

The Effect of Corporate Ownership Structure and Board Size on Earnings Management of Non-Financial Companies Listed on Indonesia Stock Exchange in 2013-2016

Gifta Gelyana

Accounting Department, School of Accounting,
Bina Nusantara University
Jakarta, Indonesia 11480

Yen Sun

Accounting Department, School of Accounting,
Bina Nusantara University
Jakarta, Indonesia 11480
yensun@binus.ac.id

Abstract

This study examines the effect of corporate ownership structure and board size on earnings management for a sample of 30 non-financial firms registered on the Indonesia Stock Exchange from 2013 to 2016. Earnings management is measured by discretionary accruals using Modified Jones Model. The corporate ownership structure is measured with managerial ownership and institutional ownership. This study also uses three control variables: return on assets, financial leverage, and firm size. Using multiple regression analysis, the results show the relationship between board size and earnings management is negatively significant. However, managerial Ownership and Institutional Ownership have no significant effect on earnings management. The findings also reveal that return on assets and firm size has a significant positive effect while financial leverage has a significant negative impact on earnings management.

Keywords

board size, discretionary accruals, earnings management, institutional ownership, managerial ownership

1. Introduction

There are a lot of big foreign companies that are increasingly entering the Indonesian market in this era of globalization. Competition between companies is increasing as a result. Therefore, companies will continue to improve their performance by making good financial statements. A financial statement is used as information for external and internal parties of the company (Yuliana and Trisnawati 2015).

A financial statement concerns the financial position and performance and changes in a company's financial position. It is beneficial to many users in economic decision-making (Agustia 2013).

Earnings are an important element in the financial statement. It is used to measure the performance of the management. In addition, earnings are also used by investors, or other parties concerned, as an indicator of the efficiency of the use of funds in the rate of return. It also may be an indicator of the increase in prosperity of the company (Ghozali and Chariri 2007). Hence, earnings become important information for the decision-making process. Earnings are usually measured on an accrual basis (Subramanyam 1996). Accrued earnings are considered a better measurement of a company's performance than operating cash flows. This is because accrual reduces mismatching and time problems, as proposed by Dechow (1994), which exists in the use of short-term cash flows (Siregar and Utama 2005).

Earnings management can be efficient and opportunistic, as proposed by Scott (2015). Efficient means an increase in the informativity of earnings in communicating private information. Opportunistic means that managers report

earnings to maximize their interests. If earnings management is opportunistic, earnings can lead to incorrect investment decision-making for investors. The practices reflected in the opportunistic behavior of managers can be explained through agency theory (Jensen and Meckling 1976). Agency theory explains that when a company is in poor condition, managers can act opportunistically by raising earnings to conceal the poor performance and vice versa (Siregar and Utama 2005).

Information asymmetry is a condition where there is a difference in information owned by managers and investors as principal. Managers are considered to have more information than investors and are directly involved with the company's management (Yuliana and Trisnawati 2015).

Some studies have shown that information asymmetry between managers and investors is necessary for earnings management (Dye 1988). This is due to the tendency of external parties (investors) to pay more attention to earnings as a parameter of the company's performance, thus encouraging the managers to manipulate showing earnings. Consequently, financial statements are unreliable because the information contained therein is biased. In other words, it does not display actual information (Amijaya and Prastiwi 2013).

It is good for a company to implement a good corporate governance system to better its performance. Good corporate governance elements can reduce the chance of earnings management practices. One of the elements is managerial ownership. Managerial ownership is the proportion of ownership owned by managers of the company. Aygun et al. (2014) suggest that the higher the managerial ownership, the higher the earnings management. The manager may become greedy in obtaining a return from his shareholding. The study of Ali et al. (2008) stated that when managerial ownership is low, the incentives for opportunistic managers will increase.

Another element of good corporate governance is institutional ownership. Institutional ownership is the proportion of ownership owned by institutional investors. Aygun et al. (2014) suggest that institutional investors can supervise managers, reducing the chance of earnings management practice. However, Jao and Pagalung (2011) stated that institutional investors only focused on current earnings. Board size is another element of good corporate governance. Xie et al. (2003) stated that an increase in supervisory measures would decrease the chance of earnings management practices. Midiastuty and Machfoedz (2003) suggest that many board sizes may be ineffective.

Some examples of cases that led to earnings management in Indonesia are the case of PT Lippo Tbk and PT Kimia Farma in 2001, the case of PT Indofarma Tbk in 2004, followed by the case of Bank Century and PT Bumi Resources Tbk (PT BUMI) in 2008.

