

The Effect of Ownership Structure, Leverage, Firm Size, and Audit Quality toward Earnings Management: An Indonesian Case

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The purpose of this study is to examine the effect of ownership structure, leverage, firm size and audit quality on earnings management. This study used the discretionary accruals of the Jones model in calculating earnings management. Fourteen companies in the consumer goods industry sector listed on the Indonesia Stock Exchange during 2013-2017 were used as samples in this study. The samples selected were based on certain criteria and the data analysis was done using the SPSS version 23 . Multiple regression testing is used to test the hypothesis such as the Classical Assumption Test (Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test), Multiple Linear Regression Analysis and Hypothesis Test (t-Test, f-Test, and Determination Coefficient Test). The results of this study indicate that ownership structures (managerial ownership and institutional ownership) and leverage have no significant effect on earnings management. In contrast, firm size and audit quality have a significant effect on earnings management.

Key words: *Earnings Management, Ownership Structure, Leverage, Firm Size, Audit Quality.*

Introduction

Economic growth and development illustrate the progress and intense competition in a country, where companies try to produce a product so that people's trust and satisfaction are maintained, always fulfilled and increased in order to attract investors to invest large sums of capital. Conditions of intense competition require the public to plan and implement strategies to survive. Manufacturing companies in the consumer goods industry sector are still the main choice of investors in investing because their shares still offer upward potential.

Manufacturing companies in the industrial sector produce products that are for the basic needs of the community and are consumptive, resulting in high sales.

Based on data from the Central Statistics Agency (BPS) and data processing by the Ministry of Industry, the growth rate of manufacturing industries consisting of companies engaged in the consumer goods industry, basic and chemical industries, and various industries in 2013 increased by 9.37%. The increase was due to the consumption goods sector which grew by 28%. In 2014, the consumer goods sector continued to contribute greatly to the growth of the manufacturing industry, where the production of the food industry increased by 10.56% and the pharmaceutical industry, chemical products, and traditional medicines increased by 9.92%. Furthermore, in 2015, the food and beverage industry, which is part of the consumer goods industry continues to be a leading industry contributing to the manufacturing industry, which experienced a contribution of 30.84%. Then in 2016, the food and beverage industry is still the highest in contributing to the growth of the manufacturing industry that is equal to 33.61%. Furthermore, in 2017, the food and beverage industry has increased by 15.28%. With an increase that occurs every year in the consumer goods industry, demand for consumer goods industry products will tend to be stable so that it will affect the company to be able to produce optimal profits and improve company performance in managing company management.

In the basic framework of preparing and presenting financial statements, one of the functions of financial statements is to provide complete information about the performance and changes in the company's financial position. The basis for decision making that is often used by a company is the profit generated by a company using accrual calculations. The company's management performance can be seen based on the company's financial statements which can help investors before deciding to invest with the information provided. Information about company profits in financial statements can be a target of management manipulation in maximising its interests so that it can harm investors. The existence of management behaviour in managing company profits following the interests and wishes of management is called earnings management. The emergence of earnings management practices due to differences in interests between company owners and company managers is due to information asymmetry. Information asymmetry is a condition of information imbalance obtained between management and shareholders, where company management has more information than external parties. Managerial ownership acts as a supervisory mechanism that aims to align various interests of the company.

The earnings management practices in consumer goods industry sector of PT. Tiga Pilar Sejahtera Food, Tbk (AISA) in 2017 was found to manipulate their financial statements up to Rp 4 trillion. These findings were obtained by KAP: Ernst and Young, who were appointed as financial statement auditors by the new management of PT. Three Pillars of Prosperous

Food. This case began when PT. Indo Beras Unggul as a subsidiary of PT. The Three Pillars of Prosperous Food was proven to mix rice with other ingredients which caused financial difficulties and lead to failure to pay large amounts of short-term debt due to insufficient corporate cash flow. After the board of commissioners rejected the financial statements, new management was appointed.

