The Effect of Leverage and Financial Distress on Earnings Management with Good Corporate Governance as the Moderating Variable

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Abstract
Every investor wants his company’s financial statement to be in accordance with the condition of the company. In practice, it often occurs that a company does profit management to attract investors’ interest. The factors which can increase the practice of profit management are leverage and financial distress. The objective of the research was to find out and to analyze the influence of leverage and financial distress on profit management with good corporate governance as moderating variable in banking companies in Indonesia. The research used descriptive explanatory method. The data were gathered by conducting documentary study. The population was 42 banking companies listed in BEI (Indonesia Stock Exchange) and the population target was 30 companies. The gathered data were analyzed by using path analysis with E-views 7.0 Software program. The result of the first model showed that leverage and financial distress simultaneously had positive and significant influence on profit management in banking companies in Indonesia at the coefficient determination (R²) of 0.1243 or 12.43%. Partially, leverage had positive and significant influence on profit management, and financial distress had negative but significant influence on profit management in banking companies in Indonesia. The result of the second model showed that institutional ownership as moderating variable could not weaken and strengthen the influence of financial distress on profit management and was considered as potential moderation. The result of the third model showed that managerial ownership as moderating variable could weaken the influence of leverage on profit management and was stated as quasi moderation. It can also weaken the influence of financial distress on profit management and was stated as quasi moderation. The result of the fourth model showed that independent commissioners as moderating variable could not weaken or strengthen the influence of leverage on profit management as was stated as potential moderation. Independent commissioners as moderating variable could not weaken or strengthen the influence of financial distress on profit management and was stated as moderating predictor.

Key words
Leverage, financial distress, profit management, good corporate governance

JEL Codes: D53

1. Introduction
Financial statement in a kind of responsibility of the company management for the responsibilities that have been conducted. Profit information is a major concern in measuring the success or failure of a business in achieving its operational objectives which have been determined (Siallagan and Machfoeds, 2006). Management takes an action in order to make a good financial statement. Such action is sometimes in conflict with the company goals. The conflicting action is earnings management. Merchant and Rockness (1994) suggest that earnings management is an action performed by the company management to influence the reported profit that can provide information about the economic advantage that is actually not experienced by the company, which is able to disserve the company in the future. The case of accounting fraud in the business world related to financial statement is growing, especially for the go public companies, both at domestic and foreign companies, which attracts serious attention from the stakeholders. In the period of 2000 – 2011, there have been recorded many earnings management practices. The following table shows the earnings management practices occurred in the period of 2000 – 2011 in Indonesia.

Table 1. The Practice of Earnings management in the Period of 2000-2011 in Indonesia

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2001</td>
<td>PT.Kimia Farma</td>
</tr>
<tr>
<td>2</td>
<td>2005</td>
<td>PT.KAI</td>
</tr>
<tr>
<td>3</td>
<td>2002</td>
<td>PT.Great River International</td>
</tr>
<tr>
<td>4</td>
<td>2002</td>
<td>PT.Bank Lippo Tbk</td>
</tr>
<tr>
<td>5</td>
<td>2008</td>
<td>PT.Bank Century</td>
</tr>
<tr>
<td>6</td>
<td>2009</td>
<td>PT.KATRINA UTAMA Tbk</td>
</tr>
<tr>
<td>7</td>
<td>2010</td>
<td>PT.Bakrie and Brothers Tbk</td>
</tr>
<tr>
<td>8</td>
<td>2010</td>
<td>PT Bakrie Sumatera Plantions</td>
</tr>
<tr>
<td>9</td>
<td>2011</td>
<td>PT Elnusa</td>
</tr>
</tbody>
</table>

