# CHAPTER III
# METHODS OF THE STUDY

## 3.1 Sites of the Study

The object of this study is used secondary data. The object of this study is Islamic General Bank and Islamic Business Unit in Indonesia listed in Central Bank.

## 3.2 Type and Approach of the Study

This type of the study is a quantitative study. Quantitative study is scientific study that emphasizes the combination of deductive logic and the use of quantitative tools in interpreting the phenomenon objectively (Efferin, *et al*, 2008:35).

## 3.3 Population and Sample

Population is all value from calculations and measurements, both quantitative and qualitative, rather than on the particular characteristics of a objects group that complete and clear (Usman and Akbar, 2006:181). The population in this study are all Islamic General Bank and Islamic Business Unit in Indonesia. Sample is a member taken using a specific technique called sampling technique (Usman and Akbar, 2006:182). The sample this study are Islamic Commercial Bank and Islamic Business Unit in 2010-2011 and selected by purposive sampling method.

## 3.4 Sample Techniques

Sample in this study is Islamic General Bank and Islamic Business Unit 2010-2011 is selected by purposive sampling method in accordance with certain criteria. Criteria in the selection of the sample as follows:

a. Islamic General Banks and Islamic Business Units in Indonesia.
b. Islamic General Banks and Islamic Business Units publish the annual report in 2010 and 2011.

c. Islamic General Banks and Islamic Business Units publish the partial report (financial condition) in 2010 and 2011.

**Table 3.1**

**Determination of Sample**

| Description | Total |
|---|---|
| a. Islamic General Banks and Islamic Business Units in Indonesia. | **35** |
| b. Islamic General Banks and Islamic Business Units do not publish the annual report in 2010 and 2011. | ( 7 ) |
| c. Islamic General Banks and Islamic Business Units established in 2010, thus the partial report (financial condition) in 2009 necessary for the processing of the data does not exist. | ( 4 ) |
| **The total of samples used in this study** | **24** |

Sources: Secondary data processed (2013)

The final samples are obtained Islamic General Banks and Islamic Business Units of the criteria are as follows:

**Table 3.2**

**Samples Islamic Bank**

| Islamic General Banks | Islamic Business Units |
|---|---|
| PT Bank Syariah Mandiri | PT Bank Danamon |
| PT Bank Syariah Muamalat Indonesia | PT Bank Permata |
| PT Bank Syariah BRI | PT Bank Internasional Indonesia |
| PT Bank Syariah Mega Indonesia | PT CIMB Niaga |
| PT Bank Panin Syariah | PT BTN |
| PT Bank Syariah Bukopin | PT Bank DKI |
| | PT Bank Tabungan Pensiunan Nasional |
| | PT OCBC NISP |
| | BPD Sumatera Utara |
| | BPD Sumatera Barat |
| | BPD Riau |

| | |
|---|---|
| | BPD DIY |
| | BPD Jawa Tengah |
| | BPD Jawa Timur |
| | BPD Kalimantan Selatan |
| | BPD Kalimantan Barat |
| | BPD Kalimantan Timur |
| | BPD Nusa Tenggara Barat |

Sources: Secondary data processed (2013)

### 3.5 Data and Data Types

The data used in this study is a secondary data in the form of annual report of Islamic banks and partial report (financial condition)of Islamic banks which was selected for the sample. The data of annual reports of Islamic banks in 2010-2011 are obtained each Islamic banks and partial report (financial condition) of Islamic banks in 2010-2011 via http://www.bi.go.id.

### 3.6 Data Collection Techniques

Data collection techniques used in this study is documentation. This method is used to obtain secondary data is data the annual report and the partial report (financial condition) of Islamic banks Islamic banks are selected to be sampled.

### 3.7 Definition of Variable Operational

Explanation of the definition of variable operational in this study with the goal to reduce mistakes of different interpretations.

#### 3.7.1 Dependent variable (Y)

Dependent variable is the variable that explained or influenced by the independent variable (Sekaran, 2006, in Setiawati, 2010:42). The dependent variable in this study is earnings management.

