Board of Commissioners, Audit Committee Gender, Institutional Ownership, and Earnings Management

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Abstract—This study aimed to investigate the effect of the board of commissioners, audit committee gender, and institutional ownership on earnings management. The sample in this study were 28 mining companies of total 140 listed on the Indonesia Stock Exchange (IDX) between 2012-2016. Multiple linear regression analysis was used to test the hypothesis of this study. The hypothesis testing indicated that board of commissioners and institutional ownership had a significant and negative influence on earnings management. While the audit committee gender does not affect earnings management.

Keywords—Earnings management, board of commissioners, audit committee gender, institutional ownership, mining companies, Indonesia.

I. INTRODUCTION

The propensity of investors and other external parties that are more drive on earnings information, triggers management to conduct dysfunctional behavior earnings management or earnings manipulation to generate earnings that are considered normal for a company [1]. Based on? [2], the selection of accounting policies in the practice of earnings management can be done by approaching the selection of accounting methods or using the discretionary accrual approach. Positive accounting research also states that managers manipulate earnings using discretionary accrual strategies [3].

Earnings manipulation has raised some accounting reporting scandal cases that are widely known, including Enron, Merck, World Com, and the majority of other companies in the United States [4]. Some cases that occurred in Indonesia, such as PT. Lippo Tbk and PT. Kima Farma Tbk also involves financial reporting that starts from the detection of earnings manipulation [5].

Financial cases in several companies are a failure of the integrity of financial statements to meet the information needs of report users. Earnings as part of the financial statements do not present actual facts about the economic condition of the company so it is expected to provide information to support decision making. If the information submitted can meet the needs of stakeholders, the practice of earnings management can be minimized [5].

The failure of several companies and the emergence of financial malpractice show the poor practice of corporate governance. Good corporate governance is needed to encourage the creation of an efficient, transparent, and consistent market with laws and regulations. The application of good corporate governance needs to be supported by three interconnected pillars: the state and its instruments as regulators, the business world as market players, and the community as users of business products and services.

To implement good corporate governance, it requires a supervisory system carried out by the board of commissioners. In general, the board of commissioners performs a supervisory function through committees to use efficient time and utilize the individual expertise of each director. The role of the audit committee is to assist the board of commissioners to ensure that management has presented financial statements following generally accepted accounting principles and that the internal control structure of the company is well implemented and internal and external audits are carried out in accordance with the applicable auditing standards. Furthermore, the audit findings are followed up by carrying out by the management.

The board of commissioners is trusted by stakeholders with the monitoring function for the management level at the highest level. In addition, the task of the board of commissioners is to ensure the company’s strategy can run smoothly and as a supervisory board for managers in managing the company to create corporate accountability. The number of board of commissioners is also considered an important characteristic that influences the effectiveness of the board in monitoring manager’s activities [6]. The bigger the number of members of the board, the higher the management monitoring activities [7]. However, according to [6] large boards produce less effective coordination, communication and decision making, and are more likely to be controlled by managers.

Audit committee plays a key role in supervising, monitoring and providing advice to the management in implementing an internal accounting control system and the preparation of financial statements [8]. According to [9], the audit committee acts as a supervisor of the company’s financial statements preparation. The audit committee members meet regularly with the company’s managers and
auditors to review the company's financial statements, audit processes, and internal accounting controls. To increase the effectiveness of audit committees and accounting scandals, such as the Enron Scandal in the US, audit committee members should have financial expertise [8] and [10].

Several previous studies have examined the relationship between earnings management and several variables of audit committee composition [9]; [11]; [8]; and [12]. It provides evidence to show that the characteristics of the audit committee have a significant relation to corporate earnings management, however; most previous research focused on independence, frequency of meetings, size and financial expertise than on gender aspects. In addition, there is a growing stream of research on the influence of gender differences which states that the presence of women on audit committees or board of directors can bring positive results in corporate’s monitoring and supervision [13] [14] to result in better financial reporting quality. Good quality financial reporting can lead to greater clarity and consistency in financial disclosures to prevent manipulation and fraud. Because of the increasing awareness of gender diversity on the audit committee, this study uses gender for the audit committee proxy.

