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Influence of Investment Opportunity Set, Financial Leverage, and Voluntary Disclosure on Real Activities Manipulation of Manufacturing Companies Listed on Indonesia Stock Exchange

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Abstract

The purpose of this study is to investigate the effect of investment opportunity sets, financial leverage, and voluntary disclosure on the real activities manipulation of manufacturing companies listed on the Indonesia Stock Exchange over the period of 2011-2015. This research used the hypothesis testing model. The sample selection is using the purposive sampling method which resulted around 130 companies. The data in this research were obtained from the annual report and analyzed by using panel regression model. The results found that the investment opportunity set does not affect the real activities manipulation, while financial leverage and voluntary disclosure have effect on the real activities manipulation.

Keywords: Real Activities Manipulation, Investment Opportunity Set, Financial Leverage, Voluntary Disclosure.

Introduction

The financial statement is a set of information addressed to the interested parties for decision making purpose, whether it is internal or external parties (Mahawyaharti & Budiasih, 2016; Suhendah & Imelda, 2012). Prior research conducted by Yusnita, Mulyadi & Erick (2015), argued that the attention of financial statements user, ie investors and potential investors tend to focused on the profits reported in the financial statements presented by the manager regardless of how the earnings are obtained. In fact, investors or potential investors should evaluate the operating cash flow and company’s income statement. This evaluation is performed in order to determine whether there is any indication of real activities manipulation through operating cash flow in the financial statements (Hariyani, 2013).
Managers have different interests with company owners. The owners of companies who owned the capital desire the managers to prioritize their interests and try to show the increasing in the profits as an indication of the return on invested capital, while managers desire for a good assessment of their performance. This is shown by the increasing profitability, so they will get a high incentive. Additionally, this condition forces managers to take an action called earnings management or earnings manipulation (Vita & Rahmawati, 2010; Purnomo & Pratiwi, 2009).

The earnings management has led to a number of widely known accounting scandal cases, including Enron, Merck, WorldCom and the majority of other companies in the United States (Cornett et al., 2006). As a case example of financial reporting scandal that occurred in Indonesia is PT. Kimia Farma Tbk. The company is expected to mark-up its net profit in financial statements during 2001, it is beginning with the detection of manipulation (Boediono, 2005). The recent reporting of earnings manipulation practices on Japanese electronics manufacturing company Toshiba. In early 2015, Chief Executive Officer (CEO), Toshiba Hisao Tanaka has made a profit markup of 151.8 billion yen or 1.22 billion dollars over the past six years (Republika, 2015).

However, one of the factor that influence the earnings management is the investment opportunity set. Some evidence in previous literature such as Skinner (1993) has proven that companies with higher investment opportunities exhibit greater earnings management that is the positive effect of investment opportunity sets on earnings management. The results are in line with Roychowdhury (2006); Arfan (2006); and Agustina, Islahuddin & Arfan (2016) which found that the investment opportunity sets in partial has a positive affect on the real activities manipulation and earnings management. These results indicate that, the greater the investment opportunity set the higher the level of earnings management performed by the manager of the company. In contrast to the results of the study from Susilawati (2010) which stated that there is a negative relationship between the investment opportunity set and earnings management, it is because the growing company will lower the level of profit. On the other hand, the Fanani (2006), Parwati & Pribadi 2013, and Kamran & Shah (2014) stated that investment opportunity sets have no effect on the real activities manipulation, where rapid corporate growth is not necessarily followed by manager behavior to perform earning manipulation.

Another factor that is predicted to affect the real activities manipulation is financial leverage. The research examined by Dechow, Kothari & Watts (1998) infered that the motivation of the company to do earnings management is to meet the needs of external users and fulfill the debt agreement. This is supported by study of Roychowdhury (2006); Subhan (2010); Kamran & Shah (2014); Wahyuni, Arfan and Fahlevi (2015); and Suffian, et al., (2015) concluded that financial leverage has a positive effect on the real activities manipulation. Conversely, Chung, Firth, and Kim (2004); Agustia (2013); and Christianti & Sanjaya (2014), they found that financial leverage negatively affects earnings management. If it is Increased in leverage (by issuing debt), it will reduce agency costs and can control the actions of managers who behave opportunistically to manipulate the earnings (Gul and Tsui, 1998) in Arfan (2006).

