“Corporate governance quality, firm size and earnings management: empirical study in Indonesia Stock Exchange”

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Abstract

Earnings management (EM) is manipulation done by management in preparing financial statement in order to gain management advantages or to increase the firm value. EM can reduce the quality of financial statements because it does not show the real earning periodical. This research aims to identify the effect of good corporate governance (GCG) (institutional ownership, managerial ownership, frequency of board meetings, frequency of audit committee (AC) meetings), firm size, and leverage on the EM. Population comprises the companies in LQ 45 index of Indonesia Stock Exchange (IDX) for the period 2010–2014. Samples of the research were taken using purposive sampling method, and the variables are tested using multiple linear regression analysis. The results of the research show that partially, only leverage has significant effect on EM, while institutional ownership, managerial ownership, frequency of board meeting, frequency of AC meetings, and firm size have no significant effect on EM, but all of the variables have simultaneously significant effect on EM. Limitations of the research are the only used 6 independent variables and 21 companies as samples of the research.

Keywords
good corporate governance, firm size, leverage, earnings management

JEL Classification
G32, M41, G14

INTRODUCTION

The financial statements are the media of information that indicates the state of a company. Statement of Financial Accounting Standards (SFAS) No. 1 (2015) stated that the objectives of financial statements are to report the company’s performance during a period and as a result of management accountability in using the resources. The report contains information used by the parties concerned, both the external and internal. For external parties, such as investors and potential investors, financial reports are used to assess the ability and prospects of the company in making investment decisions, while for internal parties, the information in the financial statements can be useful for assessing the achieved performance by the management. Management is trying to show a good performance on the financial statements, especially on profits. If the management won’t succeed in achieving the profit targets, management can utilize the accounting method that has been allowed by accounting standard to modify profit in preparing financial statements. Management performs the EM by raising or lowering the profit with the aim of maximizing the welfare of the company or its own interests (opportunistic). The companies which are involved in EM case are widely known as Enron, Merck, and World

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Com. Some of the cases occurred in Indonesia such as Lippo and Kimia Farma which were detected to manipulate in the financial statements (Ujihyanto & Scout, 2007).

One of the factors that led to the occurrence of EM is the lack of implementation of good corporate governance (GCG). Chtourou et al. (2001) revealed that the principles of GCG applied consistently can be a barrier to performance manipulation which resulted in the financial statements that do not contain the companies’ real information (Jao & Pagalung, 2011). GCG is a monitoring mechanism which aims at harmonizing the different interests and reducing information asymmetry between the principals and the agents, then EM behavior can be minimized (Kusumawardhani, 2012). First, the monitoring can be done by extending the institutional ownership (INST), INST is considered to reduce earnings manipulation because it can control the management through the monitoring process effectively and then it can influence the management in preparing the financial statements. According to Koh (2003), the lower the level of INST, the greater the company earnings management, on the contrary, the higher the INST, the smaller the company EM (Syahrial, 2013). Second, managerial ownership (MOWN) is also expected to strengthen supervision of the companies. With the owning of stock by management, management will act in accordance with the wishes of the principal, and management will have motivation to work harder. This is supported by research of Wardani and Masodah (2011) who found that the smaller the MOWN, the more perform it tends to earnings management. Third, the frequency meetings of board of commissioners (BOARDMEET) could be used as an indicator to measure the effectiveness of the board of directors. A board meeting is a medium of communication and coordination between the commissioners in conducting oversight of the management. Chen et al. (2006) states that the board which has more frequent meetings can reduce the occurrence of fraud, because when companies meet regularly, the board can identify and solve problems related to the quality of financial reporting (Prastiti & Meiranto, 2013).

Frequency of meetings of AC (ACMEET) has a role in reducing fraud in the financial statements. Indonesia capital market regulation on the Establishment and Implementation Guidance of the AC stats about performance of AC meetings periodically at least once in three (3) months. According to Effendi and Daljono (2013), AC meetings which are routinely done will enhance the monitoring of the management function. With increasingly stringent supervision, management will lose the opportunity to perform EM. Company size is a factor that can affect the EM. There are two views about the size of the company. The first view stated the small-sized companies are considered performing more EM compared to large companies. This is because small companies tend to show the high performance and then investors are interested to invest in the company, whereas a large company is considered as the community and then the company is more conservative in preparing the financial reporting (Nasution & Setiawan, 2007). The second view considers that the large companies tend to perform EM. Watts and Zimmerman (1990) stated that the large companies which have a high political cost are more likely to choose the method of accounting for reducing reported earnings than smaller firms.

Other factor that influences EM is leverage. If companies have a high leverage ratio, they will try to increase profits in order to show positive performance to obtain additional funding or rescheduling of debt payments (Pambudi & Sumantri, 2014). Several studies in Indonesia support the EM practices, including Jao and Pagalung (2011) who state that INST, MOWN and ACMEET have a significant effect on EM, while leverage has no significant effect on EM. These results are in contrast to Agustia (2013) who found that leverage has a significant effect on EM. The study of Prastiti and Meiranto (2013) indicated that BOARDMEET and ACMEET do not have a significant effect on EM, and research of Kusumawardhani (2012) shows that only the MOWN has a significant influence, while INST does not have a significant effect on EM. Halim et al. (2005) show that company size has a significant positive effect on EM. These results are in contrast to studies of Herza (2014) who explains that the firm size has a significant negative effect on EM.
The difference of this research with previous studies is that it uses dummy variables in measuring the BOARDMEET and ACMEET, whereas previous studies are using a nominal amount of frequency of meetings. By using dummy variables then the number of the category of companies that frequently carry out meetings and companies which carry out them rarely. This study uses the object of the companies listed in LQ 45. The object is selected as the average of companies included in the LQ 45 index that is large-sized companies. Large-sized companies have a considerable boost to EM because the company should be able to meet the expectations of investors and shareholders. Based on the political cost hypothesis, the larger the company, the more company will tend to choose the accounting method to lower profits. This is due to the fact if the company has a high profit, the government will increase income tax, and others. This study uses the independent variable namely the quality of GCG proxied by MOWN, INST, BOARDMEET, ACMEET, as well as the firm size, and leverage. The dependent variable of this research is EM.