Another factor that lead the company to undertake earnings management is leverage (debt). To get the funds, companies may choose an alternative such as debt, but with the high amount of debt, fewer creditors will be willing to lend them the needed funds. The greater the amount of debt owed by the company, the risk will also be greater, as companies that have a great value of debt and the organisation might be threatened with liquidation. Therefore, company owners try to increase profits or manipulate profits so the company will not be threatened in liquidity and to maintain the good image that company has, even though the company's position is threatened by liquidation.

Firm size can be measured using total sales, total assets, and market capitalisation. Rice revealed that leverage, institutional ownership, company size, and firm value simultaneously have a positive effect on earnings management (Rice, 2013). Partially, firm size has a significant negative effect on earnings management, while leverage, firm ownership, and firm value have no significant effect on earnings management. The size of a company is not proven to carry out more earnings management practices through positive earnings reporting mechanisms (Rice, 2013).

Audit quality is measured according to the public accounting firm's size. The Public accounting firm's quality is measured with the size of a public accounting firm that consists of 2 types: Big Four and Non-Big Four public accounting firms (Gerayli, 2011). The public accounting firm's size is negatively related to earnings management measured by accrual recognition that is free, unregulated, and is the result of management policy (discretionary accrual). With the specialisation of industry, auditors can be easier or more accurate in identifying the existence of earnings management practices, prediction errors, and can predict future cash flows (Christiani & Nugrahanti, 2014). Thus, if the auditor's industry specialisation audits the company's profits, it will result in a higher quality of financial reporting and a lower tendency to issue accounting restatements compared to non-specialised industry auditors. Although there are quite a lot of studies on earnings management, it is still important to do further research because it is stated that investor protection in Indonesia is at a low level, so the level of earnings management practices is still high (Christiani & Nugrahanti, 2014).

This study is based on the agency theory, signal theory, financial statement and the explanations above, then the problem of whether ownership structure, leverage, firm size,

and audit quality affect the earnings management in the consumer goods industry sector manufacturing company listed on the Indonesia Stock Exchange for the period 2013-2017. So, the purpose of this study is to analyse whether good corporate governance, financial performance, and environmental performance affect the value of the manufacturing sector companies in the Indonesia Stock Exchange for the period 2013-2017.

Methods

The object in this study is the financial statement of consumer goods industry sector manufacturing companies listed on the Indonesia Stock Exchange for the period 2013-2017. The sample selection method used in this study is the purposive sampling method that chooses samples based on certain criteria. The sample criteria in this study are as follow:

1. Consumer goods industry sector manufacturing companies listed on the Indonesian Stock Exchange for the period 2013-2017.
2. The company did not experience delisting and IPO during the observation period.
3. The company publishes financial statements and audited annual reports that ended on December 31 during the 2013 - 2017 period.
4. The company that has managerial and institutional ownership shares
5. Companies that use Rupiah as the currency in their financial statements.

Based on the criteria, 14 companies meet the sample criteria in this study. The data analysis method used in this study is SPSS version 23. Statistical tests conducted in this study consisted of Classical Assumption Test (Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test), Multiple Linear Regression Analysis and Hypothesis Test (t-Test, f-Test, and Determination Coefficient Test).

Table 1: Variable Operationalisation

No.	Variable	Indicator
1.	Earnings Management (Y)	$TAC = NI - CFO$ $TAC_t/At-1 = \alpha_1 (1/At-1) + \alpha_2 (\Delta REV_t/At-1) + \alpha_3 (PPE_t/At-1) + e$ $NDA_t = \alpha_1 (1/At-1) + \alpha_2 (\Delta REV_t - \Delta RECT) + \alpha_3 (PPE_t/At-1)$ $DAC_t = (TAC/At-1) - NDA_t$
2.	Managerial Share Ownership (X1)	$MSO = \frac{\text{Shares owned by all board members}}{\text{total shares outstanding}}$
3.	Institutional Ownership (X2)	$IO = \frac{\text{Shares owned by the institution}}{\text{total shares outstanding}}$
4.	Leverage (X3)	$LEV = \frac{\text{Total Debt}}{\text{Total Assets}}$
5.	Firm Size (X4)	$FS = \ln(\text{Total Asset})$
6.	Audit Quality (X5)	$PAF_{big\ four} = 1$ $PAF_{non\ big\ four} = 0$