Additionally, voluntary disclosure in the financial statements is another factor...
that is expected to affect the real activities manipulation. With the increase in disclosure, the information asymmetry between management and shareholders and users of financial statements will be reduced, so the manager’s flexibility to do the earnings management will be decreased (Hapsoro, 2012). The research on real activities manipulation and voluntary disclosure has been established by Hapsoro (2012); Sanjaya & Young (2012); Wahyuni, Arfan, & Fahlevi (2015), which resulted that voluntary disclosure negatively affects the real activities manipulation. Voluntary disclosure in the financial statements will be a value added to the companies and assist the users of financial statements to understand the contents and figures reported in the financial statements. Voluntary disclosure of relevant information tends to provide investors with greater confidence in the financial information provided to them. With the voluntary disclosure, the information asymmetry between management and shareholders and users of financial statements will be reduced, so the manager’s flexibility of the real activities manipulation will decrease. In contrast to findings of study conducted by Andriyani & Khafid (2014), which indicated there is no effect of voluntary disclosure on real activities manipulation because there are still many companies that do not disclose company information in a transparent manner.

The results of previous studies that vary greatly makes the motivation for the authors to reexamine the factors that affect the manipulation of real activity. The results of this study can be a consideration for companies to be more transparent in the delivery of information and reduce the actions that can reduce the trust of stakeholders to the company along with the disclosure of some real activity manipulation practices undertaken company, can contribute in the development of theory in the field of financial accounting, can be useful as input knowledge of economics about capital market, and become one of reference or material of discourse in finance so that it can be useful for further research about manipulation of real activity in the future.

Theoretical Framework and Hypothesis

Agency Theory

The theory explains a relationship between principal and agencies is called agency theory. Scott (2011 p. 287) provides the definition of the agency theory as follows: "Agency theory is a branch of the game theory that the design of contracts to motivate a rational agent to act on behalf of a principal when the agent's interests do not conflict with them of the principal. Those statement means that agency theory is a branch of game theory that studies the design of contracts that motivate agents rationally to act on behalf of principals when agency interests conflict with principal interests. According to Jensen and Meckling (1976), agency relationships arise when one person or more (principal) employs another person (agent) acting on behalf of and for the principal's interest, so that the agent's action is earned a certain reward.

Earning Management

The earnings management argued by Scott (2011 p. 423) is "the choice by a manager of accounting policies so as to achieve some specific objective". This means that earnings management is a decision of the managers to choose certain accounting policies that are deemed to achieve the desired goals, whether to increase profits or
reduce the level of losses reported. Earnings management is made by using accounting methods, accounting policies that can accelerate or delay costs and revenues. Corporate earnings may be smaller or larger.

**Real Activities Manipulation**

Roychowdhury (2006) defines the real activities manipulation as "departures from normal operational practices, motivated by managers' desire to mislead some of the stakeholders into the normal course of operations." The statement means the real activities manipulation is a practice apart from normal operating practices motivated by the manager's desire to mislead shareholders in certain beliefs that the purpose of the financial statements has been met in normal operation. This means managers intervene in the financial reporting process not only through accounting methods or estimates but also through real decisions related to operational activities. Furthermore, managers also have incentives to manipulate real activities during the year to meet profit targets.

**Influence of Investment Opportunity Set on Real Activities Manipulation**

Investment opportunity set is an opportunity to utilize the company's resources to expand and manage human resources as well as possible. Investors assess the company as an entity that has growth and has a favorable outlook through expected investment, it is done on the basis of motivation to get high return (Panggabean & Suratno, 2014). Related to the link between growth opportunities and earnings management, research on the effect of investment opportunity sets on earnings management has also been done by Gul, Leung, & Srinidhi (2003); Roychowdhury (2006); Arfan (2006); Agustina, Islahuddin, & Arfan (2015) which resulted that investment opportunity sets have a positive effect on earnings management as well as real activities manipulation (which increases profit). These finding, confirm that firms with high investment opportunity sets exhibit high levels of earnings management. In contrast to Susilawati studied (2010) performs a negative relationship between the investment opportunity set and the earnings management, that the growing company will lower the rate of return.

