The Effect of NPM, DPR, DER and Existed Size of the Company Towards the Income Smoothing in Manufacturing Companies

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Abstract. Income smoothing is a natural thing to do by management because of fluctuations in income which are considered abnormal and sometimes not as in line as the stated plan of the company set up at the beginning. Financial reports published on the Indonesian Stock Exchange are usually always analysed by investors and potential investors as a basis for decision making, one way for investors to detect that the reports presented indicate high income smoothing values which can cause mistakes in decision making and harm. One way to detect the smoothing condition of the existed income is based on the index of Eckel standards of regulations. This study uses a population of 72, for 4 years in the manufacturing sector to companies used the index of Eckel standards of regulations by means of measuring the condition of smoothing of the income. The results showed that firm size had an effect on income smoothing while DER, NPM and DPR had no effect on income smoothing.

Keywords: Debt to Equity Ratio, The Ratio of Dividend Payout, Income Smoothing, Net Profit Margin, Company Size

INTRODUCTION

Quoted from Santoso and Salim (2012) regarding Financial Statement of Accounting Concept (SFAC) number 1 explains that the main point in assessing the accountability or performance of a management can be assessed on its earnings information. Earnings information is one of the indicators held by owners or shareholders in estimating targeted profits in the future so that this encourages management to continue to pursue its strategy to improve performance because it is aware that a manager's performance is measured by profit. As a result, sometimes it is found that there are actions that should not be done (dysfunctional behavior), one of which is income smoothing.

Income Smoothing is an action that commonly comes about as the reaction towards a set of management efforts which conducted by means of lowering the condition of fluctuations as reported in the form of written earnings. Income Smoothing legitimizes information about the company's income statement to be less accurate, so that investors who
invest their money allow for errors in decision making. Every investor would want the investment made to produce positive returns and have the ability to continue to grow every year, not just for a moment. However, if investors cannot detect these deviations, then errors in decision making by investors will most likely occur, causing investors to experience losses and even lose confidence in the company.

The phenomenon of Income Smoothing practice occurs in PT. Three Pillars of Prosperous Food Tbk. (AISA), quoted from the CNBC Indonesia news page PT. Three Pillars of Prosperous Food Tbk. (AISA) released an audited financial report as of December 2019 which stated that the net profit of AISA's parent company was Rp. 1.13 trillion even though in December 2018 the company suffered a loss. The increase in this profit is known from other income of Rp. 1.9 trillion, which is bigger than last year's Rp. 18.11 billion. Other income items represent impairment of receivables and reversal of write-down of inventories. AISA's management confirms that it has received the audit results and expresses an “Qualified” opinion. However, AISA is in danger of being expelled from the IDX because it has been 24 months since AISA's shares have been traded.

The reason for the management to take income smoothing actions is conducted in relation to set up balance of the company interests, such as; maximizing the existed company value so that the perception appears that the company has a low risk of uncertainty. In addition, to increase share prices and for the benefit of management itself such as to obtain compensation and also to maintain its position (Juniarti and Corolina, 2005). Periodic income smoothing is recommended in the company's objectives to run its business. Income smoothing is carried out as a way to overcome fluctuations in income which is considered abnormal for the company, but the thing to remember This income smoothing action must be in accordance with existing accounting and management standards.

There are several factors that probably may lead the existence of Smoothings in the Income Smoothing and in this study, the researcher has applied 4 probability factors may lead the clear performance of Income Smoothing. Debt to Equity Ratio (DER) has become the first one. As has been known that Debt to Equity Ratio (DER) is also commonly called as leverage ratio this ratio is used to measure an investment to companies (Ramadhani, 2020). The greater condition of debt ratio, means company's financial proportion financed by debt will get greater as well. In fact, the truth that cannot be avoided is, companies which have great leverage tend to risk large losses. Because the company has the potential to experience such a situation, creditors will not trust the company's ability to repay debt loans and investors are also reluctant to invest in the company so that is what makes management perform Income Smoothing.

LITERATURE STUDY AND HYPOTHESES

Agency Theory

As has been mentioned by Scott (2015) theory which related to agency can be defined as the relationship that occurs between the head and agent. In this case, the term “head” can be explained as party who hired agent to conduct stated plans into realisation, however, the word “agent” itself has its own definition as side in charge of conducting stated plans as head interests.

