Board of Commissioners Composition and Earnings Management: A Test of Gender as a Moderating Variable

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Abstract
This study examines the effect of the board of commissioners’ composition on earnings management with gender as a moderating variable. Firm samples were selected from Indonesian public companies for 2019-2021. By applying the purposive sampling technique, a total of 1499 company observations are available for hypothesis testing. This study found that gender does not affect the relationship between board composition and earnings management. In addition, board size has a negative relationship with earnings management, and board independence is not associated with earnings management. The practical implications of this research are as follows: 1) Companies need to increase the number of commissioners to improve the control function. 3) OJK needs to revise the minimum proportion of independent commissioners from 30% to 50% or more to improve the control function of the board of commissioners.

Keywords: board of commissioners, composition, earnings management, gender diversity

1. INTRODUCTION
Net income is among the most important piece of information available to investors (Setyaningsih et al., 2021). Given the company's goal is to generate profit, earnings information is critical for investors to assess whether their investments will yield returns in the future. However, the importance of earnings information for performance evaluation induces managers to engage in earnings management. By definition, earnings management is an inappropriate use of accounting discretion to mislead investors about the true performance of a firm to influence contract outcomes (Anis and Chakroun, 2018). Flexibilities in applying
accounting principles and the presence of information asymmetry between managers and shareholders open opportunities for managers to engage in earnings management. Although audited financial statements increase the credibility of financial reports, auditors may fail to detect material misstatements or fraud (Needles et al., 2018). The reason is the difficulty in determining the magnitude of earnings management that can be tolerated (Barth, 2018).

A great deal of studies has been conducted to identify the determinants of earnings management. Among other factors, the board of commissioners’ composition is found to be significantly associated with earnings management with mixed results. The composition includes the size, independence, and gender of the commissioners. Several studies found that the Board of Commissioners’ independence is negatively associated with earnings management (Ernawati and Anggraini, 2020; Sari and Husnawati, 2022). The results suggest that independent commissioners perform their supervisory and advisory duties effectively because their reputations are at stake (Fama and Jensen, 1983). Outside commissioners generally come from respected leaders in the business or academic community, and their reputations will suffer if they fail to do the monitoring function effectively (Weisbach, 1988). Other studies found that the Board of Commissioners’ independence is positively associated with earnings management (Dewi and Khoiruddin, 2016; Febrina et al., 2018; Indah and Pratomo, 2022; Solihah and Rosdiana, 2022). The findings suggest that independent commissioners failed to perform monitoring functions effectively.

The number of Board Commissioners is also found to affect earnings management. A larger board has a wider range of capabilities, knowledge, and experience (Dalton, 2005). The combined skills of the commissioners enable the Board of Commissioners to deter unsound business practices and financial reporting practices that deviate from generally accepted accounting principles. Thus, opportunistic behavior in allocating company resources can be prevented. Previous studies have reported lots of evidence that are consistent with the argument that a larger board size reduces earnings management (Gunawan, 2019; Setiawan, 2018; Prastiti and Meiranto, 2013). However, the larger boards complicate communication, coordination, and decision-making processes (Jensen, 1993; Lipton & Lorsch, 1992) which leads to increased earnings management (Paramitha, 2021; Idris and Natalylova, 2021; Agyeman, 2020; Githaiga and Kosgei, 2022).

This study proposes that gender is an important factor in explaining the inconsistent research findings of previous studies. This study argues that gender moderates the relationship between the independence and size of the Board of Commissioners and earnings management. Sociological and psychological studies have shown that women are more cautious, ethical, and risk-averse (Gold et al., 2009). The presence of female directors on the Board of Commissioners is expected to influence the relationship between the independence and size of the Board of Commissioners and earnings management. Thus, the main objective of this study is to examine the effect of gender on the relationship between board composition on earnings management.

2. LITERATURE REVIEW AND HYPOTHESES FORMULATION

Agency Theory and Earnings Management

Agency theory explains the relationship between managers (agents) and investors (principals) from a contract perspective. Investors entrust some funds to be managed by
managers in the hope of receiving rewards for the funds managed. Shareholders (investors) believe that managers have the ability to use these funds effectively and efficiently and managers are given the right to make business decisions that are expected to improve the welfare of shareholders. But the actions of managers are not necessarily in line with the interests of shareholders. In this case, managers can act in their interests and ignore the interests of shareholders (principals). The situation creates agency problems (Fama & Jensen, 1983).