H₁: Investment opportunity sets affect the real activities manipulation.

**Influence of Financial Leverage on Real Activities Manipulation**

Brigham and Houston (2010 p. 440), confirm the definition of leverage is the extent to which securities with profits or fixed returns (preferred stock and debt) are used in the company capital structure." Research on financial leverage and real activities manipulation has been conducted by Roychowdhury (2006), Subhan (2010); Kamran & Shah (2014); Raja, Anugerah & Kamaliah (2014); Desry, Arfan, & Fahlevi (2015); and Mahawyaharti & Budiasih (2016) where the results exhibit that financial leverage has a positive effect on the real activities manipulation, high financial leverage (debt) will usually lead to a decline in profits that will provoke management to raise earnings to make it look stable. Financial leverage as one of the company's profit increase efforts, can be a benchmark in assessing at the behavior of managers in terms of earnings management. Companies that have high financial leverage is predicted to do earnings management because the company threatened default, that
is not able to meet debt obligations in time (Mahawyahrti & Budiasih, 2016). In contrast to the results of the above research, the study examined by Guna & Herawaty (2010) Agustia (2013); Christianti & Sanjaya (2014) and Dewi & Priyadi (2016) found that leverage negatively affects earnings management.

\[ H_2: \text{Financial leverage affect the real activities manipulation.} \]

**Influence of Voluntary Disclosure on Real Activities Manipulation**

Voluntary disclosure is the disclosure of voluntary items by the company without being required by the applicable regulations. Although all public companies are required to meet minimum disclosures, they differ substantially in terms of the additional amount of information revealed to the stock market (Healy & Palepu, 1993). The wider presentation of higher voluntary disclosures by firms can reduce information asymmetry so as to minimize the real activities manipulation. The prior research done by Veronica & Bachtiar (2003); Hapsoro (2012); Sanjaya & Young (2012); and Wahyuni, Arfan, & Fahlevi (2015) found a negative relationship between voluntary disclosure and real activities manipulation. This indicates that company with low levels of voluntary disclosure tend to manipulate more the real activities and vice versa. Companies that do a lot of real activities manipulation tend to reveal less information. The results are consistent with the manager’s opportunistic motivations described in positive accounting theory and agency theory (Veronica & Bachtiar, 2003).

\[ H_3: \text{Voluntary disclosure affect the real activities manipulation} \]

**Research Methods**

The purpose of this is to examine the effect of investment opportunity set, financial leverage, and voluntary disclosure to real activities manipulation through hypothesis testing. The population in this study is manufacturing companies listed consecutively in the IDX during 2011-2015. The sample selection of this research is purposive sampling method, that is sampling method which done by choosing subject based on specific criterion specified by researcher. The criteria are companies that report earnings during the year of observation, have shares by the institution and cash flows abnormally negative operations, so the number of companies that become the sample of research is 130 companies.

**Analysis Method**

The analysis method used in this research is the panel regression analysis. Widarjono (2013) stated that there are several methods commonly used in estimating regression model with panel data, ie pooling least square (common effect), fixed effect model, and random effect model. There are several tests conducted to obtain the best model in panel data regression analysis. The first is chow test, the test to determine the best model by comparing between fixed effect and common. The second is hausman tests, statistical tests to choose whether the fixed effect or random effect model is best approach. The third, the lagrange multiplier test (LM), to determine whether the random effect or common effect model will be used to represent the results of the research.
Considering panel data is a combination of cross section and time series data, the regression equation of selected model can be formulated as follows:

\[ Y = a + b_1(X_1)_{it} + b_2(X_2)_{it} + b_3(X_3)_{it} + b_4(X_4)_{it} + e_{it} \]  

