The Influence of Profitability, Liquidity, Leverage and Company Size on Earnings Management

Rio Syaputra
Andalas University
syaputraio55@gmail.com

Abstract

This study aims to analyze and estimate the effect of Profitability, Liquidity, Leverage and Company Size on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018. This study used the quantitative approach, and the sample selection technique used purposive sampling and obtained as many as 48 manufacturing companies listed on the Indonesia Stock Exchange. The data analysis technique used panel regression analysis by using the panel data which was a data collected from time-series and cross section data by using Eviews 10.0. The independent variables used are probability, liquidity, leverage, and company size while the dependent variable is earning management.

Based on the results of the first hypothesis test, the partial regression results explain that profitability has a significant effect on Earnings Management. The second hypothesis from the regression results partially explains that Liquidity has no effect on Earnings Management. The third hypothesis from the regression results partially explains that Leverage has a significant effect on Earnings Management. The fourth hypothesis from the regression results partially explains that firm size has a significant effect on earnings management. The fifth hypothesis from the regression results simultaneously explains Profitability, Liquidity, Leverage and Company Size together have a significant effect on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018.

Keywords: Profitability, liquidity, leverage, firm size, earnings management.

1. Introduction

Earnings management is interference in the external financial reporting process with the aim of benefiting oneself. Earnings management is one of the factors that can reduce the credibility of financial statements, earnings management adds to the bias in financial statements and can interfere with users of financial statements who believe that the engineered profit figure is an unengineered profit figure. Currently, earnings management has become a common phenomenon due to the high level of earnings management in companies in Indonesia. This happens because the company's profits tend to decrease, so the level of earnings management becomes high. Earnings management is the selection of certain accounting policies by company management to achieve certain goals. Earnings management is a manager's intervention in the financial reporting process with the aim of obtaining profits, both for managers and companies [1].

Agency theory states that earnings management is influenced by conflicts of interest between management and owners that arise when each party tries to achieve or maintain a level of prosperity. Earnings management is a direct intervention in the financial reporting process with the intention of obtaining certain advantages or benefits, both for managers and for the company.

Earnings management can be said to be an accounting game. Especially if you see that the engineering is an attempt to hide and change information by playing with the size of the figures for the components of the financial statements when recording and compiling information. This will have an impact on stakeholders, because they cannot obtain valid and adequate information to ascertain what should be done.

There are many factors that motivate managers in doing earnings management, one of which is profitability. Profitability describes the company's ability to manage assets to generate profits. According to [2], Profitability is the company's ability to seek profit, this ratio also provides a measure of the level of management effectiveness of a company. This is indicated by the profit generated from sales and investment income.

In general, the profitability of a company can be used as an indicator to measure the performance of a company. The higher the profitability of a company, the company's performance and ability to generate profits is also high. The link between profitability and earnings management is when the profitability obtained by small companies in a certain period of time will trigger the company to carry out earnings management by increasing the income earned so that it will show shares and retain existing investors [3].

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The next factor that can influence earnings management is liquidity. Liquidity is the company’s ability to meet short-term financial obligations. If the company has the ability to pay off its short-term obligations at maturity, the company can be said to be a liquid company, namely current assets with a turnover of less than one year, because it is easier to liquidate than fixed assets with a turnover of more than one year [4].

Liquidity shows the relationship between cash and other current assets of a company and its current liabilities. The company’s liquidity is indicated by the size of current assets, namely assets that are easy to convert into cash which include cash, marketable securities, receivables, inventories. If the liquidity ratio is low, managers tend to carry out earnings management so that the company is considered good because it can repay its debts with its current assets. The phenomenon that occurs is that many companies have not been able to meet short-term debt, so the management tends to take earnings management actions in meeting the profit targets to be achieved [5].