Results

Descriptive Statistics Analysis

Table 2: Descriptive Statistics Analysis Results

	N	Minimum	Maximum	Mean	Std. Deviation
DAC	70	0.06	0.53	0.2238	0.11116
MSO	70	0.10	8.26	1.0195	1.58735
IO	70	4.74	9.80	8.1120	1.30798
LEV	70	0.42	0.80	0.6338	0.10137
FS	70	5.03	5.67	5.2928	0.16991
PAF	70	0.00	1.00	0.4143	0.49615
Valid N (listwise)	70				

After conducting the descriptive statistics analysis, the study continues on the classical assumption test. The Classical Assumption Test is used to determine whether the obtained samples are ready for further analysis through several tests such as normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

Classical Assumption Test

1. **Normality Test:** A normality test is used to test whether the data in the regression model between the dependent variable and independent variable are distributed normally or not (Ghozali, 2013). The normality test used in this study is the *Kolmogorov-Smirnov* (K-S) test. The data is normally distributed if the *asympt.sig (2-tailed)* probability value is greater than the significance value of 0.05 and if the *asympt.sig (2-tailed)* probability value is less than the significance value of 0.05; it means the data is not normally distributed. The result of the normality test with Kolmogorov-Smirnov method is as follows.

Table 3: One-Sample Kolmogorov-Smirnov Test Result

	Unstandardised Residual
N	70
<i>Asymp.Sig. (2-tailed)</i>	.200 ^c

Based on the normality test result above, the obtained *Sig.(2-tailed)* value is 0.200 which is greater than the significance value of 0.05, so it can be concluded that the data is normally distributed.

2. **Multicollinearity Test:** The multicollinearity test is used to find out whether there is a correlation with the independent variables in the regression model or not. If the test results show there is a high correlation to the independent variables, it can be concluded that the regression model in this study is not good because it produces a regression coefficient of independent variables that cannot be determined, and the standard error value becomes infinitive. Multicollinearity occurs if the VIF value is above 10, and the Tolerance value is below 0.1.

Table 4: Multicollinearity Test Result

	Tolerance	VIF
MSO	.590	1.696
IO	.502	1.993
LEV	.716	1.396
FS	.350	2.855
PAF	.417	2.399

Based on table 4, each independent variable has a tolerance value above 0.1, and the VIF value less than 10. So, it can be concluded that there are no multicollinearity problems, and the regression model is feasible for this study.

3. **Heteroscedasticity Test:** This test is used to find out whether there are any differences between the residuals obtained from the regression model. The good regression model is the one that does not have heteroscedasticity problems. If the Sig. Value is greater than the 0.05 level of significance, it means the model does not have heteroscedasticity problems.

Table 5: Heteroscedasticity Test Results

	Sig.
MSO	.080
IO	.595
LEV	.393
FS	.096
PAF	.986

Based on the heteroscedasticity test above in table 5, the significance value for each independent variable (MSO, IO, LEV, FS, and PAF) is greater than 0.05, so it can be concluded that there are no heteroscedasticity problems in this regression model.

4. **Autocorellation Test:** Autocorrelation test is used to find out whether there is a correlation between residuals in period t and residuals in period $t-1$. The good regression model is the one that does not have the autocorrelation issue. To identify the autocorrelation issue in the model, it can be done by the *durbin-watson* (DW) method. If the d value is between dU and $4-dU$, there is no autocorrelation in the model. The results of the autocorrelation test in the regression model are as follows:

Table 6: Autocorellation Test Result

Model Summary^b	
Model	<i>Durbin-Watson</i>
1	1,876

Based on the test result on table 5, the d value is 1.876, and for the dL and dU in the *durbin-watson* table are 1.313 and 1.611. So, the d value is located between the dU and $4-dU$, $1.611 < 1.876 < 2.389$, this shows there is no autocorrelation issue in the regression model.