Institutional ownership is another part of corporate governance because institutions have the resources, capabilities, and opportunities to monitor and discipline managers to be more focused on the value of the company. Also, institutional ownership can control management through an effective supervision process to reduce earnings management. The percentage of certain shares owned by the institution can affect the process of financial statements preparation that does not rule out the possibility of accrualization under the interests of the management[5]. According to [15] and [16], evidence that supervisory actions carried out by a company and institutional investors could limit manager behavior. Thus, corporate supervision actions carried out by institutional ownership can encourage managers to focus on the company's performance to limit manager's behavior in earnings management.

The purpose of this study was to investigate the influence of the board of commissioners, gender audit committee, and institutional ownership on earnings management. This research used the object of a mining company that has gone public on the Indonesia Stock Exchange because mining companies are one of the pillars of economic activity in Indonesia. Mining companies play an important role because Indonesia is a country that produces potential natural resources and minerals so that the mining sector can make a significant contribution to the Indonesian economy. In addition, the nature and characteristics of the mining industry are different from other industries. Among other things, mining companies require very high and long-term investment costs and have high risks and uncertainties, so that the funding problem will become a major issue of company development. Furthermore, mining companies are chosen because they have large earnings and resources management, so it is ideal for earnings management study.

The remainder of the results of this study is divided into several sections. The second part of the literature review and hypothesis development contains an explanation of the theory used and the development of the hypothesis. The third part is about research methods which include research design, data and sample, operational definition and measurement variables, and hypothesis testing. The fourth part presents the results of descriptive statistical analysis, correlation matrix, and hypothesis testing. While the fifth part is the discussion, and the last part is the conclusion.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT
A. Agency Theory
According to agency theory, the separation of ownership and control leads to differences in interests between managers and shareholders [17]. Hence, monitoring managerial decisions is important for the board of commissioners to ensure that the interests of shareholders are protected [18], and financial reporting is reliable and complete.

The role of the board of commissioners is to monitor and discipline company management, thus ensuring that managers pursue the interests of shareholders is also their task [17]. As such, the board of commissioners plays an important supervisory role in controlling the quality and reliability of financial reporting [19] and [20].

The problem of agency arises because of a conflict of interest between shareholders and managers and the failure to meet maximum utility. Managers know more about internal information and prospects for the company in the future than the owners. Hence, there is a high probability that managers do not always act in the best interests of the owner [17].

B. Board of Commissioners and Earnings Management
The board size is related to board effectiveness [6]. In fact, board size can influence board functions and has a potential effect on company performance. The greater the number of members on the board, the higher the management monitoring activities. Also, larger councils can bring together specialists from various functional fields, and therefore the board can contribute to higher corporate values [7]. Furthermore, [7] stated if a large board size is a signal of the effectiveness of the board, the higher the number of members in the board, the lower the possibility of managers to conduct earnings management. Based on [21], larger board sizes were associated with lower levels of discretionary accruals. According to [21], the board of commissioners is charged with monitoring management to protect the interests of shareholders, and with the board of commissioners and will affect whether the company is involved in earnings management or not. Companies with a larger proportion of independent directors will be less likely to be involved in earnings management. Large board sizes can be controlled more easily by managers to reduce the efficiency of the board's monitoring. Also, the larger council will introduce communication and coordination issues, as well as decision making [6].

H1. Board of commissioners’ size had a negative effect on earnings management.

C. Audit Committee Gender and Earnings Management
Most studies of the characteristics of previous audit committees focused on financial independence and expertise rather than gender aspects. However, there is a flow of research interest that is developing into the gender problems of directors and earnings management. Previous research on gender differences in sociology and psychology showed that...
women were more at risk of rejecting, cautious and ethical than men [22] and [23]. Furthermore, [24] shows that women show communication skills that are more effective and perform better than men in group problem solving that requires consensus. Based on [25], mixed-gender groups perform better than single-gender groups. Next, [26] indicates that it is possible to reduce corporate failure by increasing the presence of female directors on the company’s board. Moreover, [27] suggesting that female accountants are less likely than their male counterparts to be involved in earnings management actions. Additionally, [14] shows that if women’s representatives reduce the risk of inherent misstatement, gender diversity in the audit committee can lead to lower audit costs. A recent study documented that companies with women’s CFOs showed better quality discretionary accruals [28] and [29]. Besides, [30] suggest that women are more likely to report incidents of fraudulent financial reporting. Women also tend to act more decisively than men to improve the quality of earnings because they are very sensitive to loss of reputation and risk of lawsuits [31]. Therefore, it is generally assumed that women will adopt a restrained approach to earnings management [32]. Likewise, [33] found that companies with more women in senior management reported high earnings quality.