Another factor that has an important relationship with earnings management and can help stakeholders to identify earnings management is leverage. Leverage is debt used by the company to finance its assets in order to carry out its operational activities. A review of the literature on earnings management highlights that leverage limits earnings management actions. If leverage increases, it will reduce earnings management actions taken by management, this happens for several reasons, namely utilizing the required debt payments, thereby reducing the money available to management for sub-optimal spending. When a company uses debt financing, it is subject to lender supervision and is often subject to lender-induced spending restrictions. Companies experiencing capital constraints will trigger earnings management [6].

The last factor that can influence earnings management in this study is firm size. Company size is indicated by total assets, total sales, and market capitalization. Companies that are classified as large in general will be more transparent in carrying out their operational activities because the company will be more noticed by external parties, such as the government; investors; and creditors, so as to minimize earnings management actions [7].

This research was conducted on manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018. The reason the researcher chooses manufacturing companies listed on the Indonesia Stock Exchange as the object of research is because manufacturing companies are large-scale companies when compared to other companies so that they can make comparisons between the level of earnings management carried out by one company with another company. Manufacturing companies also have stocks that are resilient to the economic crisis. This is because most of the manufactured products are still needed, so it is very unlikely to lose or take earnings management actions [8].

Earnings Management

Earnings management is the safest manipulation because earnings management activities are legal and do not violate generally accepted accounting principles. In the business world, the management as the manager of the company (acting as an agent for the company) is always faced with various pressures. These pressures can come from outside the company as well as from within, certain ones, either directly or indirectly, will also affect management in the financial reporting process [9].

Earnings management variables in this study were measured by Discretionary Accrual (DA) using the Jones model in 1991 which was modified by Dechow in 1995, which is generally used for earnings management research. Where the modified Jones model is the most appropriate model used to estimate Discretionary Accruals (DA) among other models. The calculation model is as follows:

1. Measuring total accruals with the modified Jones model:

   Total Accrual (TAC) = net profit after tax (net income) - operating cash flow

2. Calculating the estimated accruals value with the OLS (Ordinary Least Square regression equation):

   \[
   \frac{TACC_{it}}{TACC_{it-1}} = a_1 \left( \frac{1}{TACC_{it-1}} \right) + \beta_1 \left( \frac{\Delta Rev_{it}}{TACC_{it-1}} \right) + \beta_2 \left( \frac{PPE_{it}}{TACC_{it-1}} \right) + \varepsilon_{it}
   \]

   Note:

   TACCit : total accruals of company i in period t

   Tait-1 : total assets for sample company i at the end of year t-1

   \(\Delta Rev_{it} : \) change in earnings of company i at the end of year t-1 to year t

   \(\Delta Rec_{it} : \) change in receivables of company i from year t-1 to year t

   PPEit : fixed assets of the company year

3. Calculating the Non-Discretionary Accruals model (NDA) is as follows:

   \[NDA_{it} = a_1 \left( \frac{1}{TACC_{it-1}} \right) + \alpha_2 \left( \frac{TATT_{it} - \Delta Rev_{it}}{TACC_{it-1}} \right) + \alpha_3 \left( \frac{PPE_{it}}{TACC_{it-1}} \right)\]

   Note:

   NDAit : non-discretionary accruals in year t

   \(\alpha \) : fitted coefficient obtained from the regression results in the calculation of total accruals
4. Calculating discretionary accruals

\[ \text{DACit} = \frac{\text{TACit}}{\text{TAIt}} - \text{NDAIt} \]

Note:
DACit : Discretionary accruals of company i in period t

**Profitability**

Profitability is a ratio to assess the company's ability to seek profit. This ratio also provides a measure of the level of effectiveness of a company's management. This is indicated by the profit generated from sales and investment income [2]. The formula for Return on Assets is:

\[ \text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}} \]

Profitability is the level of net profit that has been obtained by the company in carrying out its operations. In relation to earnings management, profitability can influence managers to perform earnings management. Because if the profitability obtained by the company is low, generally managers will take earnings management actions to save their performance in the eyes of the owner [10].