Source: www.google.com
Some of the causes of the practice of earnings management are financial distress and leverage. As in 2014, PT. Bank J Trust Indonesia Tbk (formerly PT Bank Mutiara Tbk) suffered a loss of 663 billion rupiah and in 2015, the loss suffered PT. Bank J Trust Indonesia Tbk (formerly PT Bank Mutiara Tbk) increased to 676 billion rupiah. The condition of PT. Bank J Trust Indonesia Tbk (formerly PT Bank Mutiara Tbk) is considered as financial distress. Financial distress occurs prior to bankruptcy, a condition in which the results of the operation of a company operation are insufficient to meet its insolvency. Insolvency can be divided into two categories (Altman and Hotchkiss, 2006), namely: 1) Technical Insolvency, as in this category, insolvency is temporary and occurs because the company is unable to fulfill its short-term obligations; 2) Bankruptcy Insolvency, as in this category, insolvency is more serious and arises when the total debt is greater than the total value of the company's assets or the equity of the company is negative. Adam S.Koch (2002) states that earnings management behavior increases as the financial distress of the company increases. In order to limit the formation of excessive leverage in the banking system, the Basel Committee on Banking Supervision introduced an additional ratio, namely leverage ratio, as a non-risk based approach as a complement of capital ratio according to the prevailing risk profile (Mahdaleta, et al., 2016) The introduction to leverage ratio is intended as a backstop of the capital ratio according to the risk profile to prevent the occurrence of deleveraging process that can damage the financial system and the economy. Leverage is the use of a fixed source of funds with an expectation that it will provide an additional profit greater than the fixed expense, so as to increase the available profit to the shareholders (Sartono, 2012; Khaldun and Muda 2014). Leverage is calculated through the comparison between total debt and total assets of a company where the company is called as leverage ratio in the financial statement (Sartono, 2012). The researcher used the accrual working capital with sales ratios according to Nelson's model. The banking companies which were made as the examples of this calculation were Bank Jabar Banten, Bank BCA, Bank BRI, Bank Mandiri, Bank BTN. Here is the overview of their earnings management.

Table 2. The Overview of the Practices of Earnings Management

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Earnings Management</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>PT Bank Jabar dan Banten</td>
<td>0.219</td>
<td>0.250</td>
</tr>
<tr>
<td>PT Bank Rakyat Indonesia</td>
<td>-0.038</td>
<td>-0.004</td>
</tr>
<tr>
<td>PT Bank Central Asia</td>
<td>0.572</td>
<td>0.162</td>
</tr>
<tr>
<td>PT Bank Mandiri</td>
<td>0.034</td>
<td>-0.050</td>
</tr>
<tr>
<td>PT Bank Tabungan Negara</td>
<td>0.290</td>
<td>0.451</td>
</tr>
</tbody>
</table>

Source: Processed Financial Statements (2016)

Based on Table 1.2, it can be seen that there are three companies indicated to have income maximization practices, they are PT Bank Jabar dan Banten, PT Bank Central Asia and PT Bank Tabungan Negara. Meanwhile, PT Bank Rakyat Indonesia and PT Bank Mandiri are not indicated to conduct earnings management. With an interval of greater than 0.075, a company is indicated to conduct income maximization practice and with an interval of less than -0.075, a company is indicated to conduct income minimization practice (Beaver et al., 2000; Roychowdhury, 2014). The most significant change in the value of earnings management occurred in PT Bank Central Asia, as in 2013 the value of earnings management was 0.572, which then drastically decreased to 0.162 in 2014. While the least change in the value of earnings management occurred in PT Bank Rakyat Indonesia, as in 2013 the value of earnings management was -0.038, which then had a change to -0.004 in 2014. PT Bank Tabungan Negara had an increase from 2,404 to 4,380. It means that the condition of PT Bank Tabungan Negara was better in 2014 compared to 2013. While the value of its earnings management also increased from 0.290 to 0.451. It means that the indication of PT Bank Tabungan Negara in conducting earnings management practice is greater. This is different from the research conducted by Adam S.Koch (2002) that the lower the value of Alt man Z score financial distress, the higher the tendency of earnings management. The decrease in the leverage of PT Bank Jabar Banten from 9.56% to 9.02% was not followed by the decline in the value of earnings management, as it increased from 0.219 to 0.250. It means that the decrease in leverage value of PT Bank Jabar Banten in 2014 did not decrease the indication of earnings management practice in 2014. This is different from the research conducted by Guna and Herawaty (2010) which showed that leverage has a positive effect on earnings management.

2. Literature review

2.1. The Influencing Factors of Earnings Management

There are various factors that encourage the management to make earnings management, but in general, according to Scoot (2009), there are six reasons classified as follows:
1. **Bonus Purposes.** Managers who have information on the net income of the company will act *opportunistically* to conduct earnings management by maximizing the current profit (income maximization).

2. **Political motivations.** The earnings management used for reducing the reported earnings in public companies.

3. **Taxations motivations.** The tax savings motivation becomes the most real earnings management motivation.