This research clearly allows a relationship view in relation to agency theory and the research that the author is doing is that the management agency relationship that acts as an agent has more accurate information than the owner of the fund who acts as the principal. Conflicts occur because the management and principals are both trying to manage and triumph the best prosperity achievement, therefore, Smoothing condition in Income completely increases in companies.
Income Smoothing

The *Income Smoothing* phrase explains as an act of management intervention in financial statements with the aim of benefiting himself (the manager). There are 2 types of income smoothing streams, they are: the natural one and the intentional one. The action of natural smoothing in relation to existed income is an action that is carried out directly by the manager without any engineering, while intentional income smoothing is done with the intentional intervention of the management.

There are 2 types of intentional income smoothing, they are; real and artificial ones. As for real condition of smoothing related to income, can be explained to a set of management's moves in regulating transactions of every single detail of any economics value which may lead affect towards profits gained by company forward. Meanwhile, the smoothing condition of income set artificially, is management action by manipulating data to smooth profits. This research is more directed at the intentional income smoothing action, both real and artificial because the authors suspect that there is management interference in the presentation of reported earnings.

\[
INCOME\ SMOOTHING = \frac{CV \Delta I}{CV \Delta S}
\]

Description :
- \( I \) = Profit Change
- \( S \) = Sales Change
- \( CV \) = Coefficient Value of variation from the existed variables, which can be obtained through; standard deviation which divided by average value of \( I \) or \( S \)
- \( CV \_I \) = Profit change of coefficient variation value
- \( CV \_S \) = Change in income of coefficient variation value.

In fact, the value of \( CV \_I \) and \( CV \_S \) can be resulted from applying formula as follows:

\[
\sqrt{\frac{\Sigma(\Delta x - \bar{x})^2}{n-1}}
\]

Description :
- \( X \) = change in net income ( \( I \) ) or sales ( \( S \) ) between periods \( n \) and periods \( n-1 \)
- \( X \) = Average change in net income ( \( I \) ) or sales ( \( S \) )
- \( n \) = number of years observed

The Stated Margin of Net Profit

The term of *Net Profit Margin* (NPM) is able to describe company's profit after tax. A high *Net Profit Margin* (NPM) value describes the company's maximum *performance* so that it can stimulate investor confidence in the company. Profit plays an important role because it is the basis for how much dividends the company gives to investors. Stable earnings every year will minimize investor concerns so that confidence increases and shows managers are able to achieve appropriate targets in the future. Therefore, a larger stated *Margin of Net Profit* (NPM) value will affect to great risk in conducting kind of actions in relation to *Income Smoothing*. 
The Outturn of Dividend Payout Ratio (DPR)

The Ratio of Dividend Payout (DPR) resulted from percentage of gaining profit received by bondholders. The existence of ration itself can be value to encourage proven view of gaining profits resulted that will be given in cash by the company. In fact, if the true condition shows DPR higher, it can be avoided that return received by investors will be higher as well, but this situation can cause the company's internal finances to be weak because the retained earnings are small. According to Adityo and Haykal (2020) in Natsir and Bangun (2021) the value for the DPR varies depending on the level of profit or profit generated by the company itself. Companies that are in the developing stage will take the decision to be detained for operational needs, while companies that are growing will have a high DPR value because they require little funds for new growth for the company. If in a condition where the company earns high profits but the profits obtained by the company are not continuous or can be said to be unstable, it can be said that the risk owned by the company is high, therefore, a set of income smoothing moves should be necessarily conducted.

\[
NPM = \frac{LABA \ SETELAH \ PAJAK}{PENJUALAN}
\]

Debt to Equity Ratio (DER)

Term regarding Ratio Equity of Debt (DER) explains as leverage condition of ratio which shows the comparison between existed debt value and existed value of equity in one period. Companies that are said to be unhealthy can not only be seen in terms of the quality of human resources or sales. However, it can also be measured from an internal financial point of view. The following formula can be value as one of the suggestions to result ratio of DER itself:

\[
DPR = \frac{DEVIDEN}{LABA \ BERSIH}
\]

\[
DER = \frac{TOTAL \ HUTANG}{TOTAL \ EKUITAS}
\]

Firm Size Effect

The existed size value of company can be beneficial to provide clear information to company performance in relation to assets belongings, where the existence of assets will provide significance to any movements conducted by company by means of resulting profits. Large companies tend to require larger funds than small companies. The additional funds can be obtained from the issuance of new shares or additional debt. This will motivate managers to perform income smoothing, so that with high profit reporting which will be value to invite investors’ attention and creditors into involvement.

\[
COMPANY \ SIZE: L \cdot TOTAL \ ASSETS
\]

RESEARCH METHOD

Research design

There have been taken several written financial statements from several existed companies which move their businesses in manufacture. Those manufacture companies are officially listed based on the data taken from Stock Exchange of Indonesia for the period of 2017-2020. Purposive sampling has been applied to consider 9 companies fulfilled criterias
and taken as samples in this research conducted, in which, the criterias are; (1) The name of companies are officially named as manufacture companies listed on Stock Exchange of Indonesia during the period of 2017-2020; (2) The complete company provides the variables that will be used in the research; (3) The company presents its financial statements using Rupiah currency; (4) Financial Statements did not suffer losses during the 2017-2020 period.