Hypothesis 1: Profitability has a significant effect on earnings management

**Liquidity**

Liquidity ratio is a ratio that describes the company's ability to meet short-term obligations (debt) [11]. Liquidity ratio is a ratio that aims to measure the company's ability to meet its short-term obligations [12]. Liquidity ratio is the ratio used to meet short-term financial obligations [9]. Calculation of the current ratio is done by comparing the total current assets with total current liabilities. The formula to find the current ratio or current ratio is as follows:

\[ \text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Debt}} \]

Liquidity as measured by a high current ratio indicates the company’s ability to pay off its short-term obligations using its current assets. The company's liquidity that is too large shows that the company is not able to manage its current assets as much as possible so that financial performance becomes less good and the possibility of earnings management practices to beautify these profits. Therefore, investors respond negatively to the high level of liquidity of a company [13].

Hypothesis 2: Liquidity has a significant effect on earnings management

**Leverage**

Leverage is a company’s ability to fulfill and maintain an ability in order to always be able to fulfill its obligations in paying debts on time. In a broad sense it is said that the leverage ratio is used to measure the company's ability to pay all its obligations, both short-term and long-term if the company is dissolved [14]. The formula for Leverage is:

\[ \text{DER} = \frac{\text{Total Debt}}{\text{Total Asset}} \]

The greater the leverage ratio indicates the greater the level of dependence of the company on external parties (creditors) and the greater the burden of debt costs (interest costs) that must be paid by the company. With the increasing leverage ratio (where the debt burden is also getting bigger) then this has an impact on the profitability obtained by the company, because some of it is used to pay loan interest [10].

Hypothesis 3: Leverage has a significant effect on earnings management

**Company Size**

Company size is a scale where the size of the company can be classified according to various ways, including total assets, log size, stock market value, and others. The size of the company will affect the ability to bear the risks that may arise from various situations faced by the company [15]. Based on the description above, it shows that to determine the size of the company used the size of assets which is measured as the logarithm of total assets. The measurement of the company size variable is as follows:

\[ \text{Company Size} = \ln(\text{Total asset}) \]

Larger companies have a greater incentive to perform income smoothing (a form of earnings management) compared to small companies, because they have a greater political cost. Political costs arise because the company's high profitability can attract the attention of the media and consumers.

Hypothesis 4: Firm size has a significant effect on earnings management

**Research Method**

In the research, the author uses a quantitative research design because the research carried out by the author was related to numbers and then calculated from the data that had been obtained from the Indonesia Stock Exchange with an observation period from 2014 to 2018. In this study, the population is all manufacturing companies listed on the Indonesia Stock Exchange in 2014 – 2018 as many as 169 companies. The sample data was collected using purposive sampling, which used samples based on the specified criteria, and obtained as many as 48 manufacturing companies as samples.

The data analysis method in this study uses descriptive statistics and multiple regression analysis. Analysis of the data obtained in this study will use computer
technology, namely the program Econometric Views (Eviews) version 10. Before the data is tested for hypotheses, the classical assumptions are tested which consist of: (1) normality test; (2) multicollinearity test; (3) heteroscedasticity test. The model feasibility test is carried out by using (1) the chow test; (2) Hausman test; (3) lagrange multiplier test. After passing the classical assumption test and model feasibility test, then partial and simultaneous hypothesis testing is carried out using the t test and F test. The panel regression equation obtained is:

\[ Y = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + e \]

### 3. Result and Discussion

**Descriptive Analysis**

Descriptive analysis and sample data researched aims to see a description of the condition of the company in question, with the use of measuring instruments that are determined in accordance with the research variables.

| Variable | Mean | S.E. of regression | R-squared | Adjusted R-squared | S.E. of regression | S.D. dependent var | Log likelihood | Prob(F-statistic) |
|----------|------|--------------------|-----------|--------------------|--------------------|-------------------|----------------|------------------|
| C        | -3.235078 | 0.711376 | -4.547633 | 0.000000 | 0.000000 | 0.000000 | -0.005458 | 0.104810 |
| X1_PR    | 1.152919 | 0.094803 | 11.95023 | 0.000000 | 0.000000 | 0.000000 | -0.001178 | 0.107369 |
| X2_LK    | -0.001178 | 0.005460 | -0.215708 | 0.8294 | 0.000000 | 0.000000 | 0.039552 | 0.2143669 |
| X3_LV    | 0.039552 | 0.018450 | 2.143669 | 0.0333 | 0.000000 | 0.000000 | 0.0107369 | 0.472742 |
| X4_SIZE  | 0.107369 | 0.024553 | 4.732952 | 0.000000 | 0.000000 | 0.000000 | 0.0189000 | 0.104810 |