H2. Audit committee gender had a negative effect on earnings management.

D. Institutional Ownership and Earnings Management

Institutional ownership can control management through an effective monitoring process to reduce earnings management. The percentage of certain shares owned by the institution can affect the process of financial statements preparation that does not rule out the possibility of accrualization under the interests of the management [5]. Furthermore, [4] found that there was evidence to suggest that supervisory actions carried out by a company and institutional ownership could limit the behavior of managers. Besides, [4] concluded that corporate supervision measured by institutional ownership could encourage managers to focus their attention more on company performance to reduce opportunistic or selfish behavior. Moreover, [34] also found that the presence of high institutional ownership limits earnings management.

H3. Institutional ownership had a negative effect on earnings management.

III. RESEARCH METHOD

A. Research Design

This research was an empirical study by testing hypotheses to obtain empirical evidence about the influence of the board of commissioners, gender audit committees, and institutional ownership of earnings management. The quantitative approach was used to test the hypothesis in this study.

B. Data and Sample

This study used a research data set consisting of all mining companies listed on the Indonesia Stock Exchange (IDX) in the period 2012-2016.

The sample used in the study has several predetermined criteria. First, this study used mining companies consistently listed on the Indonesia Stock Exchange as of January 1, 2012, until December 31, 2016. Second, the company publishes financial statements for the period 2012-2016 which are available on the Indonesian Capital Market Directory (ICMD), www.idx.co.id or company website. Third, research data are fully available in a company.

Based on the criteria, this study used 28 companies of total 140 between 2012-2016 as its sample. The companies becoming the research sample have been categorized in sub-sector of mining company consisting of coal, metals and other minerals, oil and gas as well as rocks.

C. Operational Definition and Measurement of Variables

The variables used in this study consisted of dependent variables, independent variables, and control variables. Table 1 shows the operational definitions and measurement of variables.

| Variable | Definition | Measure |
|----------|------------|---------|
| DAC      | Earnings management | Discretionary accrual (Modified Jones) |
| JDKOM    | Board of commissioners | Total board of commissioners in a company |
| DUMGEND  | Audit committee gender | Dummy variable. If there is a female audit committee member, a score = 1, but if there is no female audit committee member, a score = 0. |
| INV      | Institutional ownership | The proportion of shares held divided by the number of shares issued by the company |
| LEV      | Leverage | Total (Long-term debt plus current debt) divided by total assets |
| SALESGROWTH | Sales Growth | Total sales in year t minus total sales in year t-1 divided by total sales in year t |
| AGE      | Firm Age | The total of years since the company was founded |
| LNSIZE   | Firm Size | The natural logarithm on total assets |

The value of the discretionary accrual is done by calculating the following steps:

a. Calculating total accrual with the equation:

\[ \text{Total Accrual (TAC)} = \text{net income-cash flow from operating} \]

b. Calculating accrual values with multiple linear regression equations based on ordinary least square (OLS):

\[ \text{TAC}_t = \alpha_1 (1/\text{A}_{i,t}) + \alpha_2 (\Delta \text{REV}/(\text{A}_{i,t})) + \alpha_3 (\text{PPE}/(\text{A}_{i,t})) + \epsilon \]

Notes:

- TAC: The total accrual of company i in period t
- A: Total assets for the sample of company i in year t-1
- ΔREV: Changes in company sales i from year t-1 to year t
- PPE: Property, plant, and equipment of the year t
- c: By using the regression coefficient above, the value of non-discretionary accrual (NDA) can be calculated by the formula:


\[
\text{NDA}_t = a_0 (1/A_{t-1}) + a_2 (A_{REV_t} - A_{REC_t}) / A_{t-1} + a_3 (PPE_t / A_{t-1}) \]

\( t \) is the year and \( i \) is the company. 