In the case of PT BUMI, the company was reported by Indonesia Corruption Watch (ICW) for the alleged manipulation of reporting the sale of three coal mining companies belonging to the Bakrie Group to the Directorate General of Taxes (Manurung, E.M. Isynuwardhana 2017). The alleged manipulation of the report occurred to PT Kaltim Prima Coal (KPC), PT Arutmin Indonesia, and the parent of both companies, PT BUMI itself. The results of the calculations performed by ICW using audited financial statements show that PT BUMI's sales report during 2003-2008 was US\$1.06 billion lower than the actual one. As a result, it is also estimated that the losses suffered by the state from the shortage of revenue from the production of coal (royalty) were US\$143.18 million (Tempo 2010). This can lead to incorrect decision-making by external parties (investors) and inaccurate financial statements for significant differences in tax (royalty) and actual sales figures.

These examples of cases show the importance of knowledge on earnings management. They are the reasons that make earnings management interesting to be examined. This study adapted previous research conducted by Aygun et al. (2014). However, this study is different to the previous study since it uses a different research object and period. The research object in this research is the non-financial company listed on Indonesia Stock Exchange, and the period of this research is the year 2013 until the year 2016. Based on the above background, the research is conducted under the title: "The Effect of Corporate Ownership Structure and Board Size on Earnings Management of Non-Financial Companies Listed on Indonesia Stock Exchange in the Period of 2013-2016". The problems identified that are going to be discussed in this study are as follow:

1. Does managerial ownership negatively affect earnings management significantly?
2. Does institutional ownership negatively affect earnings management significantly?
3. Does board size negatively affect earnings management significantly?

2. Literature Review

A research conducted by Aygun et al. (2014) entitled “The Effects of Corporate Ownership Structure and Board Size on Earnings Management: Evidence from Turkey” uses managerial Ownership, Institutional Ownership, and board size as the independent variables. This research also uses the control variables of return on assets, financial leverage, and firm size. The result of this research is that institutional ownership and board size have a negative effect on earnings management. In contrast, the effect of managerial ownership on earnings management is positively statistically significant. Meanwhile, return on assets has a significant positive effect, while financial leverage has a significant negative effect on earnings management.

A research conducted by Ali et al. (2008) entitled “Ownership Structure and Earnings Management in Malaysian Listed Companies: The Size Effect” uses managerial ownership as the independent variable and firm size as the moderating variable. This research shows that managerial ownership is negatively associated with earnings management. The result also shows that managerial ownership is less important in large firms than in small ones.

A research conducted by Xie et al. (2003) entitled “Earnings Management and Corporate Governance: The Role of the Board and the Audit Committee” uses CEO duality, and the number of board meetings, board composition, and audit committee as the independent variables. The result of this research is that CEO duality has no effect, while numbers of board meetings, independent outside directors, and board size have a negative effect on earnings management. Meanwhile, an independent outsider on the audit committee has no effect, while the number of audit committee meetings has a significant negative effect on earnings management.

A research conducted by Guna and Herawaty (2010) entitled “*Pengaruh Mekanisme Good Corporate Governance, Independensi Auditor, Kualitas Audit dan Faktor Lainnya Terhadap Manajemen Laba*” uses managerial Ownership, Institutional Ownership, audit committee, independent commissioner, independent auditor, financial leverage, audit quality, profitability, and firm size as the independent variables. This research shows that financial leverage and audit quality have a significant negative effect while profitability has a significant positive effect on earnings management. Meanwhile, institutional Ownership, managerial Ownership, audit committee, independent commissioner, independent auditor, and firm size do not affect earnings management.

A research conducted by Agustia (2013) entitled “*Pengaruh Faktor Good Corporate Governance, Free Cash Flow, dan Leverage Terhadap Manajemen Laba*” uses managerial Ownership, Institutional Ownership, audit committee, independent commissioner, free cash flow, and financial leverage as the independent variables. This research shows that managerial Ownership, Institutional Ownership, audit committee, and the independent commissioner do not affect earnings management. Meanwhile, free cash flow and financial leverage have a negative effect on earnings management.

A research conducted by Yuliana and Trisnawati (2015) entitled “*Pengaruh Auditor dan Rasio Keuangan Terhadap Manajemen Laba*” uses big four auditors, specialist auditor, audit tenure, return on assets, market to book value ratio, financial leverage, firm size, and operating cash flow and loss as the independent variables. This research shows that return on assets and firm size has a significant positive effect. In contrast, financial leverage, operating cash flow, and loss have a significant negative effect on earnings management. Meanwhile, the big four auditors, specialist auditors, audit tenure, and market to book value ratio do not affect earnings management.

A research conducted by Daljono (2013) entitled “*Pengaruh Corporate Governance dan Kualitas Auditor Terhadap Manajemen Laba*” uses institutional Ownership, managerial Ownership, firm size, board composition, audit committee activity, audit committee size and auditor reputation as the independent variables. The result of this research is that the size of the audit committee, managerial ownership and auditor reputation has a significant effect on earnings management. Meanwhile, firm size, board composition, audit committee activity and institutional Ownership have no significant effect on earnings management.