..... (1)

Description:
\[ Y \] = Real Activities Manipulation  
\[ a \] = Constant (intercept)  
\[ b_i \] = Regression Coefficient (i = 1,2,3,4)  
\[ X_1 \] = Investment opportunity set  
\[ X_2 \] = Institutional ownership  
\[ X_3 \] = Financial leverage  
\[ X_4 \] = Voluntary disclosure  
\[ i \] = Manufacturing Companies  
\[ t \] = Year  
\[ e \] = Error term

Research Result and Discussion

Classical Assumption Test

Classic assumption test conducted in this research include normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Normality test results of this study normally distributed, where the value of Kolmogorov-Smirnovbesar 0.200 greater than the level of significance of 0.05. The results are fulfill after the outlier data is omitted, resulting in the sample size of 130 companies. In the sample size of 169 companies, the normality test is 0.000, smaller than 0.05. Therefore the researcher eliminates the outlier data. The multicollinearity test results show tolerance value approaching 1 and the VIF value is less than 10, so there is no multicollinearity between independent variables. Furthermore, heteroscedasticity test results also can be fulfilled, where the points in the Scatterplot graph are spread and do not form a specific pattern. Finally, the autocorrelation test in this study can also be fulfilled, where the Durbin-Watson value lies between du and 4-dl, ie 1.7596 <1.9064 <2.2404.

Selection of Analysis Approach Model

Regarding to the result of chow test and hausman test it can be concluded that the best model in representing the results of hypothesis testing in this study is the pooling least square model (common effect). The results are shown in Table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Chow Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects Test</td>
<td>Statistic</td>
</tr>
<tr>
<td>Cross-section F</td>
<td>0.643152</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>2.712800</td>
</tr>
</tbody>
</table>
Based on the result in table 1 the probability value for Cross Section Chi-square is 0.6070 > 0.05, so the decision taken is not to reject $H_0$ and it infers that the common effect model is better than fixed effect. In this study, the common effect model will be used in representing the results of hypothesis testing.

**Hypothesis Testing Result**

The result of hypothesis testing are performed in the table below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.117797</td>
<td>0.026844</td>
<td>4.388194</td>
<td>0.0000</td>
</tr>
<tr>
<td>X1</td>
<td>0.000278</td>
<td>0.004716</td>
<td>0.059040</td>
<td>0.9530</td>
</tr>
<tr>
<td>X2</td>
<td>0.049830</td>
<td>0.018080</td>
<td>2.756172</td>
<td>0.0067</td>
</tr>
<tr>
<td>X3</td>
<td>-0.120391</td>
<td>0.034647</td>
<td>-3.474750</td>
<td>0.0007</td>
</tr>
</tbody>
</table>

R-squared 0.125823 Mean dependent var 0.047418
Adjusted R-squared 0.105010 S.D. dependent var 0.032182
S.E. of regression 0.030445 Akaike info criterion -4.115501
Sum squared resid 0.116790 Schwarz criterion -4.027269
Log likelihood 271.5076 Hannan-Quinn criterion -4.079649
F-statistic 6.045212 Durbin-Watson stat 1.906414
Prob(F-statistic) 0.000703

Regarding to the statistical analysis in the table 2, the panel regression equation can be formulated as follow:

$$Y = 0.1178 + 0.0003(MBA)_{it} + 0.0498(LEV)_{it} - 0.1204(VD)_{it}$$
Influence of Investment Opportunity Set on Real Activities Manipulation

The investment opportunity set variable ($X_1$) has $t$ value of 0.0003 with a significance level of 0.9530, it is greater than the 0.05 significance level (5%). The result indicates that investment opportunity set has no significant effect on real activities manipulation. Thus the first hypothesis ($H_1$) is rejected, meaning that the variation of real activities manipulation is not determined by the investment opportunity set variation, or whatever the value of the investment opportunity set, the value of real activities manipulation remains unchanged. The finding of this study are inconsistent with the results of Roychowdhury (2006); Arfan (2006); Agustina, Islahuddin, & Arfan (2015) suggesting that investment opportunity sets have a positive effect on earnings management as well as real activities manipulation (which raises profits), where firms with high investment opportunity sets exhibit high levels of earnings management. However, the results of this study are consistent with the results of the Fanani (2006), Parwati & Priadi 2013, and Kamran & Shah (2014) studies, which said that investment opportunity sets have no effect on the real activities manipulation. These results inferred that rapid corporate growth is not necessarily followed by manager behavior to perform earnings management.

