FACTORS INFLUENCING INCOME SMOOTHING PRACTICE IN THE OIL AND NATURAL GAS MINING COMPANIES DURING 2012-2016 PERIOD

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Abstract

Purpose of the study: This study aims to determine factors that influence the practice of income smoothing in a company.

Methodology: Method of analysis applied logistic regression. This study employed a logistic regression analysis. The use of logistic regression is because the dependent variable is a dummy variable.

Main Findings: Results of the test results show that company size significantly influences the income smoothing practice; while for variables of financial leverage, profitability, and public ownership partially give no effect on the practice of income smoothing.

Applications of this study: Observations were done in oil and natural gas mining companies during 2012-2016.

Novelty/Originality of this study: The results of this study show that the size of the company affects the practice of income smoothing in the oil and natural gas mining companies listed in Indonesia Stock Exchange during the 2012-2016 period. Meanwhile, the financial leverage, profitability, and public ownership partially have an insignificant influence on the practice of income smoothing.

Keywords: Income Smoothing Practice, Oil, Natural Gas Mining, Financial Leverage Profitability, Public Ownership.

INTRODUCTION

The current development of the capital market in Indonesia is so rapid and fast; it makes a strong reason for management in a company to display the good performance (Pangestuti et al., 2017; Robiyanto, 2018; Robiyanto et al., 2017). The performance of a company can be acknowledged, one of them is by looking at the financial statements (Ernayani & Robiyanto, 2016). Users of financial statements such as investors, creditors, government, and stockholders typically refer to financial statements for decision making. Before investing their capital in a company, investors will observe the company’s performance from the financial statements. To take a loan decision to the company, creditors will also examine the financial statements. It shows how pivotal financial statements are for those who need it. (Ernayani & Robiyanto, 2019) Hence, every company will try to maintain and improve its performance to make investors investing their capital in the company.

The types of financial statements include income statements, equity change reports, statements of financial position, cash flow statements, and notes to the financial statements. Among the types of financial statements, the focus of a company’s management is primarily on income statements that are how to generate high profits in order for the investors are interested in joining the company. Profit becomes a measure of the performance’s increase or decreases at the company (Atahau & Cronje, 2015; Ernayani et al., 2017; Murwaningsari et al., 2015).

The existence of the tendency for concerned parties to only focus on the profit information can lead the management to attempt to do everything to the company profits look stable (Machfoedz, 1994). One of them is by practicing income smoothing. Income smoothing is a practice performed by management to reduce profit fluctuation to make the company looks stable. Income smoothing is performed by transferring income from the years of high income to low-income periods. The impact of income smoothing practice can lead to a less accurate result of profit information. It can be detrimental for those concerned in the decision-making process. Some factors influence management in performing income smoothing practices are related to the company size, financial leverage, profitability, and public ownership.

The size of a company is one factor that can influence income smoothing action. Company size is measured by using the natural logarithm of total assets. Dewi & Sujana (2014) have researched income smoothing and proved that the size of the company influences the income smoothing practice. But, there are also researchers who have done the research and concluded that the size of the company has nothing to do with the practice of income smoothing (Prasetya & Rahardjo, 2013).

The next factor which may influence the income smoothing practice is financial leverage. Financial leverage is a ratio used to determine the number of the company’s assets that are funded from debt (Kasmir, 2016). The ratio of financial leverage that is used in this study is the debt to total assets ratio. Research which is conducted by Buchori, 2013;
Peranasari & Dharmadiaksa, (2014) concluded that financial leverage has a significant influence on the practice of income smoothing. While Budiasih(2009) proves that financial leverage does not influence income smoothing. Another factor that may influence income smoothing is profitability. By recognizing the level of a company’s profitability, the company’s ability to generate profit can be observed. The profitability ratio used in this research is proxy of return on assets (ROA), a ratio that measures the level of return on investment that has been made by the company using all assets owned (Prastowo & Julianty, 2015). If the ROA of the company is high, investors will be interested to invest in the company. Hence, the management of a company can practice income smoothing so that the company’s profit looks good for investors. A research conducted by Ramanuja & Mertha (2015) proves that profitability influences the income smoothing; on the contrary, Buchori(2013) concludes that profitability does not influence management in making income smoothing.

Public ownership is also another factor affecting income smoothing. Public ownership is a proportion of outstanding stocks owned by the public. Usually, the number of these stockholders is not many or minority. Therefore, managers can be freer to practice income smoothing (Hanafi, 2014). A research conducted by (Wijoyo, 2014) concluded that public ownership does not influence the practice of income smoothing.