**Variable Operational Definition**

<table>
<thead>
<tr>
<th>Variable</th>
<th>description</th>
<th>Formula</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income Smoothing</strong></td>
<td>The smoothing action of income can be completely defined as an action decided and taken by head to reduce fluctuations of profits performance, so that the financial statements presented are as expected by the company company.</td>
<td>CVß ICV S</td>
<td>Ratio</td>
</tr>
<tr>
<td><strong>The Existed Ratio Equity of debt. (DER)</strong></td>
<td>The Ratio Equity of Debt or commonly called DER explains as juxtaposition ratio between the existences of total debt existed and total equity in a certain period of time.</td>
<td>Total Debt/Total Equity</td>
<td>Ratio</td>
</tr>
<tr>
<td><strong>The Margin Value of Net Profit (NPM)</strong></td>
<td>Fixed Margin Value of Net Profit Margin which is well-known as NPM can be measure by means of figuring out the amount of gained profits every single transaction of sales conducted.</td>
<td>Profit After Tax/Sale</td>
<td>Ratio</td>
</tr>
<tr>
<td><strong>Dividend Payout</strong></td>
<td>The Ratio of Payout Dividend or customary called DPR explains as percentage of profit received by bondholders compared with</td>
<td>Net Profit/Dividend</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

**RESEARCH RESULT AND DISCUSSION**

The Panel Regression has been applied as technique to conduct analysis by means of considering findings. As has been written by Basuki (2016), Panel Regression can be considered as one of the techniques that can be applied in analysing data that leads researcher through integrating cross section data application and time series. Panel data is data obtained from several individuals or samples studied in a certain period.

1. Descriptive statistical analysis

An analysis that functions to describe data based on the minimum, maximum, standard deviation and average values. This can be seen in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Y</th>
<th>DER</th>
<th>NPM</th>
<th>DPR</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>1.3918</td>
<td>0.6279</td>
<td>0.1334</td>
<td>0.7033</td>
<td>12.8738</td>
</tr>
</tbody>
</table>
2. Panel Regression of Existed Approximate Data

There have been proposed 3 alternate courses of actions in conducting kind of approximation of panel data, they are; (1) through the Model of Common Effect which is well known as CEM, The Model of Fixed Effect or customary called FEM, and the Model of Random Effect Model or commonly explained by REM.

3. Selection of panel data estimation model technique

The three techniques used are:

a) Test chow
As can be seen clearly on Chow Test provided table, probability performs value (Prob) of cross - section F (0.7538) and Cross Section Chi - Square 0.5354 > (0.05), which may lead explanation of Ho is accepted, or, in other words, the applied of existed model of Common Effect or, well known as CEM would be more value better than the Model of Fixed Effect or, customary known as FEM.

b) Hausman test
The description which formed by the Hausman Test as come up with provided table above, gaining value of probability (Prob.) of cross sectional shows (0.4335) > (0.05), that clearly can accept Ho automatically, this provident views the Model of Random Effect, or commonly known as REM, can be well-performed than the Model of Fixed Effect or, customary known as FEM.

c) Langrange multiplier test
As viewed on Langrange Multiplier Test table, it can be seen clearly that fixed value of Breush Pagan probability obtained (0.0998) > (0.05), in which, that fact leads into statement, Ho is accepted, through this essence, the information provided explains that the Model of Common Effect or commonly known as CEM would be able to perform better than applying the Model of Random Effect or, REM.

4. Classical assumption test

The two tests used are

a) Multicollinearity test
The gaining correlation coefficient value is < 0.8. This fact shows value of coefficient required among existed variables is less than 0.8, which can be stated that, there has not found any reasons multicollinearity.

b) Heteroscedasticity test
Bruesch – Pagan LM shows a number of 0.0763, where the number is greater than 0.05, this provident gaining value lead into conclusion that the existence of Ho is completely accepted, in other words, there is no heteroscedasticity.