3. Research Methods

This research observes all non-financial companies listed on the Indonesian Stock Exchange from 2013 to 2016. Financial companies are excluded from the research because of their different capital structure (Klein 2002). This

study is quantitative research that used secondary data. The secondary data used in this research are the audited financial statements. The data source in this research is obtained from the Indonesia Stock Exchange website. This research uses purposive technique sampling. The criteria that are used to do sampling in this research are:

1. Non-financial companies were listed on the Indonesia Stock Exchange from 2013 to 2016.
2. Companies that consistently presented audited financial statements during the period 2013 to 2016.
3. Companies that provide financial statements in Indonesian Rupiah from 2013 to 2016.
4. Companies that have the complete data needed during the period 2013-2016.
5. Companies with positive net income and operating cash flow from 2013 to 2016.

The sampling procedure resulted in 30 companies, and as it is multiplied by four years, it leads to a total of 120 data obtained as the research sample.

The collected data arranged in an excel file are further processed with EViews 10 SV using the panel data regression test. The panel data regression test includes descriptive statistical analysis, classical assumption test, panel data model test, and hypothesis test using multiple linear regressions. The classical assumption test includes normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The panel data model test includes the chow test, Hausman test, and Lagrange multiplier test. The hypothesis test includes a t-test, R-squared test, and F test. The multiple linear regressions formula of this research is as follows:

$$DACC_{it} = \beta_0 + \beta_1(MANOWN_{it}) + \beta_2(INSOWN_{it}) + \beta_3(BSIZE_{it}) + \beta_4(ROA_{it}) + \beta_5(FINLEV_{it}) + \beta_6(FSIZE_{it}) + \epsilon_{it} \quad (1)$$

This research uses earnings management as a dependent variable. Earnings management can be described as a condition in which management intervenes in preparing financial statements for external parties to level out, raise, and lower profits. This research employs a discretionary accruals (DACC) approach for measuring earnings. Modified Jones Model by Dechow et al. (1995) is one of the most commonly used and accepted approaches for estimating discretionary accruals. Therefore, DACC is measured as follows:

$$DACC_{it} = TACC_{it} / A_{it-1} - \alpha_1(1/A_{it-1}) + \alpha_{1i} [(\Delta REV_{it} - \Delta REC_{it}) / A_{it-1}] + \alpha_{2i} (PPE_{it} / A_{it-1}) \quad (2)$$

Where $DACC_{it}$ is the discretionary accruals; $TACC_{it}$ is the total accruals; ΔREV_{it} is the change in operating revenues; ΔREC_{it} is the change in receivables; PPE_{it} is the gross property, plant and equipment; A_{it-1} is the lagged total asset. Total accruals (TACC) is the difference between net income and cash flows from operations.

This research uses three independent variables, which are:

1. Managerial Ownership (MANOWN)

Managerial ownership is a situation where the manager owns the company's stock. Or in other words, the manager is one of the company's shareholders.

$$\text{Managerial Ownership} = \frac{\text{Shares owned by managers}}{\text{Total outstanding shares}} \quad (3)$$

2. Institutional Ownership (INSOWN)

Institutional ownership is the ownership of shares by financial institutions such as insurance companies, banks, pension funds, and investment banking.

$$\text{Institutional Ownership} = \frac{\text{Shares owned by institutions}}{\text{Total outstanding shares}} \quad (4)$$

3. Board Size (BSIZE)

Board size is the number of board of commissioners, which is the culmination of the company's internal management system that plays an important role in implementing corporate governance.

$$\text{Board size} = \text{Number of boards of commissioners} \quad (5)$$

This research also uses three control variables, which are:

1. Return on Assets (ROA)

Return on Assets is an indicator of how profitable a company is relative to its total assets.

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total assets}} \tag{6}$$

2. Financial Leverage (FINLEV)

The leverage ratio represents the source of operating funds used by the company. The leverage ratio also shows the risks faced by the company.

$$\text{Financial Leverage} = \frac{\text{Total debt}}{\text{Total assets}} \tag{7}$$

3. Firm Size (FSIZE)

The firm size is a value that shows the size of the company.

$$\text{Firm size} = \log (\text{Total assets}) \tag{8}$$

4. Result and Discussion

4.1 Descriptive Statistical Analysis

Descriptive statistical analysis is a statistic that describes the research object. It is performed to gain a better understanding of the variables tested. This analysis is used to obtain each variable’s minimum, maximum, mean, and standard deviation. (Table 1) The minimum value is the smallest value of the variable data. The maximum value is the largest value of the variable data. The mean value is the average value of all variable data. Standard deviation is a measure of the diversity of the variable data.