Agency theory is often used to explain the opportunistic behavior of managers who use company resources for personal gain. As an insider who is directly involved in the company's business activities, a manager has unlimited access to inside information. On the other hand, shareholders do not have adequate access to inside information and often fail to assess the true performance of the company. The information advantage opens up room for managers to influence earnings by choosing certain accounting policies. According to Schipper (1989), earnings management is a deliberate attempt to influence the financial reporting process for personal gain. Various factors that encourage managers to engage in earnings management include stock market incentives, signaling private information, political costs, bonuses, and contract incentives (Rahman et al., 2013).

**Board Size and Earnings Management**

Board size refers to the number of commissioners on a firm’s Board of Commissioners. The main task of the Board of Commissioners is to monitor and provide advice to the directors regarding the best business practices. It is argued that the monitoring function works well when the number of board members increases because they have more diverse knowledge and experience (Dalton & Dalton, 2005). The combination of the various skills of the commissioners allows the Board of Commissioners to prevent unacceptable business practices and financial reporting that are not consistent with the surrounding circumstances. Thus, the opportunistic behavior of managers in conducting business and allocating company resources is mitigated. Previous studies support the argument that a larger size of the board of commissioners reduces earnings management (Gunawan, 2019; Setiawan, 2018; Prastiti and Meiranto, 2013).

However, a larger board of commissioners will likely experience problems in communication, coordination, and decision-making (Jensen, 1993; Lipton & Lorsch, 1992). The supervisory function becomes ineffective and might encourage managers to misuse company resources for personal benefit and opportunistically use accounting policies that hide the true financial performance. The unreliable financial reports prevent investors from making rational investment decisions. Several previous studies support the argument that the Board of Commissioners with a larger number of commissioners increases earnings management (Paramitha, 2021; Idris dan Natalylova, 2021; Agyeman, 2020; Githaiga and Kosgei, 2022).

Based on the previous discussion, the relationship between board size and earnings management is formulated as follows:

**H1: Board size is associated with earnings management.**

**Board Independence and Earnings Management**

The Board of Commissioners is expected to be able to monitor directors effectively when they have the freedom to express suggestions and criticisms without fear of pressure from the Board of Directors. Independent commissioners have more freedom in expressing criticism
relative to the commissioners from within the company. The more independent commissioners, the higher the independence of the Board of Commissioners (Nor et al., 2017). Independent commissioners generally come from respected business or academic circles and are motivated to enhance their reputation as professionals (Fama & Jensen, 1983; Weisbach, 1988). Consequently, independent commissioners are expected to carry out their supervisory and advisory functions more objectively and effectively due to the absence of conflicts of interest and are not subject to pressure from the directors. Thus, the greater the proportion of independent commissioners, the more effective the Board of Commissioners and the lower the earnings management. The argument has support from previous studies (Idris et al., 2018; Khan et al. 2022; Al-Sraheen & al Daoud, 2018. However, some studies failed to find a significant relationship between the independence of the Board of Commissioners and earnings management (Chen et al., 2020; Nanda and Somantri, 2020) and other studies found a positive correlation between board independence and earnings management (Ernawati and Anggraini, 2020; Sari and Hasnawati, 2022).

Based on the previous discussion, the relationship between board independence and earnings management is formulated as follows:

H2: Board commissioner’s independence is associated with earnings management.

Gender as A Moderating Variable

Studies on the association between the Board of Commissioners' independence and size and earnings management have shown conflicting results. This study proposes that the gender of the commissioners may explain the conflicting results. Sociological and psychological studies have shown that women are more careful, ethical, and risk-averse in their work (Gold et al., 2009). Female commissioners bring these characteristics into the work behavior of the Board of Commissioners and thus enhance the monitoring function of the Board of Commissioners. Female commissioners are expected to be more thorough and watchful in assessing a firm’s accounting policies, mitigating the possibility of companies being involved in earnings management. Gull et al., (2018) confirm that there is a negative relationship between female commissioners and earnings management. Consistent findings are also reported by Umer et al. (2020) and Wicaksana et al. (2017). Thus, the presence of women on the board of commissioners is expected to strengthen the relationship between board independence and earnings management. The same applies to the size of the board of commissioners. The presence of women on the board of commissioners will strengthen the relationship between board size and earnings management.