Earnings management can be measured by discretionary accruals. Discretionary accruals is a way to reduce or state reporting earnings that are difficult to detect through manipulation of the accounting policy relating to accruals, for example by increase the cost of depreciation (Listyani 2007 in Setiawati, 2010:40). Calculation of total accruals similar to those detected by Healy (1985) and Jones (1991) as used in the study Zahara and Siregar (2009). The formula is as follows:

$$TA_{it} = (\Delta PMAD_{it} + \Delta BDD_{it} + \Delta UMP_{it} - \Delta BYD_{it} - \Delta UP_{it} - BAP_{it} - Dep_{it})/(A_{it-1})$$

Where:

$TA_{it}$ = total accruals Islamic bank i in period t,

$\Delta PMAD_{it}$ = difference of revenue will still be accepted Islamic bank i in period t to t-1,

$\Delta BDD_{it}$ = difference of prepaid expenses Islamic banks i in period t to t-1,

$\Delta UMP_{it}$ = difference of tax advance Islamic bank i in period t to t-1,

$\Delta BYD_{it}$ = difference of expenses to be paid the in Islamic bank i in period t to t-1,

$\Delta UP_{it}$ = difference of tax debt Islamic bank i in period t to t-1,

$BAP_{it}$ = elimination expense of productive assets Islamic bank i in period t,

$Dep_{it}$ = depreciation expense Islamic commercial bank i in period t,

$A_{it-1}$ = total assets of Islamic bank i in period t-1.

Furthermore, the estimation is done using the model:

$$TA_{it} / A_{it-1} = a_1(1/A_{it-1}) + b_1(\Delta PO_{it} /A_{it-1}) + b_2(PPE_{it} /A_{it-1}) + \varepsilon_{it}$$

Where:

$TA_{it}$ = total accruals Islamic bank i in period t

$A_{it-1}$ = total assets of Islamic bank i in period t-1

$\Delta PO_{it}$ = difference of operating income Islamic bank i in period t to t-1

$PPE_{it}$ = property, plant, and equipment (fixed assets) Islamic banks i in period t to t-1.

Estimated error ( $\varepsilon_{it}$ ) in the above equation indicates discretionary accruals.

3.7.2 Independent Variables

Independent variables in this study using a variable that is also used in study of Suhardjanto and Dewi (2011) and Siswantaya (2007) :

a. The Board of Commissioner Size

Indicators used in accordance with the study Dalton (1999), Nasution and Setiawan (2007) and Abeysekera (2008) in Suhardjanto and Dewi (2011:110) is the total number of the commissioner board of the company both from internal and external.

b. The Number of the Board of Commissioner Meetings

Indicators used in accordance with the study of Brick & Chidambaram (2007) and Ettredge, et al. (2010) in Suhardjanto and Dewi (2011:110) is the number of meetings held by the commissioner board within one year.

c. The Independent Commissioner Composition

This variable is measured by the percentage of independent commissioner board from outside companies from all size companies commissioner board. Indicators used in accordance with the research Abeysekera (2008), Permatasari (2009) and Ettredge, et al. (2010) in Suhardjanto and Dewi (2011:110).

d. The Independent Audit Committee Composition

The indicator of this varable is the percentage of audit committee from outside the company from all size audit committee of the company in accordance with the study Nasution and Setiawan (2007), Li, *et al*. (2008), and Cety & Suhardjanto (2010) in Suhardjanto and Dewi (2011:110).

e. The Number of the Audit Committee Meetings

The indicators used in this study is according to the study Li, et al. (2010) in Suhardjanto and Dewi (2011:110), is the number of audit committee meetings held during the year.

f. Institutional Ownership

This indicator is used according to the study Siswantaya (2007:35), institutional ownership is the percentage of shares owned by institutional investors.

$$\text{Institutional ownership} = \frac{\text{number of shares owned by institutional investors}}{\text{total number of shares outstanding}} \times 100\%$$

g. Managerial Ownership

This indicator is used according to the research Siswantaya (2007:35). Managerial ownership is the percentage of shares owned by management who actively participate in corporate decision-making (commissioners and directors).

$$\text{Manajerial ownership} = \frac{\text{number of shares owned by management}}{\text{total number of shares outstanding}} \times 100\%$$

## 3.8 Data Analysis

The method used in this study is a descriptive statistical methods, the classical assumption testing, regression analysis and hypothesis testing.