4. **Change of CEO.** A CEO who is close to retirement will tend to raise income to raise bonuses.

5. **Initial Public Offering.** A go public company that do not have market value yet, and the manager of the company which will be go public conducts earnings management with an expectation of increasing the stock price of the company.

6. The importance of providing information to the investors. Information regarding the performance of the company should be submitted in such way that the investors still have an assessment on the company which states that the company is always in a healthy condition.

2.2. **Leverage**

*Leverage* is the use of fixed costs in an attempt to increase profitability (Lutfi et al., 2016). When a lever is used appropriately, the pressure applied to a point will be formed or magnified into pressures or movements at other points. The greater the level of *leverage*, the higher the level of uncertainty of returns, but on the other hand, the greater the amount of return given (Van Horne et al., 2007).

2.3. **Financial distress**

Foster in Almilia and Kristijadi (2003), states that there are several possible indicators of financial distress, including:

1. Cash flow analysis for the current and future periods
2. Corporate strategy analysis that considers potential competitors, relative cost structures, plan expansion in industry, and capability of the company.
3. Analysis of the financial statement of the company and its comparison with other companies.
4. External variables such as return on security investment and bond valuation.

According to Fachrudin (2008) the causes of *financial distress* are classified as follows:

1. **Neoclassical model**, bankruptcy occurs if the allocation of resources is not appropriate
2. **Financial model**, the asset mix is correct but the financial structure is wrong and is faced with the limit of liquidity.
3. **Corporate Governance model**, bankruptcy due to the correct but poorly managed asset mix and financial structure.

Platt and Platt in Rizky Ludy (2011) states that a company which experiences *financial distress* can accelerate its management actions to prevent problems before the occurrence of bankruptcy.

![Figure 1. Conceptual Framework](image-url)

3. **Methodology of research**

3.1. **Type and nature of research**

It is a descriptive statistics research. According Sinulingga (2014), Erlina et al., (2017); Yahya et al., (2017); Azlina et al., (2017); Handoko et al., (2017); Nasir et al. (2017) and Hasan et al., (2017), descriptive research is a type of research that aims at describing the facts and nature of a particular object or population systematically, factually and accurately. Causal research is those aimed to test the hypothesis and the research to explain the phenomenon in the form of relationship between variables. The main objective of this study is to identify causal relationship among various variables (Muda and Dharsuky, 2015; Dalimunthe et al., 2016; Nurzaimah et al., 2016; Lubis et al. 2016; Tarmizi et al., 2016; 2017 and Muda, 2017). This research used a quantitative approach. Quantitative research emphasizes on the theoretical testing through the measurement of research variables using numbers and performing data analysis with statistical procedure.

3.2. **Population and target population**
The population of this research is banking companies listed on the Indonesia Stock Exchange (IDX) for 42 banking companies. Based on these criteria, there were 30 out of 42 banking companies listed on the Indonesia Stock Exchange in the period of 2011-2014 selected that meet the criteria that will be the target population of the research.

3.3. Data analysis method

The Multiple Linear Regression Analysis in this study was conducted by using Eviews software. The form of formulation is as follow:

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e \]  

(1)

Where:
- \( Y \) = Earnings Management; \( a \) = Constant; \( X_1 \) = Leverage; \( X_2 \) = Financial distress; \( b_1, b_2 = \) Regression Coefficient; \( e = \) Standard Error.

Moderated Regression Analysis (MRA) is a specialized application for multiple linear regression in which the equation of regression consists of interaction with the following equation:

\[ Y = a + b_1X_1 + b_2X_2 + b_3Z + b_4(X_1Z) + b_5(X_2Z) + e \]  

(2)

Where:
- \( a = \) Constant; \( Y = \) Earnings Management; \( x_1 = \) Leverage; \( x_2 = \) Financial distress; \( b_1, b_2 = \) Regression Coefficient; \( Z = \) GCG; \( X_1Z = \) Interaction between leverage and GCG; \( X_2Z = \) Interaction between financial distress and GCG; \( e = \) error.