Based on the previous discussion, the relationship between gender, board size (independence), and earnings management is formulated as follows:

H3: Gender affects the association between board size and earnings management.
H4: Gender affects the association between board independence and earnings management.

3. RESEARCH METHODS

Population and Sample

The population in this study are all companies listed on the Indonesia Stock Exchange and the sample is selected from 2019-2022. The sampling method is purposive sampling with
the following criteria: 1) Companies listed on the IDX during 2019-2022. 2) Companies do not belong to the financial and insurance industry because of different accrual characteristics. 3) Companies’ financial reports can be accessed from data sources. Annual reports were downloaded from www.idx.co.id. After imposing the criteria, as many as 1551 observations are available for further analysis. Table 1 presents the sample selection procedure in detail.

Table 1 Sample Selection Procedure

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms listed on the Indonesia Stock Exchange</td>
<td>688</td>
<td>713</td>
<td>766</td>
<td>2167</td>
</tr>
<tr>
<td>Perusahaan yang masuk kelompok industri keuangan dan asuransi.</td>
<td>(165)</td>
<td>(165)</td>
<td>(165)</td>
<td>(495)</td>
</tr>
<tr>
<td>Laporan tahunan atau keuangan perusahaan tidak tersedia dan tidak dapat diakses dari sumber data</td>
<td>(37)</td>
<td>(40)</td>
<td>(44)</td>
<td>(121)</td>
</tr>
<tr>
<td>Total Sampel</td>
<td>486</td>
<td>508</td>
<td>557</td>
<td>1551</td>
</tr>
</tbody>
</table>

Variable Measurement

The dependent variable in this study is earnings management. Earnings management is proxied by discretionary accruals which are estimated using the modified Jones model. Meanwhile, there are three independent variables consisting of the independence of the Board of Commissioners, the size of the Board of Commissioners, and the Gender diversity of the Board of Commissioners. The three independent variables are measured as follows: 1) Board independence is the ratio of independent commissioners to the total members of the Board of Commissioners. 2) Board size is measured by the number of commissioners on the board of commissioners. 3) Gender is a dummy variable that takes 1 if firms have female commissioners and 0 otherwise. In addition, three control variables are included to control for firm characteristics: leverage (debt to equity ratio), firm size (total asset), and profitability (return on asset.

Regression Model

The four hypotheses will be tested by using regression analysis and the following is the regression model to test the hypotheses.:

\[
DAC = \beta_0 + \beta_1 UDK + \beta_2 IDK + \beta_3 GD + \beta_4 GD*IDK + \beta_5 GD*UDK + \beta_6 DER + \beta_7 SIZE + \beta_8 ROA + e
\]

Where DAC = discretionary accruals; IDK = Board independence; UDK= Board size, and GD = Board gender.

4. RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 displays the descriptive statistics for all variables which include minimum, maximum, mean, and standard deviation. After eliminating 52 observations that were
considered outliers, a total of 1499 observations during the 2019-2022 period are available for further analysis.

Table 2. Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAC</td>
<td>1499</td>
<td>0.001</td>
<td>7.39</td>
<td>0.272</td>
<td>0.453</td>
</tr>
<tr>
<td>IDK</td>
<td>1499</td>
<td>0.170</td>
<td>1.00</td>
<td>0.414</td>
<td>0.108</td>
</tr>
<tr>
<td>UDK</td>
<td>1499</td>
<td>1.00</td>
<td>10.00</td>
<td>3.738</td>
<td>1.619</td>
</tr>
<tr>
<td>GD</td>
<td>1499</td>
<td>0.00</td>
<td>1.00</td>
<td>0.345</td>
<td>0.476</td>
</tr>
<tr>
<td>DER</td>
<td>1499</td>
<td>-30.15</td>
<td>24.85</td>
<td>1.103</td>
<td>3.053</td>
</tr>
<tr>
<td>ROA</td>
<td>1499</td>
<td>-0.760</td>
<td>0.610</td>
<td>0.013</td>
<td>0.109</td>
</tr>
<tr>
<td>SIZE</td>
<td>1499</td>
<td>9.650</td>
<td>19.21</td>
<td>14.588</td>
<td>2.829</td>
</tr>
</tbody>
</table>