5. Determination Test of Coefficient

Regarding Determination Test of Coefficient on the provident table describes that the Adjusted R-squared value is 0.257078 with a low correlation, meaning that the variation of changes in the ups and downs in relation to Smoothing actions in forming the income, explained by Ratio of equity on Debt, or, it is commonly known as DER, Existed Margin of Net Profit, or, well known as NPM, Ratio of Dividend Payout or DPR and Company
size is 25.70%, while the remaining 74.30% is affected by variables which not existed on discussion of this research.

6. Test the hypothesis
   The provident results existed on t-test, explains significance in relation to effect of independent variables partially on existed dependent variable or to test validity of the research hypothesis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-32.74544</td>
<td>9.157862</td>
<td>-3.575665</td>
<td>0.0012</td>
</tr>
<tr>
<td>DER</td>
<td>0.413283</td>
<td>0.732213</td>
<td>0.564430</td>
<td>0.5765</td>
</tr>
<tr>
<td>NPM</td>
<td>4.745554</td>
<td>4.283312</td>
<td>1.107917</td>
<td>0.2764</td>
</tr>
<tr>
<td>DPR</td>
<td>-0.309270</td>
<td>0.743262</td>
<td>-0.416099</td>
<td>0.6802</td>
</tr>
<tr>
<td>SIZE</td>
<td>2.599252</td>
<td>0.675073</td>
<td>3.850329</td>
<td>0.0006</td>
</tr>
</tbody>
</table>

a) The t-statistic Ratio Equity on Debt or, DER value performs 0.564430 < t Table (1.69389) and gaining Prob. Value views 0.5765 > 0.05, in which, through this essences, the Ratio of Equity on Debt or, DER variable has no any effects towards Income Smoothing.

b) T-statistic value of Net Profit Margin (NPM) is 1.107917 < t Table (1.69389) and the gaining Prob. Value proves 0.2764 > 0.05, which leads into conclusion that the Existed Margin of Net Profit Margin or, NPM variable performs no effects towards Income Smoothing.

c) Provident t-statistic value of Ratio of Dividend Payout or, DPR gains - 0.416099 < t-table (.69389) and Prob. Value reach 0.6802 > 0.05, in other words, Ratio of Dividend Payout, or DPR variable, leads no effects towards Income Smoothing.

d) The t-statistic value of Firm Size is 3.850329 > t-table (1.69389) and the value of Prob. 0.0006 <0.05, through this essence, it can be clearly seen that company existed size variable, gets no effects towards Income Smoothing.

7. Panel data regression analysis

Income Smoothing = - 32.74544 + 0.413283 DER + 4.745554NPM + -0.309270 DPR + 2.599252 Size + ε


CONCLUSION AND SUGGESTION

The Existed Margin Value of Net Profit, or, NPM towards Income Smoothing

In line as provident prove which performs by results explained by t-test, it is clearly drawn that the t-statistic gaining value has reached (1.107917) < t-table (1.69389) and Prob. Gaining value has reached 0.2764 > 0.05. This prove describethe existed Margin of Net Profit Margin or, NPM leads no effects towards disclosure of Income Smoothing . So (H₂) is completely rejected. The cause is not significant Net Profit Margin (NPM) of the Income Smoothing because the number of existed sample of companies taken part in this research to generate profits varied resulting in less impact on income smoothing, the next possibility in practice in come Smoothing more emphasis on sales volumes and cost efficiencies that allows the profits generated to be used more to pay off the company's debts than to increase its
capital, besides that investors tend to pay less attention to sales information to the fullest so that management is not motivated to make income smoothing through NPM.

Findings which providently existed in this research are closely similar to several studies conducted by other researchers, they are: Artawan, Semara Putra and Ernawatiningsih (2020) which literally noticed that the existed Margin of Net Profit or, NPM leads no effects towards Income Smoothing action.