Multiple Linear Regression Analysis

Table 7: Multiple Linear Regression Test Result

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.857	.712		2.606	.011
MSO	-.009	.010	-.133	-.885	.379
IO	.003	.014	.040	.244	.808
LEV	-.105	.149	-.096	-.707	.482
FS	-.306	.127	-.467	-2.403	.019
PAF	.083	.040	.369	2.070	.042

Based on table 7, the multiple linear regression equation in this study is as follows:

$$DAC = 1.857 - 0.009 \text{ MSO} + 0.003 \text{ IO} - 0.105 \text{ LEV} - 0.306 \text{ FS} + 0.083 \text{ PAF} + \varepsilon$$

The interpretations for the multiple linear regression equation are:

1. The value of intercept is 1.857; this illustrates that when there is no addition or reduction of each independent variable, the value of the dependent variable is valued at intercept or the earnings management increase 1.857 units.
2. Managerial variables have a coefficient value of -0.009. If there is an increase in one managerial unit, the earnings management will increase by 1,848 units, assuming the other variables are valued at 0.
3. The institutional variable has a coefficient value of 0.003. If there is an increase in one managerial unit, the earnings management will increase by 1,860 units, assuming the other variables are valued at 0.
4. The leverage variable has a coefficient of -0.105. If there is an increase in one managerial unit, the earnings management will increase by 1,752 units, assuming the other variables are valued at 0.
5. Variable company size has a coefficient value of -0.306. If there is an increase in one managerial unit, the earnings management will increase by 1,551 units, assuming the other variables are valued at 0.
6. The audit quality variable has a coefficient value of 0.083. If there is an increase in one managerial unit, the earnings management will increase by 1,940 units, assuming the other variables are valued at 0.

Hypothetical Test

1. **T-Test/Independent Sample T-Test:** T-test is used to find out the impact from each independent variable to the dependent variable, partially. It can be concluded that the independent variable significantly influences the dependent variable if the significance value is less than the level of significance. In this study, the level of significance is 0.05. Below is the t-test result:

Table 8: T-Test Result

	Sig.
SKM	.379
SKI	.808
LEV	.482
UKP	.019
KAP	.042

Based on the t-test result on table 8, the conclusions are as follows: 1) Managerial ownership variable (MSO) shows the significance value of 0.379. As the significance value is greater than the level of significance, it can be concluded that managerial ownership variable does not influence the earnings management. 2) The institutional variable (IO) shows the significance value of 0.808. As the significance value is greater than the level of significance, it can be concluded that the institutional variable does not influence the earnings management. 3) The leverage (LEV) variable shows the significance value of 0.482. As the significance value is greater than the level of significance, it can be concluded that the leverage variable does not influence the earnings management. 4) The firm size variable (FS) shows the significance value of 0.019. As the significance value is less than the level of significance, it can be concluded that the firm size variable does influence the earnings management. 5) The audit quality variable (PAF) shows the significance value of 0.042. As the significance value is less than the level of significance, it can be concluded that the audit quality does significantly influence the earnings management.

2. **F-Test/Simultaneous Test:** The F-test is used to examine the influence of each independent variables on dependent variables, simultaneously. The influence is significant if the calculated f-value is greater than the f-table or the if significance value is less than the level of significance; in this study, the level of significance is 0.05. The result of f-test in this regression model is as follow:

Table 9: F-Test Result

Anova ^a	
F	2.305
Sig.	.055 ^b

Table 9 above shows the significance value 0.055. With a greater significance value than the level of significance, it illustrates the independent variable in this study affects the dependent variable simultaneously.