Table 1. Descriptive Statistics Result

	N	Mean	Maximum	Minimum	Std. Dev.
EM	120	-0.016858	0.225046	-0.288153	0.067831
MANOWN	120	0.040371	0.408300	0.000200	0.083071
INSOWN	120	0.661353	0.986500	0.322200	0.173901
BSIZE	120	5.033333	22.00000	2.000000	3.587873
ROA	120	0.099576	1.201541	0.000757	0.122466
FINLEV	120	0.463908	5.809452	0.120635	0.543453
FSIZE	120	15.22101	19.38330	11.80397	1.551676

Source: Eviews 10 SV

4.2 Classical Assumption Test

1. Normality Test

Normality tests ensure that the data used is normally distributed and does not contain outliers. According to Winarno (2015), to perform this test, it can be done by looking at the probability value of the normality test histogram on Eviews. If the probability value is greater than the 5% significance level, it can be concluded that the data is normally distributed. Conversely, if the probability value is smaller than the 5% significance level, it can be concluded that the data is not normally distributed.

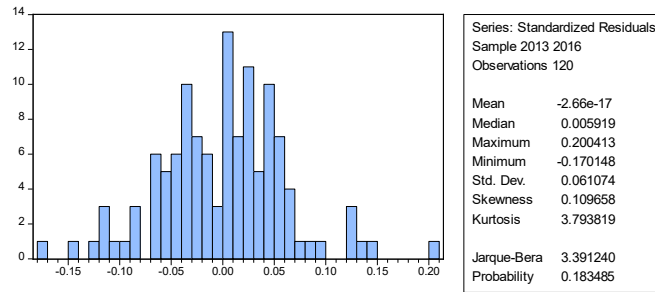


Figure 1. Histogram – Normality Test
Source: Eviews 10 SV

Based on Figure 1 above, the p-value is 0.183485. This value is greater than the 5% significance level, so it can be concluded that the regression model is already distributed normally.

2. Multicollinearity Test Multicollinearity is a condition where there is a linear relationship between independent variables (Winarno 2015). Multicollinearity tests were performed to ensure that the independent variables used in the study were not closely correlated with each other. A good regression test should be free of multicollinearity among the variables used.

The multicollinearity test can be done by calculating the correlation coefficient between independent variables. A coefficient number smaller than 0.8 indicates that the data is free of multicollinearity. Conversely, a coefficient greater than 0.8 indicates that the data still contain multicollinearity.

Table 2. Correlation – Multicollinearity Test

	MANOWN	INSOWN	BSIZE	ROA	FINLEV	FSIZE
MANOWN	1.000000	-0.570183	0.050337	-0.049039	-0.138855	-0.091559
INSOWN	-0.570183	1.000000	-0.027986	-0.113262	-0.004955	-0.228664
BSIZE	0.050337	-0.027986	1.000000	0.140807	0.150322	0.380754
ROA	-0.049039	-0.113262	0.140807	1.000000	0.712897	0.081995
FINLEV	-0.138855	-0.004955	0.150322	0.712897	1.000000	0.079750
FSIZE	-0.091559	-0.228664	0.380754	0.081995	0.079750	1.000000

Source: Eviews 10 SV

Based on Table 2, the whole value of the research variable indicates values that are smaller than 0.8. Therefore, it can be concluded that the data does not contain multicollinearity.

To further ensure that data is freed from multicollinearity, it can also be seen from the value of variance inflation factors (VIF). A VIF value lower than 10 indicates that the data is free from multicollinearity. On the contrary, a VIF value greater than 10 indicates that the data still contain multicollinearity.

Variance Inflation Factors
Date: 06/23/18 Time: 14:13
Sample: 1 120
Included observations: 120

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.006592	201.3878	NA
MANOWN	0.008182	2.117953	1.710568
INSOWN	0.001941	27.70864	1.777952
BSIZE	3.19E-06	3.712603	1.243922
ROA	0.004604	3.486158	2.091684
FINLEV	0.000234	3.633719	2.094594
FSIZE	1.89E-05	135.3724	1.380887

Figure 2. VIF – Multicollinearity Test
Source: Eviews 10 SV

Based on Figure 2, the whole VIF value of the research variable indicates values that are lower than 10. Therefore, it can be concluded that the data does not contain multicollinearity.

2. Heteroscedasticity Test

Heteroscedasticity is a state in which all the disorders that appear in the population regression function do not have the same variance (Ajija et al. 2011). A good regression model is if the model's data is homoscedastic, meaning that the residual variance of observation with other observations remains the same.