**The Ratio of Equity on Debt to Equity Ratio, or, DER towards Income Smoothing**

In line as provident prove which performs by results explained by t-test, it is clearly drawn that the t-statistic gaining value obtained by Ratio of Equity on Debt or, DER variable, has reached t-statistic value 0.564430 < t table (1.69389) and Prob. Value has reached 0.5765 > 0.05, which is completely greater than 0.05. This fact leads the Ratio of Equity on Debt or, DER does not have any effects towards Income Smoothing. In other words, (H1) is rejected. Through this essence, it can be saying that DER does not give any effects towards management to perform income smoothing. This condition is completely related to agency theory which explains that company has a set of work contract between the company and its managers and a loan contract between the company and its creditors. Both types of contracts are often based on net profit figures. Debt level can be clearly described as a consideration to perform measurement of management performance in the way of managing company finances. The high and low debt of company gained, affects certain number profit value for the company which predictably reflects company performance as indicate ability in completing financial needs and fulfill its obligations. It is reasonable because the greater debt, will lead greater obligation that should be completed as well. Of course, this condition leads implication to financial condition and performance in several coming years. The reason is that the Ratio of Equity on Debt or, well known as DER does not have any significance towards Income Smoothing, because, it can be logically accepted that certain proportion value of debt, does not have any significant impact towards ability to encourage all company operational activities and the companies involved in this research are mostly get involved in level of financing using debt to finance the company's activities. operational activities are low which can be seen by referring to the assessment of the Ratio of Equity on Debt or, DER. So it can be concluded for this study that the fluctuations in the value of the Ratio of Equity on Debt or, DER are just not enough to make the company's reason for taking Income Smoothing actions.

It goes without saying, provident findings of this research are completely supporting previous research which has been conducted by Dien Sefty Framita (2018) which completely found that the Ratio of Equity on Debt or, DE has no effects towards Income Smoothing.

**Effect of Existed Ratio of Dividend Payout, or (DPR) towards Income Smoothing.**

In line as provident prove which performs by results explained by t-test, it could be described the t-statistic gaining value has pointed -0.416099 < t table (1.69389) and Prob. Value has reached 0.6802 > 0.05. This condition explains Ratio of Dividend Payout or,customary well known as DPR does not provide any effects towards Income Smoothing. In other words, it is drawn that (H3) is clearly rejected. This finding is completely has close relation ship with theory in relation to signaling, which mainly discussed thing related to information asymmetry. The company gives a signal to external parties to find out the actual state of the company. The company gives a signal by showing the level of dividends produced by the company for investors to consider whether the company deserves to be given a capital injection or a place to invest so as to generate profits. It is reasonable because the existed Ratio of Dividend Payout or, DPR does not have any significance towards Income Smoothing because the dividend rate given is the result of the general meeting of shareholders.
which does not necessarily influence the management to carry out Income Smoothing actions. Therefore, it can be set in words that dividend value performed by certain company does not have any significant effect to company itself, which may lead to conduct Income Smoothing.

The results of this study are in line with the results of previous research conducted by Fiscal and Steviany (2015) which showed that the Dividend Payout Ratio (DPR) had no effect on the Income Smoothing action.

Effect of Existed Company Size towards Income Smoothing.

As provident prove which performs by results explained by t-test, it could be described the t-statistic gaining value has noticed on -3.850329 > t-table (1.69389) and Prob. Value has come up with 0.0006 <0.05, this fact leads conclusion that the existed size of company does not have any effect towards Income Smoothing. In other way of explanations, it leads statement that (H4) is completely accepted. As finding of this research in relation to this fact that keeps consistency of theory related to signalling, in which, associated with information asymmetry. The company tries to give a signal to external parties that the state or size of the company which is classified as large is in line with the profits generated. The size of the company becomes more value than investors in considering to invest their capital in the company. Because large companies pay more attention to whether the company can generate large and stable profits so that the possibility of the company maintaining its existence is also very necessary so that investors continue to believe in the company. It is completely reasonable because size company gives an effect towards Income Smoothing is because a large company size has an operational level on a larger and more complex scale, causing the possibility of loopholes to be exploited for the Income Smoothing action.

The findings resulted by this research has supporting preliminary research that have conducted by Kusmiyati and Hakim (2020), which found, company size can give an kind of influence towards Income Smoothing actions.

CONCLUSIONS

Since this research has completely conducted, provident conclusion explains Ratio of Equity on Debt or, DER, the existed Margin of Net Profit or, NPM, the Ratio of Dividend Payout or, DPR has no effect on the dependent variable towards Income Smoothing. Meanwhile, the existed size company variable is able to provide effect towards Income Smoothing. From the conclusions obtained, suggestions can be made for the management of manufacturing companies to further improve their performance and pay more attention to the disclosure of social performance. This is because Indonesian companies must maintain their operational implementation according to standard operating procedures to maintain public and shareholder trust. Meanwhile, suggestions for investors are expected to be more careful in obtaining financial information as a reference in investing their capital, this is because of the possibility of Income Smoothing in go public companies in Indonesia.

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