) using natural logarithm professional fee to measure audit fee. This variable is symbolized by LNFEE.

2. Independent Variable

The independent variable is a variable that explains or affect other variables. Independent variable in this research are:

a. Existence of Independent Commissioners

Independent Commissioners are members of the board of commissioners who are not affiliated with the directors, other members of the board of commissioners and controlling shareholders, and are free from any business relationship or other relationship that may affect their ability to act independently or act solely for the benefit of the enterprise (Law Number 40, 2007). This variable shows the percentage of independent commissioners' existence. Based on Hazmi

and Sudarno (2013) the existence of independent commissioners (BoardInd) can be seen in financial statement that is published by company with this formula:

$$BoardInd = \frac{Total\ Independent\ Commissioners}{Total\ Board\ of\ Commissioners}\ x\ 100\%$$

b. Size of Commissioners Board

Board of commissioners is an organ of the company responsible for supervising publicly and / or specifically in accordance with the articles of association and giving advice to the directors (Law Number 40, 2007). Size of Commissioners Board variable is proxied by total of board commissioners in a company. Based on Hazmi and Sudarno (2013), size of commissioner's board is measured by total of commissioner's board in a company or BoardSize. The formula is:

BoardSize = Total of Commissioners Board in a Company

c. Size of Board of Commissioner's Meeting

Based on Hazmi and Sudarno (2013) this variable shows how often meeting of board commissioners. The proxy is using total meeting of commissioners board in accounting period or BoardMeet as below:

BoardMeet = Total of Board of Commissioners Meeting

d. Size of Audit Committee

The audit committee is a group of persons selected by a larger group to do certain work or to perform specific tasks or a number of members of the Board of Commissioners of the client company responsible for assisting the auditor in maintaining his or her independence from management (Tugiman, 1995). Size of

audit committee in a company shows how many member of audit committee in a company (Hazmi and Sudarno, 2013). It is symbolized by ACSize with formula:

ACSize = Total Audit Committee's Member

e. Audit Committee Expertise

Based on Hazmi and Sudarno (2013) the expertise of audit committee is using the percentage of audit committee's member who has expertise in accounting and financial compared to total of audit committee member. It is symbolized by ACExpert as below:

$$ACExpert = \frac{Total\ of\ Accounting\ Expertise\ in\ Audit\ Committee\ Member}{Total\ of\ Audit\ Commitee\ Member} \; x \; 100\%$$

f. Business Complexity

Based on Xu (2011); Siskawati et al (2017) business complexity is how complicated audit task to auditor when doing audit to client. Business complexity is shown by:

Sub = Number of subsidiaries

g. Business Risk

Business Risk can be proxied by credit rating that is available in Pefindo web (pefindo.com). it is using dummy variable (1 for rating AAA until BBB; and 0 for rating BB+ until D) (Siskawati et al, 2017):

TABEL 3.1.
Credit Rating Category

	Symbol	Category
1	$_{id}$D	*Non-investment grade*
2	$_{id}$CC	*Non-investment grade*
3	$_{id}$CCC-	*Non-investment grade*

4	idCCC	*Non-investment grade*
5	idCCC+	*Non-investment grade*
6	idB-	*Non-investment grade*
7	idB	*Non-investment grade*
8	idB+	*Non-investment grade*
9	idBB-	*Non-investment grade*
10	idBB	*Non-investment grade*
11	idBB+	*Non-investment grade*
12	idBBB-	*Investment grade*
13	idBBB	*Investment grade*
14	idBBB+	*Investment grade*
15	idA-	*Investment grade*
16	idA	*Investment grade*
17	idA+	*Investment grade*
18	idAA-	*Investment grade*
19	idAA	*Investment grade*
20	idAA+	*Investment grade*
21	idAAA	*Investment grade*

BRisk = *Credit Rating of company*

3. **Control Variable**

Control variable is variable that control the relationship between independent variable with dependent variable, which is assumed to be involved affect independent variables and reduce error rates or confounding variables. The control variables in this study are company size.

According to Fachriyah (2011), the size of the company reflects the size of the client company to be audited. Company size will affect the length of the audit process, which will have an impact on audit fees. Furthermore, data is measured using natural logarithms of the company's total assets, and symbolized by LNASSETS in equation.