The heteroscedasticity test can be done by observing the actual fitted residual graph. The actual fitted residual graph that does not indicate a pattern means that the data is homoscedastic. Conversely, the graph that does indicate a pattern means that the data is still heteroscedastic.

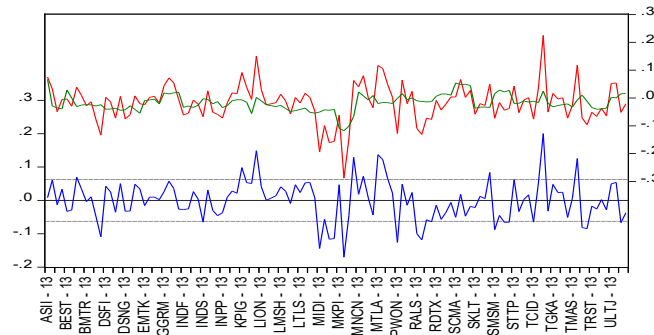


Figure 3. Heteroscedasticity Graph

Source: Eviews 10 SV

Based on Figure 3, no pattern is found. Therefore, it can be concluded that the residual tends to be constant, and the data does not contain any heteroscedasticity problems.

A white test can further ensure that the data is homoscedastic. The p-value of Obs*R-Squared can be seen to decide whether the data is homoscedastic or heteroscedastic. If the p-value is greater than the 5% significance level, the data is homoscedastic. Conversely, the data is heteroscedastic if the p-value is smaller than the 5% significance level.

Heteroskedasticity Test: White			
Null hypothesis: Homoskedasticity			
F-statistic	2.179967	Prob. F(6,113)	0.0500
Obs*R-squared	12.44907	Prob. Chi-Square(6)	0.0527
Scaled explained SS	15.42054	Prob. Chi-Square(6)	0.0172

Figure 4. Heteroscedasticity Test: White

Source: Eviews 10 SV

Based on Figure 4, the value of the Probability Chi-square of Obs*R-squared is 0.0527. This value is greater than the 5% significance value. Therefore, it can be concluded that the data does not contain heteroscedasticity.

2. Autocorrelation Test

According to Ghozali (2016), the autocorrelation test is a test that aims to test whether there is a correlation between the confounding errors in period t with error disturbance in the previous period in the linear regression model. If there is a correlation, an autocorrelation problem arises because of sequential observations overtime related to each other.

The autocorrelation test can be performed using the Durbin Watson test. The basic decision-making used is: (1) If the value of d is $< d_L$ or $> 4-d_L$, there is an autocorrelation problem, (2) If the value d is in between d_U and $4-d_U$, there is no autocorrelation problem, and (3) If the value of d lies between d_L and d_U or $4-d_U$ and $4-d_L$, then it became inconclusive whether there is an autocorrelation problem or not.

The Durbin-Watson Graph is used to find the dL and dU value for the test by looking for the value according to the total number of sample (n) and the total number of independent and control variables (k). This study uses 120 data and 6 independent and control variables. Therefore n = 120 and k = 6. Tracing it down, the result is as follows:

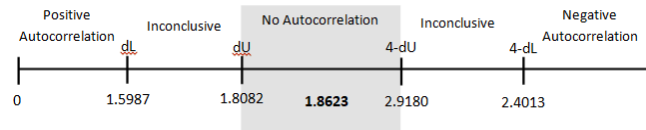


Figure 5. Durbin-Watson Test Table
Source: Author

R-squared	0.169239	Mean dependent var	-0.009683
Adjusted R-squared	0.125128	S.D. dependent var	0.056034
S.E. of regression	0.052411	Sum squared resid	0.310399
F-statistic	3.836639	Durbin-Watson stat	1.862308
Prob(F-statistic)	0.001610		

Figure 6. Durbin-Watson Test Result
Source: Eviews 10 SV

Based on Figure 6, the d value obtained from running the data in Eviews is 1.862308. It is in between the range of the values 1.8082 (dU) and 2.9180 (4-dU), as shown in Figure 5. Therefore, it can be concluded that there is no autocorrelation problem.

To further ensure that the data is free from the autocorrelation problem, the Breusch-Godfrey autocorrelation test is done. In the Breusch-Godfrey autocorrelation test, a p-value greater than the 5% significance value indicates no autocorrelation problem in the regression model. On the contrary, a p-value smaller than the 5% significance value indicates an autocorrelation problem in the regression model.

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	1.976778	Prob. F(2,111)	0.1434
Obs*R-squared	4.127117	Prob. Chi-Square(2)	0.1270

Figure 7. Breusch-Godfrey Test
Source: Eviews 10 SV

Based on Figure 7, the value of Probability Chi-Square is 0.1270, greater than the 5% significance level. Therefore, it can be concluded that there is no autocorrelation problem.