### 3.8.1 Descriptive Statistics

Descriptive statistics were used to describe the data that has been collected into an information, such as measures of central tendency, measures of dispersion, index numbers, and the presentation of the data is good and right (Suharyadi and Purwanto, 2009:4). Descriptive statistics were used to explain whether good corporate governance affect earnings management practices with multiple linear regression method that will facilitate the calculation using the tools of SPSS (Statistical Product and Service Solutions).

3.8.2 Classical Test Assumptions

Using secondary data, the classical assumption test is done to determine the accuracy of the model. In the classical assumption test, this study is using tests of normality, multicollinearity, heteroskedatisitas, and autocorrelation.

3.8.2.1 Normality Test

Normality test is intended to determine whether the regression model residuals are normally distributed or not normally distributed. The method is used to test normality using Kolmogorov-Smirnov test. If the significance value of the Kolmogorov-Smirnov test > 0.05, the normality assumption is fulfilled (Sulhan, 2011:24).

3.8.2.2 Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between the independent variables. Good regression models should not occur in the correlation between the independent variables. If the independent variables are correlated, then these variables are not orthogonal. Orthogonal variable is the independent variable that the correlation between independent variables equal to zero (Ghozali 2006 in Syahfandi, 2012:46).

3.8.2.3 Autocorrelation test

This assumption aims to determine whether a linear regression model is correlation between the error in period t with error in period t-1 (previous). If there is a correlation, so there is a problem called autocorrelation (Sulhan, 2011:22).

There are several ways to test for autocorrelation, one of which Durbin-Waston test. Durbin and Waston define the following decision rule:

$0 < dw < dl$ = positive autocorrelation problems that need

| | | |
|---|---|---|
| | | improvement |
| dl < dw < du | = | positive autocorrelation but a weak, where improvements will be better |
| du < dw < 4-du | = | no autocorrelation problem |
| 4-du < dw < 4-dl | = | weak autocorrelation problem, where the improvements will be better |
| 4-dl < d | = | serious autocorrelation problem |

The decision criteria free autocorrelation can also be done by looking at the Durbin-Watson, where if the value of d is close to 2, it is assuming no autocorre-lation fulfilled (Sulhan, 2011:22).

3.8.2.4 Heteroscedasticity Test

This assumption aims to determine whether in a regression model of the residual variance inequality occurs between one observation with other observations. If the variance of the residuals between the observations with other observations differ called heteroscedasticity, while a good model is not going heteroscedasticity (Sulhan, 2011:16).

Heteroscedasticity tested using the Spearman rank correlation coefficient test is correlate between absolute residuals the results of the regression with all the independent variables. When the significance of the results of the correlation is smaller than 0.05 (5%) so the regression equation contains heteroscedasticity and otherwise is non heteroscedasticity or homoscedasticity (Sulhan, 2011:16).

3.8.3 Regression Analysis

Regression analysis in this study will be conducted to test the coefficient of determination ($R^2$ test), simultaneous significance test (test statistic F) and the individual significance test (test statistic t).

3.8.3.1 Individual Parameter Significance Test (Statistic t Test)

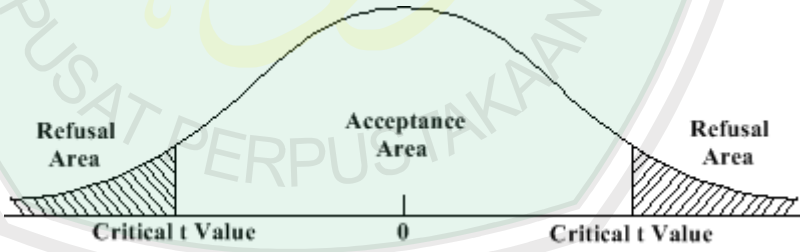
T test is a statistical test to determine whether the independent variables individually have an influence on the dependent variable. If the level of probability is smaller than 0.05, it can be said to be independent variables influence the dependent variable (Wisnumurti, 2010:50).

