Earnings Management and Its Determinant (Study of Listed Companies on Indonesia Stock Exchange)

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ARTICLE INFO

Revision:
January 19, 2021

Accepted:
January 27, 2021

Online Published:
January 28, 2021

Kata Kunci:
Earnings management, firm size, firm age, DER, ROA.

ABSTRACT

The study aims to identify the determinant factors that affecting earning management practices of companies. We used firm size, age, leverage (DER) and profitability (ROA) as independent variables in term of earnings management detection. There were 344 listed companies in Indonesia Stock Exchange at the year of 2017 and 2018, hence we obtained 688 observed data as samples. Purposive sampling and multiple regression were employed as sampling and analysis methods, respectively. The results show that firm size, age and ROA have a significant effect toward earnings management, whilst DER has no significant effect towards earning management. In addition, earnings management detection provides information to investors and potential investors in decision making process.

1. INTRODUCTION

Profit is a fundamental and important part of financial reporting in various contexts. Profits are generally seen as the basis for taxation, a determinant of dividend payment policies, guidance in carrying out investments and decision making, and an element in forecasting (Belkaoui, 2007). Profit is a measurement of performance of a company summary based on accrual-based accounting. Earnings information on financial statements is generally the main concern in estimating performance or seeing management accountability (Bestivano, 2013). However, earnings information is often used as manipulation target through opportunistic actions by management to maximize its satisfaction due to the tendency of those who pay attention to profit and this is realized by
management, especially managers whose performance is measured based on the earnings information, thus encouraging actions to manage earnings (Savitri, 2014). This behavior is influenced by the presence of asymmetry information in the concept of agency theory. An agency conflict will arise if each party, both the principal and the agent (manager), has different interests to strive their respective interests. Both the agent and principal aim to maximize their profits, thus the gap is used by managers to manage earnings.

Earnings management is a concept implemented by companies in managing financial reports purposes to appear to high quality report (Bestivano, 2013). Therefore, management has a tendency to expose appropriate financial reports, even more serious if they modify the reports on purpose in regard their personal interest, such as to maintain a position or get high bonuses. A stable profit does not fluctuate much from one period to another, thus it is considered a good achievement. We employ several factors in detecting earnings management practices in a company, including firm size, age, leverage, and profitability. Firm size is be measured in various ways such as the total assets, total income, and total capital of a company. Total assets can be used to show how big a company is, if a company has large total assets, the company more able to earn profits than smaller total assets company, thus it is prone to earnings management practices (Turegun, 2016; Jiraporn, 2007; Tehrani et al., 2011). Firm age is the age from its establishment year until current observation year. Long-established companies are deemed to be more trusted due to the ability to gain higher profits compared to newly-established counterparts (Agustia & Suryani, 2018). Leverage is used to measure how much the company is financed with debt. Debt is needed to gain benefits greater than the cost of assets and sources of funds. Leverage and profitability are measured with debt to equity ratio (DER) and Return on Assets (ROA), respectively.

Despite several previous studies that support the abovementioned variables as the determinant factors in detecting earnings management, there are some contrary results remain. Such as the study of Siregar and Utama (2008); Agustia and Suryani (2018); Wardani and Isbela (2017) which similarly conducted in Indonesia show that firm size has no significant effect to earnings management. Further, Gunawan et al. (2015) has found that profitability has no significant effect to earnings management, whilst Savitri (2014) has revealed that age has insignificant effect towards earnings management. Moreover, the
study of Wardani and Isbela (2017) shows that firm size, profitability and age have no significant effect to earnings management. Lastly, there are several studies stated insignificant association between leverage and earnings management (Tala and Karamoy, 2017; Jao and Pagalung, 2011; Gunawan et al., 2015).

We use in term of total or observed accrual (TAC) in measuring earnings management. TAC is often used by managers in detecting earnings management practices due to the discover possibility is lower than that of traditional accounting practices. In contrast, TAC is easier to apply rather than the traditional methods counterpart (Mendes et al., 2012). However, this method is unfamiliar to those investors and stakeholders that resulting earnings management practices under detected. Therefore, this study is disparate from the prior studies that commonly used the traditional accounting approaches in earnings management (e.g., the study of Bao and Bao, 2004; Habib, 2005; Daske et al., 2006; Tseng and Lai, 2007). Therefore, the study purposes to identify the relationship between firm size, age, leverage, profitability to earnings management using the accrual-based method namely TAC. The samples are 344 listed companies on Indonesia Stock Exchange in 2017 and 2018.