4.3 Panel Data Model Test

1. Chow Test

According to Ajija et al. (2011), the chow test determines whether the regression model will use the common effect model or the fixed-effect model. If the value of probability chi-square is greater than 5%, then the common effect model will be used. If the value of probability chi-square is smaller than 5%, then the fixed effect model will be used.

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.689467	(29,84)	0.0002
Cross-section Chi-square	78.809504	29	0.0000

Figure 8. Chow Test Result
Source: Eviews 10 SV

Based on Figure 8, the probability chi-square value is 0.0000, smaller than 5%. Therefore, it can be concluded that the fixed effect model is more suited for the data panel regression test in this research.

2. Hausman Test

According to Ajija et al. (2011), the Hausman test determines whether the regression model will use the random effect model or the fixed-effect model. If the probability value is greater than 5%, the random effect model will be used. If the probability value is smaller than 5%, the fixed-effect model will be used.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.281652	6	0.3924

Figure 9. Hausman Test Result
Source: Eviews 10 SV

Based on Figure 9, the probability value is 0.3924, greater than 5%. Therefore, it can be concluded that the random effect model is more suited for the data panel regression test in this research.

2. Lagrange Multiplier Test

According to Ajija et al. (2011), the Lagrange multiplier test determines whether the regression model will use the common effect model or the random-effect model. If the value of Breusch-Pagan probability is greater than 5%, then the common effect model will be used. If the value of Breusch-Pagan probability is smaller than 5%, then the random effect model will be used.

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	11.61393 (0.0007)	1.141116 (0.2854)	12.75505 (0.0004)

Figure 10. Lagrange Multiplier Test Result
Source: Eviews 10 SV

Based on Figure 10, the Breusch-Pagan probability value is 0.0007, smaller than 5%. Therefore, it can be concluded that the random effect model is more suited for the data panel regression test in this research.

4.4 Hypothesis Test

Dependent Variable: EM
Method: Panel EGLS (Cross-section random effects)
Date: 06/23/18 Time: 14:16
Sample: 2013 2016
Periods included: 4
Cross-sections included: 30
Total panel (balanced) observations: 120
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.206132	0.111791	-1.843907	0.0678
MANOWN	0.073486	0.125139	0.587240	0.5582
INSOWN	0.057470	0.059285	0.969375	0.3344
BSIZE	-0.006382	0.002502	-2.551353	0.0121
ROA	0.328694	0.082896	3.965158	0.0001
FINLEV	-0.048447	0.018037	-2.685922	0.0083
FSIZE	0.011180	0.006049	1.848226	0.0672
R-squared	0.169239	Mean dependent var		-0.009683
Adjusted R-squared	0.125128	S.D. dependent var		0.056034
S.E. of regression	0.052411	Sum squared resid		0.310399
F-statistic	3.836639	Durbin-Watson stat		1.862308
Prob(F-statistic)	0.001610			

Figure 11. Hypothesis Test Result Source: Eviews 10 SV

1. t-test

The t-test is performed to prove whether the independent variables affect the dependent variable separately. Testing is done by looking at probability values. If the probability value is greater than the significant value, then it can be concluded that there is no significant influence between the independent variable and the dependent variable. If the probability value is smaller than the significant value, then it can be concluded that there is a significant influence between the independent variable and the dependent variable.

Based on Figure 11, it can be concluded that managerial Ownership and Institutional Ownership have no significant influence on earnings management. Board size and financial leverage negatively influence earnings management, while return on assets and firm size positively influence earnings management.

2. R-squared Test

This test is done to determine the ability of independent variables to explain the dependent variable. The determination coefficient has the number 0 to 1. If the test result is close to 1, then it can be concluded that independent variables provide information that is increasingly able to explain the dependent variable.

Based on the R-squared test result in Figure 11, it is known that the independent and control variables can explain 17% of the dependent variable. In contrast, the remaining 83% is explained by the other variables not investigated in this study. However, based on the adjusted R-squared test result, it is known that the independent and control variables can explain 13% of the dependent variable. In contrast, the remaining 87% is explained by the other variables not investigated in this study.

3. F Test

F test is performed to test whether the independent variables simultaneously affect the dependent variable. If the value is below 0.05, then the independent variables simultaneously have a significant influence on the dependent variable. Conversely, if the value is above 0.05, then the independent variables do not simultaneously have a significant influence on the dependent variable.

Based on Figure 11, the Prob (F-statistic) value is 0.001610, which is smaller than 0.05. It can be concluded that managerial Ownership, Institutional Ownership, board size, return on assets, financial leverage, and firm size as independent and control variables have a significant influence on the dependent variable, earnings management, simultaneously.