- Coefficient of Determination Test (R^2):** The coefficient of determination value is used to see how much the independent variables (managerial ownership, institutional ownership, leverage, firm size, and audit quality) can explain the dependent variable (earnings management). The range of R^2 value is from 0 to 1. The greater the value of the coefficient of determination, the greater the independent variables can explain the dependent variable and the smaller the coefficient of determination, the smaller the independent variables can explain the dependent variable. The following are results from the coefficient of determination (R Square):

Table 10: Coefficient of Determination Test Result (R^2)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.391 ^a	.153	.086	.10625

The result in Table 10 shows the R^2 value of 0.153 or equal to 15.3%. The result illustrates that the independent variables (managerial ownership, institutional ownership, leverage, firm size, and audit quality) in this study are only able to explain the dependent variable (earnings management) for 15.3%. In comparison, 84.7% of the dependent variables are explained by other variables outside this observation.

Conclusion and Suggestion

Conclusion

This study aims to examine the ownership structure, leverage, company size, and audit quality on earnings management in consumer goods industry manufacturing companies listed on the Indonesia Stock Exchange (IDX). There are 14 sampled companies from the period of 2013-2017. The conducted test is using IBM SPSS 23, and the regression model used was declared eligible to use as it was free from the normality, multicollinearity, heteroscedasticity, and autocorrelation problems. The results obtained during the study are as follows:

Managerial share ownership does not significantly influence earnings management. This is proved by the t-test result, as the significance level of managerial ownership is greater than the level of significance, $0.379 > 0.05$. It might not have a significant effect because the sampled companies in this study had a low percentage of managerial share ownership.

Institutional share ownership does not significantly influence earnings management. The t-test results show that the significance value of institutional ownership was greater than the level of significance, $0.808 > 0.05$. This means that the large percentage of institutional share ownership does not influence managers to do earnings management practices because institutional investors do not have the power to control the company's operations despite having large share ownership.

Leverage has no significant effect on earnings management. Based on the results of the t-test, leverage has a significant value that is greater than the level of significance, $0.482 > 0.05$. The higher leverage of a company does not influence managers to do earnings management because of the risk of default, and the company has the responsibility in fulfilling its obligations.

Firm size has a significant effect on earnings management. Based on the t-test results, the significance value is less than the level of significance, $0.019 > 0.05$. Companies in greater size will have a greater probability to do earnings management practices because companies try to maximise profits so that the company's performance and financial performance will look good and stable for investors.

Audit quality has a significant effect on earnings management. Based on the results of the t-test, the significance value of the PAF is less than the level of significance, $0.042 > 0.05$. This illustrates that the big four PAF has added value in the eyes of investors for companies that use their services because the audit results from the big four PAF are higher in quality. Therefore, investors have a higher trust level on companies that use big four PAFs as the auditors.

Simultaneously, the independent variables in this study (managerial ownership, institutional ownership, leverage, company size, and audit quality) have no significant effect on earnings management. The statement is based on the results of the f-test, the significance value of the entire independent variable was greater than the level of significance, $0.055 > 0.05$. Likewise, with the results of the coefficient of determination, where the value of r squared is 15.3%. This means that the earnings management variable can only be explained by managerial ownership, institutional ownership, leverage, company size, and audit quality for 15.3%. Other variables outside this study explain the remaining 84.7%.



Suggestion

Based on research and conclusions that have been briefly explained, below are the suggestions regarding this study: (i) For companies are expected to be consistent and ensure that the information obtained is in accordance with information obtained by investors, so there is no imbalance information. (ii) For investors are expected to be careful in making decisions in investing, to understand the financial statements better so that it is not only focused on changes in earnings, because in this study the size of the company and audit quality affect the earnings management. (iii) For future researchers, it is better to add other variables that are possible in improving earnings management practices, to increase the research periods to obtain more accurate results and expanding the population and research sample.

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