From processing using Eviews 10 above, the regression equation is obtained as follows:

\[-3.235078 + 1.132919 (PR) – 0.001178 (LK) + 0.029552 (LV) + 0.107369 (SIZE) + e\]

From the multiple regression equation, it can be concluded that:

a. From the results of the multiple regression analysis test, it can be seen that the constant value is -3.235078, meaning that Profitability (X1), Liquidity (X2) and Company Size (X4) are zero or fixed, then Earnings Management is -3.235078.

b. Profitability variable (X1) has a regression coefficient of 1.132919. This means that if the Profitability variable (X1) increases by one unit of weight with the assumption that Liquidity (X2), Leverage (X3) and Company Size (X4) are zero or fixed, Earnings Management will increase by 1.132919.

c. Liquidity variable (X2) has a regression coefficient of -0.001178. This means that if the Liquidity variable increases by one unit of weight with the assumption that Profitability (X1), Leverage (X3), and Company Size (X4) are zero or fixed, Earnings Management will decrease by 0.001178.

d. Leverage variable (X3) has a regression coefficient of 0.029552. This means that if the Leverage variable increases by one unit weight with the assumption that Profitability (X1), Liquidity (X2), and Company Size (X4) are zero or fixed, Earnings Management will increase by 0.029552.

e. Firm Size Variable (X4) has a regression coefficient of 0.107369. This means that if the Leverage variable increases by one unit weight with the assumption that Profitability (X1), Liquidity (X2) and Leverage (X3) are zero or fixed, Earnings Management will increase by 0.107369.

### Panel Regression Analysis (Selected Panels)

Panel regression analysis is used to see the effect of Profitability (X1), Liquidity (X2), Leverage (X3) and Company Size (X4) variables on Earnings Management (Y) as other independent variables are considered constant. The following is the result of the estimation table using the application, Eviews 10.
Hypothesis Testing

From the results of the statistical t test of the Profitability variable is 11.95023 with a significant level (0.0000 < 0.05), meaning that partially there is a positive and significant influence on Profitability on Earnings Management. Thus, Ho is rejected and H1 is accepted. These results indicate that the higher the profit generated by the company, the higher the level of earnings management carried out by the company. Profitability measures the level of profit generated by the company. Profitability is the company's ability to earn profits from its business activities. From the results of the study, it can be seen that the actions of company management tend to carry out earnings management by means of income minimization and income maximization. The behavior of company management in earnings management by means of income minimization aims for tax considerations, namely minimizing the company's tax obligations, while the income maximization method is intended to maximize manager bonuses, creating good company performance so as to increase company value. Capital market considerations which aims to gain the trust of investors to invest in the company, delaying debt covenant violations and managers can gain control over the company. The results of this study are in accordance with agency theory where the company's management as an agent takes actions that are only concerned with their own interests because they have manipulated financial statements to the detriment of investors. In addition, this study supports positive accounting theory which explains the motivation for company management to take earnings management actions. By adjusting the reported profit with the aim of maximizing the amount of bonus he will receive. The results of this study are in line with the results of research conducted by K. C. Lestari & Wulandari who found that profitability had a significant effect on earnings management. Other studies have also been conducted by Agustia who also found the same result that profitability had a significant effect on earnings management so that their performance is considered good. The results of this study are in line with the results of research conducted by Agustia, who found that liquidity had no significant effect on earnings management.