4.5 Discussion of Test Result

1. Effect of Managerial Ownership on Earnings Management

Based on the regression carried out in this study, it can be concluded that the managerial ownership of the non-financial companies listed on the Indonesia Stock Exchange period 2013 to 2016 has no significant influence on earnings management. The conclusion is made by looking at the p-value of 0.5582, which is greater than the 5% significance level. Managerial ownership does not affect earnings management because the percentage of managers who own shares is relatively small compared to the overall shares owned by general investors. Therefore, it does not matter. The chance of managers implementing earnings management is still there. This study is consistent with Guna and Herawaty (2010) and Agustia (2013) research.

2. Effect of Institutional Ownership on Earnings Management

Based on the regression carried out in this study, it can be concluded that the institutional ownership of the non-financial companies listed on the Indonesia Stock Exchange period 2013 to 2016 has no significant influence on earnings management. The conclusion is made by looking at the p-value of 0.3344, which is greater than the 5% significance level. Institutional ownership does not affect earnings management because institutional investors focus more on current earnings. Therefore, they do not use their ability and opportunity to monitor and discipline managers to focus more on firm values and limit management policies in manipulating earnings. This study is consistent with Agustia (2013), and Guna and Herawaty (2010) research.

3. Effect of Board Size on Earnings Management

Based on the regression carried out in this study, it can be concluded that the board size of the non-financial companies listed on the Indonesia Stock Exchange period 2013 to 2016 has a significant negative influence on earnings management. The conclusion is made by looking at the p-value of 0.0121, which is below the 5% significance level. The coefficient of the Board Size variable is -0.006382. Board size has a negative effect on earnings management because the increase in board size will increase supervisory measures. With the increase in supervision, the chance of earnings management practices decreases. On the contrary, the decrease in board size will lead to lesser supervision, therefore increasing the chance of earnings management practice. This result is consistent with Aygun et al. (2014) and Xie et al. (2003) research.

4. Effect of Return on Assets on Earnings Management

Based on the regression carried out in this study, it can be concluded that the return on assets of the non-financial companies that are listed on the Indonesia Stock Exchange period 2013 to 2016 has a significant positive effect on earnings management. The conclusion is made by looking at the p-value of 0.0001, which is below the 5% significance level. The coefficient of the Return on Assets variable is 0.328694. Return on assets positively affects earnings management because managers want to make the company's year on year more stable. If the increase in return on assets is high, a sharp fluctuation might show. A sharp fluctuation is not good for the company. Therefore, earnings management is implemented to make year on year look more stable in the eye of the public. This result is consistent with Aygun et al. (2014) and Guna and Herawaty (2010).

5. Effect Financial Leverage on Earnings Management

Based on the regression carried out in this study, it can be concluded that the financial leverage of the non-financial companies listed on the Indonesia Stock Exchange period 2013 to 2016 has a significant negative influence on earnings management. The conclusion is made by looking at the p-value of 0.0083, which is below the 5% significance level. The coefficient of the Financial Leverage variable is -0.048447. Financial leverage has a negative effect on earnings management because if leverage is low, then interest expense will also be low. If interest expense is low, then net income will be high. If net income is high, the company will have to pay a larger amount of tax. Therefore, managers implement earnings management to avoid paying a larger amount of tax. Therefore, the implementation of earnings management is low because it is already tax saving. This study is consistent with Aygun et al. (2014) and Yuliana and Trisnawati (2015).

6. Effect of Firm Size on Earnings Management

Based on the regression carried out in this study, it can be concluded that the firm size of the non-financial companies listed on the Indonesia Stock Exchange period 2013 to 2016 has a significant positive influence on earnings management. The conclusion is made by looking at the p-value of 0.0672, which is below the 10% significance level. The coefficient of the Firm Size variable is 0.011180. Firm size positively affects earnings management because the larger the company, the higher the investor's expectations of them. Not only that, but the management must also be able to maintain the company in certain positions. With these pressures, management will always implement earnings management to meet all of the company's interests. This study is consistent with Daljono (2013).

5. Conclusion and Suggestion

Based on the result of the hypothesis test, it can be concluded that:

1. Managerial ownership has no significant effect on earnings management.
2. Institutional ownership has no significant effect on earnings management.
3. Board size has a significant negative effect on earnings management.

Based on the result of hypothesis test and research limitations, there are some recommendations:

1. For investors and creditors, not focus only on information regarding the earnings generated because there may be the accrual component that is arranged by the manager's considerations for personal gain. Besides earnings, investors and creditors also need to pay attention to other non-financial information, one of which is the implementation of good corporate governance to make a decision.
2. For the company to be willing to evaluate the results of the company's performance. A better implementation of good corporate governance is needed to reduce earnings management practices.
3. For future researchers, to use a longer study period to better illustrate the effect of independent variables on the dependent variable. Future research also recommends adding or using other independent variables to

further describe earnings management even better. Using another method of calculating earnings management is also recommended to compare the result.