Notes: 
NDAT: Non-discretionary accruals in year \( t \) 
\( \Delta \text{REC}_i \): Changes in corporate receivables \( i \) from year \( t-1 \) to year \( t \) 
\( \alpha \): Fitted coefficients obtained from the regression results on calculations.

d. Calculating the value of the discretionary accrual (DAC) with the equation:

\[
\text{DAC}_t = \frac{(TAC_t - \text{LNSIZE}_t + \text{AGE}_t \cdot \text{SALESGROWTH}_i + \text{INVT}_t + \text{LEVT}_t + \text{SALES} \cdot \text{GROWTH}_t \cdot \text{AGE}_t \cdot \text{LNSIZE}}{\alpha}.
\]

IV. RESULT

A. Descriptive Statistics Analysis

This analysis was conducted to find a descriptive description of the variables in the study. Descriptive statistics provide an overview of data seen from the average value (mean), middle value (median), standard deviation, minimum value and maximum value of the variables studied. Table III shows the results of descriptive statistical analysis.

| TABLE II. DESCRIPTIVE STATISTICS |
|----------------------------------|
| Min. | Max. | Mean | Std. Dev |
| DAC  | -108.47 | 0.47 | -0.97 | 9.16 |
| JDKOM | 2 | 13 | 5 | 1.97 |
| DUMGEN  | 0 | 1 | 0.27 | 0.45 |
| INV  | 0.00 | 0.80 | 0.22 | 0.25 |
| LEV  | 0.006 | 3 | 0.52 | 0.34 |
| SALESGROWTH | -23.57 | 0.99 | -0.28 | 2.28 |
| TH | 7 | 65 | 31 | 14.02 |
| LNSIZE | 1.01 | 7.98 | 6.62 | 0.91 |

Valid N = 140

B. Correlation Matrix Testing Results

Table 3 below shows that earnings management (DAC) does not correlate with all independent variables but shows a positive correlation relationship with one company size control variable (LNSIZE) and significant at the level of 1% (0.527). Besides, table 3 also shows that there are significant, positive, and negative correlations between control variables.

All of these variables are included in the same model because the correlation is not strong (lower than 0.80). Th research results[35] recommended 0.80 as a threshold where multicollinearity concerns can threaten regression analysis and show that a VIF value of less than 10 is acceptable.

C. Hypothesis Testing Results

Table IV shows the results of hypothesis testing.

| TABLE IV. REGRESSION TEST |
|---------------------------|
| Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| (Constant) | -30.189 | -0.363 | 4.319 | 0.000*** |
| JDKOM | -1.685 | -0.022 | 0.982 |
| DUMGEN | 0.033 | 0.022 | 0.982 |
| INV | -9.340 | -0.258 | 3.626 | 0.000*** |
| LEV | 0.547 | 0.299 | 0.765 |
| SALESGROWTH | 0.139 | 0.035 | 0.500 | 0.618 |
| AGE | 0.157 | 0.240 | 3.035 | 0.003*** |
| LNSIZE | 7.588 | 0.750 | 9.384 | 0.000*** |

Adj R² | 38.7% |
F(13, 544) | 0.000*** |
Significant: **p<0.01; ***p<0.01

Hypothesis 1 stated that the number of board of commissioners had a negative effect on earnings management and were accepted as presented in table IV, the results of hypothesis testing show significant and negative results of 0.000.

Hypothesis 2 stated that the number of gender audit committees had a negative effect on earnings management, as declared not accepted, as can be seen in the results in table IV, the results of hypothesis testing show insignificant results of 0.982.

Hypothesis 3 states that institutional ownership has a negative effect on earnings management, stated to be accepted, as shown in table IV, the results of hypothesis testing show significant and negative results of 0.000.

Table IV also shows the control variable has a significant effect on earnings management is firm age (AGE) and firm size (LNSIZE). The leverage control (LEV) and sales growth (SALESGROWTH) variables did not effect on earnings management.

Based on table IV, the calculated F value is 13.544 with a significant level of 0.000, this indicates that all independent variables simultaneously and significantly affect the dependent variable.