Based on the theories that have been mentioned and the results of previous research, inconsistent results are still found. It indicates that there are variables that influence the practice of income smoothing, but there are also variables that give no effect on income smoothing. Therefore, this study attempts to reexamine whether the company size, financial leverage, profitability, and public ownership variables are related and associated with the practice of income smoothing performed by companies, especially in the oil and natural gas mining companies listed in Indonesia Stock Exchange during 2012-2016.

**LITERATURE REVIEW**

**Income Smoothing**

Financial statements are commonsense and are considered reasonable (Tucker & Zarowin, 2006). Income smoothing practices are driven by a variety of factors. The income smoothing driving factors can be differentiated over the economic consequence factors of accounting options and profit factors. The consequence factors of accounting options are conditions that are affected by accounting figures, so the accounting changes that affect accounting figures will affect that condition. While the profit factors are the influence of the periodic profit figures which by itself also encourages the behavior of income smoothing. Income smoothing will not occur if the expected profit is not too different from the actual profit (Nugroho et al., 2018).

Fudenberg & Tirole (1995) argue that income smoothing is a process of manipulation of the time of profit or earnings reports so that the profit reported is stable. Beidleman (1973) means the reported income smoothing can be defined as a deliberate effort to flatten or fluctuate the level of profit so that at present it is considered normal for a company. In this case, income smoothing indicates an enterprise management effort to reduce the abnormal profit variation within the allowable boundaries in the accounting practice and reasonable management principles.

From the above definitions, it can be concluded that income smoothing is a deliberate manipulation of action, which is done by management of the reported profit fluctuations so that the company's profit is at a level deemed normal by Company or in other words in order for the company's reported profits to look stable as long as permitted by a healthy accounting and management principle. Income Smoothing does not depend on fraud and distortions or changes, but rather on opportunities that arise in alternative accounting principles of transactions received and its spread.

The theory of Efficiency Market Hypothesis (EMH) mentions that financial statements can affect the capital market. This shows how important financial statements are (Gimba, 2012; Malkiel, 1989).

Because of the importance of this financial report in Western communities, in particular, it supports management doing things that alter the income statement for its personal interests, such as maintaining a position or gaining a high bonus. Usually, a stable profit where not many fluctuations or variance of another period is judged as a good achievement. The effort to stabilize this profit is called income smoothing.

Income Smoothing is usually done in various ways (Kanagaretnam et al., 2003; Michelson et al., 1995):

1. Set the timing of the transaction event.
2. Choose a principle or allocation method.
3. Set the classification between the normal operating profit and the profit that is not from the normal capital.

The Previous research results about income smoothing are: (Alexandri & Anjani, 2014, 2014; Dwimulyani & Abraham, 2019; Irawati, 2008; Sahnio & Baridwan, 2000; Yusuf & Soraya, 2004).
Based on previous research, the novelty of this research is that income smoothing is used to the oil and natural gas mining companies during the 2012-2016 period. Previous research conducted on the company registered manufacturing in BEI, while the research This is done on oil mining companies and gas listed on the BEI.

**Profit Management**

According to *Cornforth, (2002)* Profit management is a manager’s act that raises (lowers) the reported profit from the unit of responsibility that has no relation to the increase or decrease in the profitability of the company in the long term. *Sims & Quatro (2015)* define profit management with actions taken via accounting policy options to acquire specific objectives, such as to meet their own interests or increase the market value of their company. According to *Assih, (2000)* profit management is a process that is done intentionally within the General Adopted Limitation Accounting Principles (GAAP) to point to the level of profit reported.

**METHODOLOGY**

**Population and Sample**

Population of this study was all oil and natural gas mining companies that go public in Indonesia Stock Exchange during 2012-2016 period; there are 7 (seven) companies namely: Ratu Prabu Energi Tbk, Benekat Integra Tbk, Elnusa Tbk, Energi Mega Persada Tbk, Surya Esa Perkasa Tbk, Medco Energi International Tbk, Radiant Utama Interisco Tbk. Sampling techniques used in this study is purposive sampling. The criteria for sampling In this research is a company that provides financial statements of the company period 2012-2016. Based on these criteria, the company that will be sampled in this study amounted to 6 companies.

Samples were selected based on the purposive sampling method with certain criteria, namely (1) Oil and natural gas mining companies listed in Indonesian Stock Exchange 2012-2016, (2) Companies that publish financial and annual reports of 2012-2016 completely. The following table illustrates samples of companies:

<table>
<thead>
<tr>
<th>Sample Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and natural gas mining companies listed in Indonesia Stock Exchange 2012-2016</td>
<td>7</td>
</tr>
<tr>
<td>Companies that do not publish their financial and annual reports of 2012-2016 completely</td>
<td>1</td>
</tr>
<tr>
<td>Companies that can be used as a sample</td>
<td>6</td>
</tr>
</tbody>
</table>

**Source:** Processed data

Table 1 shows that the number of companies that can be sampled was 6 (six) companies. The type of data used was secondary data in the form of audited financial statements; the source of publication is from the Indonesian Capital Market Directory (ICMD).