4. Results and discussions

4.1. Results

<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>-0.162195</td>
<td>0.060583</td>
<td>-0.245534</td>
<td>0.8066</td>
</tr>
<tr>
<td>X1?</td>
<td>0.124340</td>
<td>0.052266</td>
<td>2.377882</td>
<td>0.0088</td>
</tr>
<tr>
<td>X2?</td>
<td>-2.705501</td>
<td>0.756299</td>
<td>3.577290</td>
<td>0.0006</td>
</tr>
</tbody>
</table>

**Table 3. The Results of Descriptive Statistics Analysis**

**Table 4. Estimation Model 1**
The data processing resulted in a Multiple Linear Regression model of Equation I as follow:

\[
\text{Earnings Management} = -0.162 + 0.139 \text{ leverage} - 2.705 \text{ Financial Distress} + \epsilon
\]

The Estimation of Moderating Test Model of Institutional Ownership on the Effect of Leverage and Financial Distress on Earnings Management

Table 5. Estimation Model II

<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>-0.034449</td>
<td>0.713383</td>
<td>-0.048290</td>
<td>0.9616</td>
</tr>
<tr>
<td>X1?</td>
<td>0.583756</td>
<td>0.247773</td>
<td>-2.356190</td>
<td>0.0207</td>
</tr>
<tr>
<td>X2?</td>
<td>-2.074500</td>
<td>1.718933</td>
<td>1.206854</td>
<td>0.2308</td>
</tr>
<tr>
<td>X1*Z1?</td>
<td>-0.472858</td>
<td>0.253577</td>
<td>1.864754</td>
<td>0.0456</td>
</tr>
<tr>
<td>X2*Z1?</td>
<td>1.936710</td>
<td>1.913637</td>
<td>1.047187</td>
<td>0.2984</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.361228</td>
<td>Mean dependentvar</td>
<td>0.028619</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.143792</td>
<td>S.D. dependentvar</td>
<td>0.830037</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.768045</td>
<td>Akaike info criterion</td>
<td>2.543586</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>50.73083</td>
<td>Schwarz criterion</td>
<td>3.333375</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-116.6151</td>
<td>Hannan-Quinn crnter.</td>
<td>2.864323</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>1.605606</td>
<td>Durbin-Watson stat</td>
<td>2.257789</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.024245</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data processing resulted in a Multiple Linear Regression model of Equation II as follow:

\[
\text{Earnings Management} = -0.034 + 0.583 \text{ Leverage} - 2.074 \text{ Financial Distress} - 0.472 \text{ Leverage}^{*}\text{Institutional Ownership} + 1.036 \text{ Financial Distress}^{*}\text{Institutional Ownership}.
\]

The Estimation of Moderating Test Model of Institutional Ownership on the Effect of Leverage and Financial Distress on Earnings Management

Table 6. Estimation Model III

<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>0.097980</td>
<td>0.715404</td>
<td>1.269185</td>
<td>0.2078</td>
</tr>
<tr>
<td>X1?</td>
<td>0.270404</td>
<td>0.063566</td>
<td>-4.255408</td>
<td>0.0001</td>
</tr>
<tr>
<td>X2?</td>
<td>-2.498704</td>
<td>0.729091</td>
<td>3.422923</td>
<td>0.0010</td>
</tr>
<tr>
<td>X1*Z?</td>
<td>-0.219620</td>
<td>0.066380</td>
<td>3.308520</td>
<td>0.0014</td>
</tr>
<tr>
<td>X2*Z?</td>
<td>-3.063766</td>
<td>1.456292</td>
<td>-2.103813</td>
<td>0.0383</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.425802</td>
<td>Mean dependentvar</td>
<td>0.028619</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.265194</td>
<td>S.D. dependentvar</td>
<td>0.830037</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.739993</td>
<td>Akaike info criterion</td>
<td>2.469717</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>47.09277</td>
<td>Schwarz criterion</td>
<td>3.258961</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-114.1503</td>
<td>Hannan-Quinn crnter.</td>
<td>2.789909</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>1.930969</td>
<td>Durbin-Watson stat</td>
<td>2.294864</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.008165</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data processing resulted in a Multiple Linear Regression model of Equation III as follow:

\[
\text{Earnings Management} = 0.907 + 0.270 \text{ Leverage} - 2.498 \text{ Financial Distress} - 0.219 \text{ Leverage}^{*}\text{Managerial Ownership} - 3.063 \text{ Financial Distress}^{*}\text{Managerial Ownership}.
\]

The Estimation of Moderating Test Model of Independent Commissioners on the Effect of Leverage and Financial Distress on Earnings Management
Table 7. Estimation Model IV