The test procedure is after calculating the t arithmetic, then compare the value of t arithmetic with the t table. Decision-making criteria are as follows:

a. If t arithmetic > t table and level of significance (α) < 0.05, so the Ho declare that independent variables doesn't influence dependent variable partially, is refused. This means partially independent variables influence significantly on the dependent variable.
b. If t arithmetic < t table and level of significance (α) > 0.05, then Ho is accepted, this means partially independent variables doesn't influence significantly on the dependent variable (Wisnumurti, 2010:50).

**Image 3.1**

**Normal Curve t Test**




Source: Mustafa (2010)

3.8.3.2 Simultaneous Significance Test (Statistic F Test)

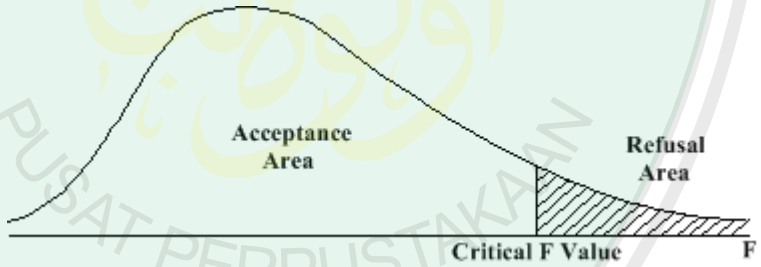
This test is to determine whether the independent variables influence the dependent variable. If the probability level of less than 0.05, it can be said that all the independent variables influence the dependent variable (Wisnumurti, 2010:49).

The test procedure is after doing the calculations F and then comparing the value F arithmetic with F table. Decision-making criteria are as follows:

a. If F arithmetic > F table and the level of significance (α) < 0.05, so Ho which declare that all the independent variables doesn't influence simultaneously on the dependent variable, is refused. This means that simultaneously all the independent variables influence significant on the dependent variable.
b. If the F calculated < F table and the level of significance (α)> 0.05, so Ho is accepted, this means that simultaneously all the independent variables doen't influence significant on the dependent variable (Wisnumurti, 2010:50).

**Image 3.2**

**Normal Curve F Test**




Source: Mustafa (2010)

3.8.3.3 Test Coefficient of Determination ($R^2$ Test)

This test is intended to determine the level of certainty of the best in the regression analysis are expressed by the coefficient of multiple determination ($R^2$). $R^2$ = 1 means effect of independent variables is perfect on the dependent variable, otherwise if $R^2$ = 0 means that the independent variable has no effect on the dependent variable (Wisnumurti, 2010:62).

3.8.4 Hypothesis Test

Hypotheses were tested based study model that has been compiled is using multiple regression as follows:

$$\mathbf{AD_{it} = \beta_0 + \beta_1 UDK_{it} + \beta_2 JRDK_{it} + \beta_3 KKI_{it} + \beta_4 KKAI_{it} + \beta_5 JRKA_{it} + \beta_6 KI_{it} + \beta_7 KM_{it} + \beta_8 BUS_{it} + \varepsilon}$$

Description:

| | | |
|---|---|---|
| $AD_{it}$ | = | discretionary accruals Islamic bank i in period t |
| $UDK_{it}$ | = | board of commissioner size Islamic bank i in period t |
| $JRDK_{it}$ | = | number of the board of commissioners meeting Islamic bank i in period t |
| $KKI_{it}$ | = | independent commissioner composition Islamic bank i in period t |
| $KKAI_{it}$ | = | independent audit committee composition Islamic bank i in period t |
| $JRKA_{it}$ | = | number of the audit committee meeting Islamic bank i in period t |
| $KI_{it}$ | = | percentage institutional ownership Islamic bank i in period t |
| $KM_{it}$ | = | percentage of managerial ownership Islamic bank i in period t |
| $BUS_{it}$ | = | Dummy value Islamic bank I in period t, where 1 = BUS (Islamic General Bank) and 0 = (Islamic Business Units) |
| $\beta_0$ | = | Constant |
| $\beta_{1...8}$ | = | coefficient of regression |
| $\varepsilon$ | = | error term |

In the above regression models also include control variables BUS for control the possibility of discretionary accruals difference between BUS and UUS with expectations $\beta_8 \neq 0$.