References

- Agustia, D., Pengaruh Faktor Good Corporate Governance, Free Cash Flow, dan Leverage Terhadap Manajemen Laba, *Jurnal Akuntansi Dan Keuangan*, 15(1), 27–42, 2013.
- Ajija, S. R., Sari, D. W., Setianto, R. H., and Primanti, M. R., *Cara Cerdas Menguasai EViews*, Salemba Empat, 2011.
- Ali, S. M., Salleh, N. M., and Hassan, M. S., Ownership Structure and Earnings Management in Malaysian Listed Companies: The Size Effect, *Asian Journal of Business and Accounting*, 1(2), 89–116, 2008.
- Amijaya, M. ., and Prastiwi, A., Pengaruh Kualitas Audit Terhadap Manajemen Laba, *Journal of Accounting*, 2(3), 1–13, 2013.
- Aygun, M., Ic, S., and Sayim, M., The Effects of Corporate Ownership Structure and Board Size on Earnings Management: Evidence from Turkey, *International Journal of Business and Management*, 9(12), 2014.
- Daljono, S. E., Pengaruh Corporate Governance Dan Kualitas Auditor Terhadap Manajemen Laba, *Diponegoro Journal of Accounting*, 2(3), 2013.
- Dechow, P. M., Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals, *Journal of Accounting and Economics*, 18(1), 3–42, 1994.
- Dechow, P. M., Sloan, R. G., and Sweeney, A. P., Detecting Earnings Management, *The Accounting Review*, 70(2), 193–225, 1995.
- Dye, R. A., Earnings Management in an Overlapping Generations Model, *Journal of Accounting Research*, 26(2), 195–235, 1988.
- Ghozali, I., *Aplikasi Analisis Multivariate dengan Program SPSS 23*, 2016.
- Ghozali, I., and Chariri, A., *Teori Akuntansi*, Badan Penerbit Universitas Diponegoro, 2007.
- Guna, W. I., and Herawaty, A., Pengaruh Mekanisme Good Corporate Governance, Independensi Auditor, Kualitas Audit Dan Faktor Lainnya Terhadap Manajemen Laba, *Jurnal Bisnis Dan Akuntansi*, 12(1), 53–68, 2010.
- Jao, R., and Pagalung, G., Corporate Governance, Ukuran Perusahaan, Dan Leverage Terhadap Manajemen Laba Perusahaan Manufaktur Indonesia, *Jurnal Akuntansi & Auditing*, 8(1), 1–94, 2011
- Jensen, M. C., and Meckling, W. H., Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3(4), 305–360, 1976.
- Klein, A., Audit Committee, Board of Director Characteristics, and Earnings Management, *Journal of Accounting and Economics*, 33(3), 375–400, 2002.
- Manurung, E.M. Isynuwardhana, D., Pengaruh Kepemilikan Manajerial, Leverage, dan Profitabilitas Terhadap Manajemen Laba, *Journal of Accounting and Finance*, 1(1), 16–32, 2017.
- Midiastuty, P. P., and Machfoedz, M., Analisis Hubungan Mekanisme Corporate Governance dan Indikasi Manajemen Laba, *Simposium Nasional Akuntansi VI*, 2003.
- Scott, W. R., *Financial Accounting Theory* (7th ed.), Prentice Hall, 2015.
- Siregar, S. V. N. P., and Utama, S., Pengaruh Struktur Kepemilikan, Ukuran Perusahaan, dan Praktek Corporate Governance Terhadap Pengelolaan Laba (Earnings Management), *Simposium Nasional Akuntansi VIII*, 2005.
- Subramanyam, K. R., The pricing of discretionary accruals, *Journal of Accounting and Economics*, 22(1–3), 249–281, 1996.
- Tempo, *ICW Ungkap Manipulasi Penjualan Batu Bara Grup Bakrie*, Tempo, 2010.
- Winarno, W., *Analisis Ekonometrika dan Statistika dengan Eviews* (4th ed.), 2015.
- Xie, B., Davidson, W. N., and Dadalt, P. J., Earnings Management and Corporate Governance: The Role of the Board and the Audit Committee, *Journal of Corporate Finance*, 9(3), 295–316, 2003.
- Yuliana, A., and Trisnawati, I., Pengaruh Auditor Dan Rasio Keuangan Terhadap Manajemen Laba, *Jurnal Bisnis Dan Akuntansi*, 17(1), 33–45, 2015.

Biographies

Gifta Gelyana

The author was born in Jakarta on 3 September 1998. The author completed her bachelor's degree in Accounting at Bina Nusantara University in 2018.

Yen Sun

The author is currently working as a lecturer at Bina Nusantara University.