**Variables**

This study used a dependent variable and an independent variable. The dependent variable was income smoothing measured by using the Eckel index, while the independent variables consist of company size, financial leverage, profitability, and public ownership. Income smoothing (Y) is the reduction in profit fluctuations from year to year by transferring income from high-income periods to the less profitable periods as an attempt to reduce reported profit fluctuations so that the company looks stable. Income smoothing is measured by using Eckel Index.

\[
\text{Income Smoothing Index} = \frac{CV \Delta I}{CV \Delta S} \tag{1}
\]

Information:

\[
\Delta I = \text{Profit Change}
\]

\[
\Delta S = \text{Change of Sales}
\]

\[
CV = \text{Coefficient of Variation}
\]

Companies with index Eckel < 1 are classified as companies that are indicated performing income smoothing, while companies with index Eckel > 1 are classified as those which are not indicated performing income smoothing. This variable uses the nominal scale given the IE symbol and uses dummy variable; IE = 1 for companies that are performing income smoothing, and IE = 0 for those that are not.

The independent variable is Company Size (X1). The company size in this study was measured by using the total natural logarithm of the asset. The next variable is the Financial Leverage (X2). Leverage in this study used debt to total asset ratio. The debt to total asset ratio is a ratio of debt which is used to measure the ratio of total debt to total assets. The third independent variable is Profitability (X3). The measurement of profitability uses Return on Assets (ROA) which is a
ratio that measures the rate of return on investment that has been done by a company by using all funds (assets) owned. The fourth independent variable is public ownership (X4). Public ownership is a proportion of outstanding stocks that are owned by the public. Public ownership is measured by the percentage of public ownership.

Data Analysis Method

This study employed a logistic regression analysis. The use of logistic regression is because the dependent variable is a dummy variable. The regression model is as follows (Ghozali, 2011):

\[
\ln \frac{p}{1-p} = \alpha + \beta_1 \text{SIZE} + \beta_2 \text{FL} + \beta_3 \text{ROA} + \beta_4 \text{KP} + e
\]  

(2)

Information:
- Ln = Natural Logarithm
- P = Income Smoothing Prediction
- \( \alpha \) = Constant
- \( \beta_1, \beta_2, \beta_3, \beta_4 \) = Regression Coefficient
- SIZE = The Company Size
- FL = Financial Leverage
- ROA = Profitability
- KP = Public Ownership
- e = Residual Error

RESULTS

Based on the data from www.idx.co.id, the oil and natural gas mining companies which become the population in this study during the 2012-2016 period are 7 (seven) companies. Based on the purposive sampling that fit the criteria are 6 (six) companies, with five years of observation, so 30 observation data were obtained.

Descriptive Statistic

The descriptive statistical analysis gives a general description of the research variables. The following descriptive statistic result of each variable in the form of minimum value, maximum value, mean value, and standard deviation.

![Figure 1: Result of descriptive statistic](source: Author findings)

Based on the descriptive statistics of 30 samples, it is known that Income Smoothing has a mean of 0.80, a minimum value of 0, a maximum value of 1, with a standard deviation of 0.40. Company Size has a mean 29.39, minimum value 25.56 maximum value 38.30 with a standard deviation of 2.20. Financial leverage has a mean of 0.75, a minimum value of 0.15, a maximum value of 7.56 with a standard deviation of 1.30. Profitability has a mean of 0.03, a minimum value of -0.13, a maximum value of 0.43 with a standard deviation of 0.08. Public Ownership has a mean of 0.34, a minimum value of 0.05, a maximum value of 0.59, with a standard deviation of 0.13.
Result of Logistic Regression Test

Logistic Regression is used to predict the probability of events by matching the data on the logical function. Table 2: Results of Logistic Regression Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Size (SIZE)</td>
<td>2.967</td>
<td>3.740</td>
<td>0.053</td>
</tr>
<tr>
<td>Financial Leverage (FL)</td>
<td>-0.515</td>
<td>0.209</td>
<td>0.647</td>
</tr>
<tr>
<td>Profitability (ROA)</td>
<td>18.407</td>
<td>1.005</td>
<td>0.316</td>
</tr>
<tr>
<td>Public Ownership (KP)</td>
<td>-4.840</td>
<td>0.705</td>
<td>0.401</td>
</tr>
<tr>
<td>Constant</td>
<td>-81.637</td>
<td>3.640</td>
<td>0.056</td>
</tr>
</tbody>
</table>