Influence of Financial Leverage on Real Activities Manipulation

Financial leverage variable ($X_2$) has $t$ value of 0.0498 with a significance level of 0.0067 smaller than the significance level of 0.05 (5%). The statistical test resulted that leverage has significant effect on real activities manipulation. Thus the second hypothesis ($H_2$) is accepted, meaning that the variation of real activities manipulation is determined by the variation of financial leverage. The results of this study support the results of Roychowdhury (2006), Suffian, et al. (2015); Kamran & Shah (2014); Raja, Anugerah & Kamaliah (2014); Desry, Arfan & Fahlevi (2015); and Mahawyahrti & Budiasih (2016) performing that financial leverage has a positive effect on the real activities manipulation. The financial leverage exhibits the proportion of debt usage to finance corporate investment. The greater the debt of the company, the greater the risk faced by investors so that investors will ask for higher profit levels. Due to these conditions companies will tend to practice real activities manipulation practices in order to achieve the desired profit target and avoid losses. Conversely, the recent research conducted by Chung, Firth, and Kim (2004); Guna & Herawaty (2010); Agustia (2013); Christiani & Sanjaya (2014) and Dewi & Priyadi (2016), they found that financial leverage negatively affects earnings management.

Influence of Voluntary Disclosure on Real Activities Manipulation

The voluntary disclosure variable ($X_3$) has $t$ value of -0.1204 with a significance level of 0.0007 smaller than the 0.05 (5%) of significance level. This suggests that voluntary disclosure has a significant effect on the real activities manipulation. Thus the third hypothesis ($H_3$) is accepted, meaning that the variation of real activities manipulation is determined by the variation of voluntary disclosure. The results of this study support the results of Veronica & Bachtiar (2003), Hapsoro (2012), Sanjaya & Young (2012) and Wahyuni, Arfan & Fahlevi (2015) studies which show that voluntary disclosure has a negative effect on the real activities manipulation, the higher voluntary disclosure will lower the action of manipulation on the real activities of the company. Companies with low levels of voluntary disclosure tend to manipulate more real activities and vice versa. Companies that perform the real activity manipulation tend to reveal less information (Veronica & Bachtiar, 2003). The results of this study do not in line with
the results of Andriyani & Khafid's study (2014) which concluded that voluntary disclosure does not affect the real activities manipulation. This means that the presence of real activities absence of voluntary disclosure can not affect the occurrence of manipulation in the company.

Conclusion and Suggestion

Conclusion

The empirical results of this study point the way to the validation of the hypothesis, which can be concluded that the investment opportunity set does not affect the real activities manipulation, which indicates that the rapid growth of companies is not necessarily followed by the behavior of managers to conduct profit manipulation behavior. Different results are shown by financial leverage and voluntary disclosures that have an effect on the real activities manipulation of manufacturing companies listed on the Indonesia Stock Exchange for the period of 2011-2015. This means that the greater the debt of the company the greater the risk faced by the investor so that the investor will demand the higher level of profit. Due to these conditions companies will tend to practice real activities manipulation practices in order to achieve the desired profit target and avoid losses. Companies with low levels of voluntary disclosure tend to manipulate more real activities and vice versa.

Suggestions

Regarding to the result of the research, it is hoped that the future research can include other independent variables such as good corporate governance, free cash flow, and company size, using probability (random) sampling technique to get representative sample, and can expand research analysis unit, not only manufacturing company because it allows the discovery of different results and conclusions if it is done on different units of analysis, and it can increase the period of the observation.

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