<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>-0.395469</td>
<td>0.681599</td>
<td>-0.580207</td>
<td>0.563</td>
</tr>
<tr>
<td>X1</td>
<td>0.111332</td>
<td>0.076613</td>
<td>-1.453173</td>
<td>0.149</td>
</tr>
<tr>
<td>X2</td>
<td>-1.908223</td>
<td>0.919933</td>
<td>2.074307</td>
<td>0.041</td>
</tr>
<tr>
<td>X1*Z</td>
<td>-0.033264</td>
<td>0.077484</td>
<td>-0.423925</td>
<td>0.658</td>
</tr>
<tr>
<td>X2*Z</td>
<td>-1.747330</td>
<td>1.151651</td>
<td>1.517240</td>
<td>0.129</td>
</tr>
</tbody>
</table>

The data processing resulted in a model of Multiple Linear Regression of Equation IV as follow:

\[
\text{Earnings Management} = -0.395 + 0.111 \text{Leverage} - 1.908 \text{Financial Distress} - 0.033 \text{Leverage} \times \text{Independent Commissioners} - 1.747 \text{Financial Distress} \times \text{Independent Commissioners}
\]

4.2. Discussions

The Effect of Leverage on Earnings Management

The results showed that leverage has a significant and positive effect on earnings management. The higher the leverage value, the higher the possibility of the company to conduct earnings management. The greater the level of leverage, the higher the level of uncertainty of returns, but on the other hand, the greater the amount of return given (Van Horne et al., 2007).

The Effect of Financial Distress on Earnings Management

The results showed that financial distress had a significant negative effect on earnings management. Financial distress usually occurs due to a series of errors, improper decision making and interrelated weaknesses that can contribute directly or indirectly to management (Fachrudin, 2008; Sadalia et al., 2017).

The Effect of Institutional Ownership as the Moderation on the Effect of Leverage and Financial Distress on Earnings Management

The results showed that institutional ownership as a moderating variable can weaken the relationship between leverage and earnings management and is stated as pure moderation. While institutional ownership is not a moderating variable between financial distress and earnings management. Institutional ownership can weaken the effect of leverage on earnings management. A strict corporate monitoring encourages the institution to increase its shares in the related company.

The Effect of Managerial Ownership as the Moderation on the Effect of Leverage and Financial Distress on Earnings Management

The results showed that managerial ownership as a moderating variable can weaken the relationship between leverage and earnings management and is stated as pure moderation. Jensen and Meckling (1976) state that the ownership of a company's shares by the management can equate the interests of shareholders with the interests of managers, so that the conflict of interest between the shareholders and managers can be reduced.

The Effect of Independent Commissioners as the Moderation on the Effect of Leverage and Financial Distress on Earnings Management

The results showed that independent commissioners as a moderating variable cannot moderate the relationship between leverage and financial distress on earnings management.
5. Conclusions and suggestions

5.1. Conclusions
1. Leverage and financial distress variables have significant effect on earnings management.
2. Institutional ownership is able to moderate the relationship between leverage and earnings management variables.
3. Institutional ownership is unable to moderate the relationship between financial distress and earnings management variables. Institutional ownership does not change the probability of earnings management practice caused by financial distress.
4. Managerial ownership is able to moderate the relationship between leverage and financial distress variables and earnings management. Managerial ownership weakens the relationship between leverage and financial distress variables and earnings management.
5. Independent Commissioners is unable to moderate the relationship between leverage and financial distress variables and earnings management.

5.2. Suggestions
1. Investors and Potential Investors
Investors and potential investors should pay attention to the level of leverage of the company. If the level of leverage of the company is above 8.71%, the possibility of the company to practice earnings management is higher.
2. Government
The government should further examine the financial statements of banking companies owned by foreign banking companies. Because the lowest result for the value of earnings management is conducted by foreign banking subsidiaries. The subsidiary of a foreign bank is likely to make income minimization.
3. Companies
A company can sell its shares internally to employees at a lower price than in the market. So that the employees perceive that they are the owners of the company.
4. Future Researcher
Any future researcher should add additional variables. Due to the low adjusted R-Square value of 0.1242, it means that the ability of leverage and financial distress variables is 12.42%, while the rest is 87.58%. It shows that leverage and financial distress are weak enough to explain their variations in earnings management because the value is less than 50%, while the rest is explained by other independent variables.

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