The mean for earnings management (DAC) is 0.272 with a standard deviation of 0.453. This suggests that managers are involved in earnings management of 27.2% of total assets and the spread varies widely. The mean for board independence is 0.414 with a standard deviation of 0.108. The average number indicates that the proportion of independent commissioners reaches 41.4% which is consistent with OJK regulations. However, it should be noted that there is one company that does not yet meet a minimum proportion of 30%. The mean for the board of commissioners (UDK) reached 3.738 with a standard deviation of 1.619. This indicates that the company has 3-4 independent commissioners. It seems that the company only intends to comply with OJK regulations. The mean for gender is 0.345. It should be noted that the gender variable is a dummy variable that takes 1 for female commissioners and 0 for male commissioners. Thus, the average of 0.345 indicates that the board of commissioners is dominated by men while only 34.5% are female commissioners. As for control variables, descriptive statistics show that on average the sample companies come from less profitable companies (ROA=1.30%), have low debt levels (DER=1.103), and medium size (SIZE=14.588).

Results

Four hypotheses are tested in this study. Hypothesis 1 predicts that board size is associated with earnings management. Hypothesis 2 predicts board independence is associated with earnings management. Note that Hypothesis 1 and Hypothesis 2 are formulated without a specific direction because previous studies show conflicting results. This study argues that these inconsistent results may be influenced by the gender of commissioners. Therefore, hypotheses 3 and 4 predict that gender affects the association between board size (board independence) with earnings management. Regression results are presented in Table 3.

Table 3 shows that the board size (UDK) has a significant negative relationship with earnings management at a 5% level. The result indicates that a larger number of commissioners improve the control function and reduce earnings management. Meanwhile, board independence (IDK) has no effect on earnings management which suggests that independent
commissioners do not have a significant contribution to the ability of the Board of Commissioners to perform the control function. Concerning gender as the main variable, the

<table>
<thead>
<tr>
<th>Variables</th>
<th>Expected Signs</th>
<th>Coefficients</th>
<th>t-stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDK</td>
<td>+/-</td>
<td>-0.024</td>
<td>-2.374</td>
<td>0.018</td>
</tr>
<tr>
<td>GD</td>
<td>-</td>
<td>-0.001</td>
<td>-0.050</td>
<td>0.960</td>
</tr>
<tr>
<td>DER</td>
<td>+</td>
<td>0.001</td>
<td>0.420</td>
<td>0.675</td>
</tr>
<tr>
<td>ROA</td>
<td>+/-</td>
<td>-0.015</td>
<td>-0.233</td>
<td>0.816</td>
</tr>
<tr>
<td>IDK*GD</td>
<td>-</td>
<td>0.003</td>
<td>0.189</td>
<td>0.850</td>
</tr>
<tr>
<td>IDK</td>
<td>-</td>
<td>0.015</td>
<td>1.590</td>
<td>0.112</td>
</tr>
<tr>
<td>UDK*GD</td>
<td>-</td>
<td>-0.015</td>
<td>1.064</td>
<td>0.288</td>
</tr>
<tr>
<td>SIZE</td>
<td>+/-</td>
<td>-0.001</td>
<td>-1.289</td>
<td>0.198</td>
</tr>
</tbody>
</table>

results show that gender does not affect earnings management. The same result was also found for gender as a moderating variable. Thus, H1 is accepted and H2, H3, and H4 are rejected.