From the results of the statistical t test of the Leverage variable is 2.143669 with a significant level (0.0333 < 0.05), meaning that partially there is a positive and significant influence between Leverage on Earnings Management. Thus, Ho is rejected and H3 is accepted. These results indicate that companies whose debts are financed with company capital will tend to practice earnings management. With the higher level of debt owned by a company, it encourages management to manipulate earnings to improve the company's image in the eyes of the public and so that investors are still willing to invest in the company. Despite the fact that the company's finances are at risk of being liquidated. The results of this study are in accordance with the agency theory proposed by Jensen and Meckling in 1976 that there is an agency relationship between managers and creditors (debt to equity hypothesis) where companies that have high leverage ratios tend to use accounting methods that will increase profits so that their performance will increase [16]. The company looks good with the hope that creditors can trust the company's performance. So that this information can convince creditors who think that the debtor can pay his debt to the principal (creditor). The results of this study are in line with the results obtained by Fajaria, who found that leverage had a significant effect on earnings management. The next research was conducted by Agustia & Suryani, who also found similar results that leverage had a significant effect on earnings management.

From the results of the statistical t test of the Firm Size variable, it is 4.372952 with a significant level (0.0000 < 0.05), meaning that partially there is a positive and significant effect between Firm Size on Earnings Management. Thus, Ho is rejected and H4 is accepted. These results indicate that the larger the company, the higher the level of earnings management carried out by the company. The results of this study find that firm size has a positive and significant effect on earnings management disclosure, this indicates that firm size may not necessarily reduce the possibility of earnings management, because large companies have more assets and allow many assets that are not managed properly so that possible errors in disclosing the total assets of the company. Larger companies have a greater ability of a company to pay off its short-term debts while respecting its long-term obligations. A current ratio that is too high indicates an excess of current assets that should be managed by the manager to be reinvested in order to get a higher rate of return. However, the results obtained are not in accordance with agency theory, which states that the higher the current ratio makes managers motivated to practice earnings management so that their performance is considered good. The results of this study are in line with the results of research conducted by Agustia, who found that liquidity had no significant effect on earnings management.
incentive to smooth earnings compared to smaller companies because larger companies are subject to scrutiny (tighter supervision from the government and the general public). The bigger the company, the greater the opportunity for managers to carry out earnings management where large companies have more complex operational activities besides that large companies are also more required to meet higher investor expectations. Similar results were found by Orazalin in his research which found that company size has a significant effect on earnings management [17]. Different results found by Saputra in his research which found that the size of the company did not have a significant effect on the company’s earnings management.

Based on simultaneous testing, it was found that the probability value was 0.000000 <0.05. These results also show Fcount 4.727441, therefore the author can conclude that the variables Profitability (X1), Liquidity (X2) and Leverage (X3) and Company Size (X4) together have a positive and significant effect on Earnings Management (Y). The value of Adjusted R-squared without using control variables is 0.443020 or 44.30%. This indicates that the contribution of the independent variables, namely Profitability, Liquidity, and Leverage and Company Size to the dependent variable, namely Earnings Management is 44.30% and the remaining 55.70% is determined by other variables not analyzed in the model in this study. Earnings management is an action by managers in preparing financial statements by manipulating earnings to be misleading for readers who can influence decision making. Earnings management can be said to be an accounting game. Especially if you see that the engineering is an attempt to hide and change information by playing with the size of the figures for the components of the financial statements when recording and compiling information. This will have an impact on stakeholders, because they cannot obtain valid and adequate information to ascertain what should be done.

4. Conclusion

Based on the results of testing and research that has been done, it can be concluded as follows: Based on the first hypothesis, the regression results partially explain that profitability has a significant effect on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018. Based on the second hypothesis, the regression results partially explain that Liquidity has no effect on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018. Based on the third hypothesis from the regression results, it partially explains that Leverage has a significant effect on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018. Based on the fourth hypothesis from the regression results, it partially explains that Company Size has a significant effect on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018. Based on the fifth hypothesis from the regression results simultaneously explain Profitability, Liquidity, Leverage and Company Size together have a significant effect on Earnings Management in Manufacturing Companies listed on the Indonesia Stock Exchange in 2014-2018.

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