Source: Processed Data

From the testing of the logistic regression equation, the model of logistic regression obtained is as follows:

\[
\ln \frac{p}{1-p} = -81.637 + 2.967\text{SIZE} - 0.515\text{FL} + 18.407\text{ROA} - 4.840\text{KP}
\]

The Influence of Company Size towards Income Smoothing

The result of statistics testing by using logistic regression shows that the variable of company size has a significant influence on the practice of income smoothing. It is shown by the value of 0.053 is lower than 0.1. It means that managers in companies have different personal interests in performing income smoothing practices without considering whether the company is categorized as large or small. It proves that both large and small companies can do the practice of income smoothing. The results of this study support research conducted by Dewi and Sujana (2014) that the company size influences positively on income smoothing. But, this result does not support research done by Buchory and Prasetya (2013) which states that the company size does not influence income smoothing.

The Influence of Financial Leverage towards Income Smoothing

The result of statistic testing by using logistic regression indicates that the value of financial leverage is 0.647 or higher than 0.1. It means that the variable of financial leverage has no significant influence on income smoothing. It can be caused by if the level of financial leverage or company debt is high, the supervision from parties outside will be more stringent; as a result, the management is unwilling to perform the practice of income smoothing. This finding supports Budiasih (2009) which obtains the result that financial leverage has an insignificant influence on income smoothing. But, this finding is not in line with the results of studies done by Peranasari and Dharmadiaksa (2014); Prasetya and Rahardjo (2013) that conclude financial leverage affects income smoothing.

The Influence of Profitability towards Income Smoothing

The result of statistics testing by using logistics regression shows that the value of profitability significance is 0.316 or higher than 0.1. It means the variable of profitability has no significant influence on income smoothing. It implies that the existence of high profitability represents good company performance. Consequently, the management is unwilling to perform income smoothing practice due to the companies with high profitability will become public attention and certainly will risk the credibility of the company still practice the income smoothing. The results of this study are consistent with research by Ramanuja and Mertha (2015). But it is different from the finding from Prasetya and Rahardjo (2013) where profitability influences income smoothing.

The Influence of Public Ownership towards Income Smoothing

The result of statistics testing by using logistic regression shows that the value of public ownership is 0.401 or higher than 0.1. It means that the variable of public ownership has no significant influence on income smoothing. The larger the public ownership reflects the real performance from the management and is a form of public trust in the company. Thus, management is not encouraged to practice income smoothing. In addition, the greater the percentage of stock ownership by the public, the more information can be accessed by the public; hence, the management of companies will be very careful when going to practice income smoothing. The result of this study supports research conducted by Wijoyo (2014).

CONCLUSIONS

The results of this study show that the size of the company affects the practice of income smoothing in the oil and natural gas mining companies listed in Indonesia Stock Exchange during the 2012-2016 period. Meanwhile, the financial leverage, profitability, and public ownership partially have insignificant influence on the practice of income smoothing, are; The size of the company has no influence on a partial profit leveling practice; Financial risk has no influence on partial income smoothing practices; Profitability has no influence on the company size practices have no influence on
grading practices Profit partially; Financial risk has no influence on partial income smoothing practices; Profitability has no influence on the practice of partial income smoothing; Leverage has no influence on the practice of partial income smoothing; Profit margins have no influence on the practice of partial income smoothing; Company size, financial risk, profitability, leverage, and profit margins together affect the practice of simultaneous and partial income smoothing; Leverage has no influence on the practice of partial income smoothing; Profit margins have no influence on the practice of partial income smoothing; Company size, financial risk, profitability, leverage, and profit margins together affect the simultaneous income smoothing practices

SUGGESTION

For further researchers who are researching similar topics are advised to uncover other variable-variable that have not yet can be disclosed in this research such as compensation for Management and structure of ownership. In addition, the observation period can be extended and the research sample can be reproduced so that it will be obtained more maximal results

LIMITATION OF STUDY FORWARD

The limitation of this study is that it only used four independent variables, so it has not been thoroughly recognized the other factors which may influence the practices of income smoothing. Based on the limitation, it is suggested for further research to add other variables such as institutional ownership, audit committee, and board of commissioner. The next research can also change the type of company studied, for example, a coal mining company or financial company, so the results of the study reflect the diversity of the real condition in an industry.

IMPLICATION

This research shows still low levels of profitability Owned by mining and petroleum gas companies, Management should further improve the performance of resources To increase the profitability of the company so as not to have a tendency to do profit leveling.

Investors are expected to more thoroughly read the information company's finances especially information related to corporate profits, investors should also be careful to see the company's financial situation and company growth by examining the company's financial statements historically as well as Financial ratios of the company so that investors can make informed decisions.

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