2. LITERATURE REVIEW

Agency Theory

The theory that underlies this research is agency theory. Agency theory emerges due to the contractual relationship between two parties namely, agent and principal. An agent is a party that is mandated certain task or responsibility by a principal as a decision maker, which is mutually benefits both of each party (Mursalim, 2005).

Scott (2000) states that agent and principal aims to maximize the utility with their internal information. Meanwhile, the agent has more information than the principal that boosting increase to information asymmetry. More information that managers have, trigger actions regarding the desire and interest to maximize their utility. Meanwhile, due to the less information, it will be not easy for investors to supervise each action taken by managers.
Earnings Management

Earnings management is a smoothly manipulation of financial reports within certain limits that does not break the financial reporting standards. It is played by management using its authority to select the accounting method permitted by the standard. Managers have the flexibility in selecting accounting methods and policies from a variety of alternative methods and policies. According to Scott (2000), earnings management actions can be taken in various forms. Some of the patterns used by managers in earnings management include:

a. Increasing income by accelerating the recording of income, delaying costs and transferring costs for other periods to increase profits.

b. Income Minimization is carried out when the profitability of a company is extremely high in order to reduce the possibility of political costs.

c. Taking a bath which is also called the big bath. It can occur during periods of stress within the organization or reorganization, such as a CEO replacement.

d. Income smoothing, which is intentionally reducing or increasing profits to reduce volatility in the earnings report, so that the company less risky and appear financially stable.

We used total or observed accruals (TAC) in term of measuring the earnings management practice of a company. Accruals is measured by subtracting net income to total cash flow, this calculation is able to represent the cumulative effects obtained from the application of the accrual basis in conventional accounting models (Mendes et al., 2012; Lazzem and Jilani, 2017).

Firm Size

Company size is a scale in which the size. The larger size of a company the higher tendency to use larger debt to meet its funding needs than the small companies therefore bigger company tends to manage their earnings (Riyanto, 2010). Moreover, several previous studies reveal that large firms do earning management more than that of small firms (Turegun, 2016; Jiraporn, 2007). Larger companies with large board attract more attention because they attain bigger earnings than small firms do. Hence they have to
undergo some mechanisms to distribute their earnings (Tehrani et al., 2011). Managers mostly choose accounting standard to report lower earnings in order to reduce taxes.

We use in term of total assets to measure firm size, further it is transformed into a natural logarithm (Ln).

\( H_1 \): Firm size has a significant effect to earnings management

**Age**

The age of the company used is the age since its establishment until the company has been able to run its operations. Firm age has been found associated with earnings management (Agustia and Suryani, 2018). Theoretically, newly-established companies difficult to gain funds in regard to capital market (Zen & Herman, 2007). long-established companies tend to manage their earnings because they experiencing the financial management of a company longer than newly-established companies.

\( H_2 \): Age has a significant effect to earnings management

**Leverage**

The leverage ratio measures how much a company is financed by debt. If the company gets a lower profit than its fixed costs, the use of leverage will reduce shareholder profits (Harjito and Martono, 2014). Leverage is measured using a debt to equity ratio by dividing total liabilities to total assets. Higher DER indicates higher financial risk of a company. Therefore, higher leverage increase the tendency of management to manage their earnings (Agustia and Suryani, 2018; Savitri, 2014; Wardani and Isbela, 2017; Lazzem and Jilani, 2017).

\( H_3 \): Leverage has a significant effect to earnings management

**Profitability**

Profitability is the level of net profit that the company succeeds in carrying out its operations. In relation to earning management, profitability can influence managers to carry out earnings management. Because if the profitability of a company is low, managers will generally take earnings management actions to save their performance in the eyes of the owner. Profitability is measured by Return on Assets (ROA) by dividing net income to total...
assets. ROA reflects as a measure of the rate of return generated by organizational assets (Atkinson et al., 2004), or how the ability of a company to increase net income based on certain asset levels. The higher the ratio obtained, the more efficient the asset of a company. Thus, ROA is used to perceive how much the combined effect of margin and asset turnover is (Higgins & Postma, 2004). Profitability has been shown significant effect toward earnings management (Dechow et al. 1995; Kaznik 1999; Goel and Kapoor, 2016), therefore the hypothesis is:

H₄ : Leverage has a significant effect to earnings management

3. RESEARCH METHODOLOGY

Population and Sample

The population in this study are all companies listed on the Indonesia Stock Exchange (IDX) circa 2017-2018. There are 344 companies obtained as samples using purposive sampling by these following criteria:

a. Listed on the IDX in 2017 and 2018;

b. Consistently issue financial reports and annual reports during the research year period;

c. Data availability during the research period.

Operational Variables

There are four independent variables used in this study, namely firm size, age, leverage and profitability. Further, we identified the link between these independent variables to earnings management. The variables description refer to Table 1.

Data Analysis Technique

This study used quantitative and qualitative approaches to analyse data obtained from a particular population or sample. The data used in this study are secondary data in the form of financial reports on companies listed on IDX. Panel data regression has been employed to test the hypothesis. Ajija et al. (2011) stated that the advantage of panel data is it has implications for the data that does not have to test classical assumptions in the panel
data model because research using panel data allows the identification of certain parameters without the need to make strict assumptions or do not require the fulfilment of all classical assumptions of linear regression such as Ordinary Least Square (OLS). The regression model is described as follows:

\[ YEM_{it} = \alpha + \beta_1 \text{Size}_{it} + \beta_2 \text{Age}_{it} + \beta_3 \text{DER}_{it} + \beta_4 \text{ROA}_{it} + \varepsilon \]

Whereas,
\[ \alpha = \text{Constant} \]
\[ \beta = \text{Coefficient} \]
\[ YEM = \text{Earnings Management} \]
\[ \text{Size} = \text{Company Size} \]
\[ \text{Age} = \text{Company Age} \]
\[ \text{DER} = \text{Leverage} \]
\[ \text{ROA} = \text{Profitability} \]
\[ \varepsilon = \text{Error Term} \]
\[ it = \text{Institutional (Company), Time (Time)} \]

Testing the research hypothesis is conducted by these following tests:

a. Determination Coefficient Test (R2)

The coefficient of determination (R2) is used to measure how much the independent variable can explain the dependent variable. This coefficient is used to show how much the total variation in the dependent variable can be explained by the variables in the regression model. The value of the determinant coefficient is 0 to 1, the value of R2 is close to 1, indicating that the variables in the model can represent the problems studied because they can explain the variations that occur in the dependent variable. If the R2 value is close to zero, it shows that the variables in the model formed cannot explain the variation in the dependent variable.

b. Simultaneous Regression Test (Test F)
Simultaneous regression test is used to determine whether all independent variables simultaneously affect the dependent variable. The $f$ test result can be interpreted by comparing $F$ count to $F$ table with significance level $\alpha = 5\%$.

c. Partial Regression Test ($t$ test)

The hypothesis testing will be carried out using a two-tailed hypothesis test. The formulation of a partial regression test using a two-way hypothesis is to see whether or not there is a relationship between the independent variable and the dependent variable individually. The $t$ test result can be interpreted by comparing $t$ count to $t$ table with significance level $\alpha = 5\%$.

<table>
<thead>
<tr>
<th>Table 1. Operational Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>Y (Earnings Management)</td>
</tr>
<tr>
<td>X1 (Firm Size)</td>
</tr>
<tr>
<td>X2 (Firm Age)</td>
</tr>
<tr>
<td>X3 (Leverage)</td>
</tr>
<tr>
<td>X4 (Profitability)</td>
</tr>
</tbody>
</table>

4. RESULTS AND DISCUSSIONS

Determinant Coefficient

Table 2 show coefficient of determinat. The coefficient shows a value of 0.114 or 11.4% in ratio (Table 2). It indicates that changes in variations in earnings management are influenced by the independent variables tested.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.338^a</td>
<td>.114</td>
<td>.109</td>
</tr>
</tbody>
</table>

F-test

Refer to Table 3. F-test result shows that firm size, age, leverage and profitability simultaneously affect earnings management. The result of the F-test shows a significant value of 0.000 (<0.05). It indicates that the independent variables, namely firm size, age, leverage, and profitability simultaneously have a significant effect to the dependent variable, namely earnings management on listed companies at Indonesian Stock Exchange circa 2017-2018.