The coefficient of determination indicated by Adjusted R² can be seen in table IV, indicating that the coefficient of determination shows the adjusted R² value of 38.7%. This means that 38.7% of earnings management (DAC) variables can be explained by independent variables, namely the number of independent commissioners (JDKOM), gender
audit committees (DUMGEN) and institutional ownership (INV) and leverage (LEV), company growth (SALAGE) variables, company age (AGE), and company size (LNSIZE). While the remaining 62.3% is explained by other reasons beyond the research model.

V. DISCUSSION

This study aimed to examine the influence of the board of commissioners, gender audit committee, and institutional ownership on earnings management by proposing three research hypotheses. The first hypothesis stated that the board of commissioners had a negative effect on earnings management. The second hypothesis suggested that the gender audit committee had a negative effect on earnings management. The last or third hypothesis stated that institutional ownership had a negative effect on earnings management.

The results of hypothesis 1 stated that the board of commissioners had a negative and significant effect on earnings management. This showed that the presence of the board of commissioners indicated by the number of members of the board of commissioners can be used as a control committee for management. The board of commissioners is seen as an effective monitoring mechanism for managers to avoid earnings management actions. The much more the number of members of the board of commissioners, the more effective the control and monitoring to produce optimal company performance with only a little action. The results of this study are in accordance with the research [7], [21], and [36]. However, the results of this study do not support the results of the study [37].

The results of hypothesis 2 stated that the gender audit committee had no effect on earnings management. The audit committee plays a role as an extension of the board of commissioners to assist them, in reducing the actions of earnings management. The audit committee is considered effective in suppressing the actions of managers to conduct earnings management. However, audit committee gender had no role in suppressing earnings management. There are or no female audit committees, so the results do not affect the prevention of earnings management. The results of this study supported the research [26], [33], [23], and [38]. However, these findings are not in accordance with the results of the study [30], [14], [29], [28], and [39].

Finally, the results of hypothesis 3 stated that institutional ownership had a negative effect on earnings management. The proportion of shares held by the institution can be used as a preventive tool for the manager in conducting earnings management. The much more shares owned by institutional parties, the higher the supervision carried out by external parties in pressuring managers to reduce earnings management actions. Hence, the earnings information generated by the company delivered in the financial statements is a real earnings result and not an earnings management action. Also, it will produce optimal performance for the company, to assess the external stakeholders. The results of this study are in accordance with the research [34], [4], [40], and [41], but not support the results of the study [42] and [43].

VI. CONCLUSION

The objective of this study was to investigate the influence of the board of commissioners, gender audit committee, and institutional ownership on earnings management. The sample used in this study is a mining company listed on the Indonesia Stock Exchange in 2012-2016. Based on the sample criteria that have been determined, the sample obtained was 140 companies.

There are three hypotheses proposed: the first hypothesis states that the board of commissioners had a negative effect on earnings management, the second hypothesis states that the gender audit committee had a negative effect on earnings management, and the third hypothesis states that institutional ownership had a negative effect on earnings management. The results showed that hypothesis 1 and hypothesis 3 are accepted while hypothesis 2 is rejected. Thus both the board of commissioners and institutional ownership had a negative effect on earnings management, while the gender audit committee had no effect on earnings management. The results revealed that the gender audit committee had no effect on earnings management, so it cannot be used as a benchmark in minimizing earnings management practices in a company. Hence, the existence of female audit committee members is not the right gender proxy used in measuring the audit committee.

The contribution of this study is to try to offer a new perspective on the effectiveness of gender diversity in audit committees by exploring the effect of the gender audit committee on earnings management, even though the results of gender hypothesis testing are not accepted.

Some limitations of this study turn into a suggestion for future research. First, this study only uses current discretionary accruals to measure earnings management. In this case, it would be interesting to conduct a test using other earnings management proxies such as income smoothing, real earnings management, or avoidance losses. Second, the size of the board of commissioners can use a proxy proportion of independent board of commissioners so that it can be known how much monitoring activities have carried out. Third, for the audit committee gender, it will be more appropriate to use a proxy proportion of the number of female audit committees within a company that can be considered to get a better understanding of the effect of this attribute on earnings management.

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