F. **Instrument and Data Testing**

1. **Descriptive Analysis**

Descriptive statistic is used to analyze data by spell out data that are collected without make general conclusion (Sugiyono, 2013). Descriptive statistic shows mean, minimum, maximum, and deviation standard.

2. **Classical Assumption Test**

   a. **Normality Test**

   Normality test is beneficial to examine the distribution between independent variable and dependent variable. Good regression model when it distributed normally. Normality test in this research is using One Sample Kolmogorov-Smirnov method. (Nazaruddin and Basuki, 2015).

   a. If Asymp.sig (2-tailed) is less than 0.05, thus HO is rejected. The data is not distributed normally.

   b. If Asymp.sig (2-tailed) is more than 0.05, thus HO is accepted. The data distributed normally.

   b. **Multicolinearity Test**

   Based on Nazaruddin and Basuki (2015) Multicolinearity Test is used to test whether there is correlation between independent variable in regression model. A good regression model is when there is no multicolinearity between independent variable. Multicolinearity test is done by looking at Variance Inflation Factors (VIF) and Tolerance.

   1. If Tolerance > 0.1 and VIF < 10, means that there is no multicolinearity between independent variable.

   2. If Tolerance < 0.1 and VIF > 10, means that there is multicolinearity between independent variable.

c. Heteroskidastisity Test

Heteroskidastisity is used to examine whether there is variance and residual in regression model from one observation to another observation. A good regression model is when there is no heterokidastisitas. This test is done by using Glejser Test method. If significant value > 0.05, thus there is no heteroskidastisitas. (Nazaruddin and Basuki, 2015),

d. Autocorrelation Test

Autocorrelation test is used to find out the classical autocorrelation deviation, the correlation between two residuals on an observation with another observation in regression model. The often used testing method is Durbin Watson Test (D-W Test). There is no autocorrelation if DU < DW < 4-DU.

G. Hypotheses Testing

Independent variables in this research are more than one, thus in this research use Multiple Regression. Multiple regression model is chosen to test the hypotheses in this research. This analysis is used to determine the relation between audit fee and independent variables from hypotheses 1 until hypotheses 7 and control variable. Multiple regression model equation in this research is:

LNFEE= α_0 + α_1 BoardInd + α_2 BoardSize + α_3 BoardMeet + α_4 ACSize + α_5 ACExpert + α_6 Sub + α_7 Brisk + *LNAsset* + e

Notes:

A = Constant

LNFEE = Natural logarithm of professional fee

α_1 BoardInd $\quad = $ Percentage of total independent commissioner on total commissioner

α_2 BoardSize $\quad = $ Total of board of commissioner in company

α_3 BoardMeet $\quad = $ Total of board of commissioner's meeting

α_4 ACSize $\quad = $ Total of audit committee in company

α_5 ACExpert $\quad = $ Percentage of audit committee who has expertise in accounting

α_6 Sub $\quad = $ Number of subsidiaries

α_7 Brisk $\quad = $ Credit rating of a company

LN Asset $\quad = $ Total asset of a company

$e \quad = $ Error

a. **Determination Test (R^2)**

R^2 Test is used to know how big independent variable could explain the dependent variable (Nazarudin and Basuki, 2015). Adjusted R^2 value shows the determination coefficient that should be changed into percentage. Then, the residual (100% - determination coefficient percentage) explained by other factors that is not mentioned in model. (Nazaruddin and Basuki, 2015).

b. **F Value Test**

F Value Test examined whether all the independent variables could influence dependent variable in ANOVA Table (Nazarudin and Basuki, 2015). F Test is done with these conditions:

1. If p-value (sig) $< \propto$ (0.05), thus independent variables together influence the dependent variable.

2.   If p-value (sig) > ∝ (0.05), thus independent variables doesn't together influence dependent variable.

c. t-Value Test

t –Value Test examined how big one independent variable can explain dependent variable. Testing is done by compare t- *hitung* with t-table with significance 0.05 (5%) (Nazaruddin and Basuki, 2015). The criteria when hypotheses is accepted are:

1.   If p-value (sig) <∝ (0.05).

2.   Regression coefficient in same direction with hypotheses.