<table>
<thead>
<tr>
<th>Model</th>
<th>Df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4</td>
<td>21.978</td>
<td>.000</td>
</tr>
</tbody>
</table>

T-test

Refer to Table 4. the result of t-test shows that the coefficient of firm size is -0.296 (significance level of 0.000<0.05), it indicates that H1 is accepted. The relation between firm size and earnings management is negative significant, the smaller size of a firm the higher tendency of earnings management practices appear. This result is in line with several
previous studies. The research conducted by Rice (2016), Handayani & Rachadi (2009) stated that company size has an effect on earnings management practices.

Table 4. t-test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Std Coef.</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>9806173053</td>
<td>130964106</td>
<td>7.48</td>
<td>.000</td>
</tr>
<tr>
<td>Size</td>
<td>-483372997</td>
<td>59524988</td>
<td>-.296</td>
<td>8.121</td>
</tr>
<tr>
<td>Age</td>
<td>-1313141.983</td>
<td>607955.030</td>
<td>-.078</td>
<td>2.160</td>
</tr>
<tr>
<td>DER</td>
<td>-3851519.489</td>
<td>5145500.44</td>
<td>-.027</td>
<td>-.749</td>
</tr>
<tr>
<td>ROA</td>
<td>35075820.36</td>
<td>13939036.0</td>
<td>.091</td>
<td>2.51</td>
</tr>
</tbody>
</table>

Chtourou et al. (2001) in the United States using a sample of industrial firms in 1996 found that firm size has a negative relationship with earnings management. Companies are more substantial lack the urge to perform earnings management than small companies, because large companies are seen as more critical by the shareholders and external parties. Siregar & Utama (2005) observed BEJ (hereinafter BEI) in the period of 1995-1996 and 1999-2002, has revealed that firm size has a significant negative relationship to earnings management. It indicates that earnings management carried out by small companies is inefficient. Therefore, small company needs to be controlled regularly by management to avoid earnings management practices. Further, larger company usually has well planned earnings management, as a result it could be difficult to detect.

Based on Table 3. the age coefficient shows negative coefficient (-0.78) with a significance level of 0.000 (<0.05). Those result indicates that H2 is accepted. In the theoretical long-established company will be trusted by investors rather than a newly-established company, because long-established company is assumed to be able to earn a higher profit than the new comer. As a result, newly-established companies will find it difficult to obtain funds in the capital market and require them to rely on their own capital (Zen & Herman, 2007).
The t-test results show that Leverage has a significance value of 0.454 which is greater than the level of confidence of 0.05. It indicates that H3 is unaccepted. This means that leverage is not able to indicate earnings management practices due to the amount of debt that can be confirmed in the audit process makes company management unable to carry out earnings management and companies with larger capital from loans will be closely monitored by debtors, thus the company will find it difficult to carry out earnings management. This results support the study of Tala and Karamoy, 2017; Jao and Pagalung, 2011; Gunawan et al., 2015 that have found no significant effect between leverage towards earnings management.

The results of the t-test show that the profitability which measured by ROA has a positive coefficient value (0.91) with a significance level of 0.012 (<0.05). It indicates that H4 is accepted, profitability has a significant effect on earnings management. The results of this study are consistent with the study of Guna & Herawaty (2010) and Widyastuti (2009) who found a positive relationship between profitability and earnings management. The greater the value of the profitability of a company the greater possibility of earning management practices. It is because higher profitability of a company, the greater tax that must be paid by the company. Therefore a company manages its profits by reducing profits to reduce cost from tax that must be paid (Yunietha & Palupi, 2017).

5. CONCLUSION

This study analyses the association of firm size, age, leverage and profitability on earnings management using a sample of. The samples used are listed companies on Indonesian Stock Exchange (IDX) in 2017 and 2018. Based on the aforementioned, it can be concluded that firm size, age and profitability have a significant effect to earnings management. Meanwhile leverage which measured by DER does not have a significant effect to earnings management practices. The limitation is the sample obtained from two-year periods and four independent variables. Further research should extend the observation period and variables to gain more robust results such as institutional ownership, net profit margin and free cash flow and other variables.
REFERENCES


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