Discussion

As previously described, the findings show that the size of the Board of Commissioners has a negative relationship with earnings management. Recall that there are two conflicting arguments to support the relationship between board size and earnings management. The result supports the argument that the larger size of the Board of Commissioners improves the control function because the various knowledge and experiences possessed by the commissioners will increase the ability of the Board of Commissioners to carry out strict supervision of the directors. As a representative of shareholders, the board of commissioners is responsible for safeguarding the interests of shareholders by minimizing the possibility for managers to exploit company resources in an opportunistic manner that harms the interests of shareholders. This finding is consistent with the results reported by Gunawan (2019), Setiawan (2018), and Prastiti and Meiranto (2013) who use Indonesian public companies as well. Meanwhile, research conducted by Githaiga & Kosgei (2022) using public companies in Africa shows that a larger board of commissioners increases earnings management (Githaiga & Kosgei, 2022).

A more independent Board of Commissioners is believed to be able to carry out the control function more effectively. However, the result shows that the independence of the Board of Commissioners has no significant effect on earnings management. This means that the existence of an independent commissioner does not contribute to the effectiveness of the Board of Commissioners’ control function. The descriptive statistics show that the average value of the board's independence is only 0.41. This figure is rather small which suggests that 30% of minimum requirements are merely to comply with OJK regulations. It seems that those who are appointed as commissioners do not necessarily have competence because there are no rules governing the level of competence or minimum education to become Independent Commissioners. Apart from that, independent commissioners do not necessarily possess in-
depth knowledge of a company and its operations relative to commissioners who come from within the company. As a result, the oversight function which is the responsibility of the board of commissioners becomes ineffective and fails to prevent the company from engaging in earnings management. The finding is consistent with Chen et al. (2020) and Nanda and Somnatri (2020) who found no relationship between board independence and earnings management. However, the finding is inconsistent with other studies that show a positive correlation between board independence and earnings management (Ernawati and Anggraini, 2020; Sari and Hasnawati, 2022).

Note that the focus of this study is to examine the moderating effect of gender on the effectiveness of the Board of Commissioners’ control function. More specifically, this study examines whether gender can moderate the relationship between board size and earnings management and the relationship between board independence and earnings management. However, the results show that gender does not affect the relationship between board size and earnings management and the relationship between board independence and earnings management. The reason for the insignificant effect may result from the fact that women tend to have a higher level of agreeableness than men (Risse et al., 2018). Specifically, women tend to follow existing patterns, easily agree with circumstances, are more cooperative, and avoid conflict. As a result, women's good qualities such as being more careful, more ethical, and avoiding risks are not dominant in carrying out their duties as commissioners and thus fail to prevent the company's involvement in earnings management.

5. CONCLUSIONS AND SUGGESTIONS

Research studies examining the relationship between board composition and earnings management show inconsistent results. Several studies found that board independence is negatively associated with earnings management (Ernawati and Anggraini, 2020; Sari and Husnawati, 2022). However, other studies found that board independence is positively associated with earnings management (Dewi and Khoiruddin, 2016; Febrina et al., 2018; Indah and Pratomo, 2022; Solihah and Rosdiana, 2022). As for board size, previous studies support the arguments that a larger board size reduces earnings management (Gunawan, 2019; Setiawan, 2018; Prastiti and Meiranto, 2013). But other studies found opposite results (Paramitha, 2021; Idris dan Natalylova, 2021; Agyeman, 2020; Githaiga and Kosgei, 2022). Thus, this current study proposes gender as a moderating variable to explain the conflicting results.

Firm samples are selected from Indonesian public firms from 2019-2022. A total of 1499 observations are available for hypothesis testing. Regression analysis shows the following findings: 1) Board size is inversely related to earnings management. 2) Board independence is not associated with earnings management. 3) Gender does not affect the association between board size and earnings management. 4) Gender does not affect the association between board independence and earnings management.

The practical implications of this research are as follows: 1) Companies need to increase the number of commissioners to improve the control function. 2) OJK needs to revise the minimum proportion of independent commissioners. The minimum requirement of 30% should be revised to 50% or more to improve the control function of the board of commissioners. 3) The company is advised to increase the proportion of female commissioners so that the role of
women in enhancing the control function of the board of commissioners becomes more evident. Further research should examine the effect of the background of independent commissioners such as finance or accounting, political affiliation, or past managerial experiences on earnings management.

**REFERENCE**