1. LITERATURE REVIEW

1.1. Agency theory

Agency theory is the basis used in corporate management. Jensen and Meckling (1976) explain that the agency relationship occurs when one party gives the other party delegation to do a job or service and gives the authority in decision-making (Jao & Pagalung, 2011). By this theory, the investor believes that managers benefit as the reciprocal of the investments that have been given and not deviate to the advantage of the investment. The problem in this concept is the separation between the owners and management rights. Conflicts arise when managers are not performing any work that can provide benefits to owners or shareholders. This conflict will lead to information asymmetry because management does not disclose the information in an honest and transparent way to shareholders.

1.2. Positive accounting theory

Positive accounting theory is formulated by Watts and Zimmerman (1990) who stated that three hypotheses are the motivation of EM (Kusumaningtyas, 2012). These hypotheses are namely: (1) bonus plan hypothesis: if the company plans to give bonuses, managers will prefer this accounting method to shift profits from the future into the present so that the current earnings will increase. This will result in higher bonuses for managers, (2) to equity hypothesis (debt covenant hypothesis): in the companies having a high debt to equity ratio, their managers will use accounting methods to increase revenue or profits because the companies with high of debt to equity ratio have difficulty in obtaining additional funds from the creditors, and (3) political cost hypothesis (size hypothesis): in the companies having a high political cost, their managers will choose the accounting method to suspend the current period earnings to next period and future reported earnings to be minimized. Political costs are accrued because high profitability attracts the attention of consumers and the media).

1.3. Good corporate governance (GCG)

According to Calbury Committee (2003), GCG is a set of rules that define a relationship between shareholders, managers, creditors, government, employees, and other internal and external stakeholders in respect to review their responsibilities. According to the Forum for Corporate Governance in Indonesia (FCGI), GCG is defined as a system that regulates and controls the company to create value added for the stakeholders related to the rights and obligations of the parties with an interest in them. GCG is the key to success in building a surveillance system and good control. There is a balance in the supervision and oversight in the management which will be a barrier for managers to make appropriate policies and encourage the creation of personal interests of transparency, accountability, responsibility, independence, and justice (Jao & Pagalung, 2011).

In this study, GCG is proxied by (a) institutional ownership. According to Shien et al. (2006), INST are shares held by the government, financial institutions, institutional legal entities, foreign insti-
Institutions and trusts and other institutions at the end of the year (Widigdo, 2013). Institutional investors are considered more experienced in detecting errors in the company, so it is not easily fooled by management, and management will avoid actions to perform EM in order to profit the more qualified (Asward & Lina, 2015), (b) managerial ownership. MOWN is a privately owned share or shares owned by the subsidiary concerned and its affiliates. High share ownership would make managers have greater responsibilities in managing the company and presenting the financial statements with the correct information for the benefit of shareholders and themselves. Increased managerial ownership in the company is able to encourage managers to give high performance so that it can reduce EM actions (Putri & Yuyetta, 2013), (c) frequency of meetings of the board of commissioners. Based on general guidelines of GCG (2006), the board is a unit within the company in charge of and responsible collectively for overseeing and advising the board of directors and ensuring that the company has been implementing GCG. Commissioners must have a professional attitude, and directors have to meet the interests of all stakeholders. In addition, the board also performs the function of monitoring and providing advice consisting of preventive measures, repairs and the temporary dismissal. The effectiveness of the board of commissioners in performing supervisory functions can be seen from the BOARDMEET. BOARDMEET are a means of communication and coordination between the commissioners in their duties as supervisory management. Chen et al. (2006) stated that the board has more frequent meetings which can reduce the possibility of fraud, because the frequent meetings allow the council to identify and solve potential problems, especially related to the quality of financial statements (Prastiti & Meiranto, 2013) and (d) frequency meetings of AC (ACMEET). The Indonesian capital market regulation on the Establishment and Implementation Guidance of the AC stated that the AC is a committee which has responsibility to the board of commissioners in helping to carry out the duties and functions of the board of commissioners. The AC served as a facilitator to ensure that in the board of directors: (1) internal control can keep management ready to run the company in a sound and prudent manner; (2) the implementation of internal and external audits in accordance with auditing standards is applicable; (3) follow-up audit findings have been done with good management (Zarkasyi, 2008). Capital Market Supervisory Board and the Finance Institutions (2012) want the AC to carry out periodic AC meetings at least once in three (3) months. Beasley et al. (2004) said that the company's AC which makes mistakes in financial reporting has fewer ACMEET reporting (Pamudji & Triharti, 2009).

1.4. Firm size

Moses (1997) suggests that the larger companies have a greater impetus for income smoothing (one of EM forms) compared with small companies, as it has a greater political cost. Political costs appear to be high due to the profitability of the company that can attract the attention of the media and consumers (Yendrawati & Setyo, 2012). Large-sized companies have various stakeholders, so that various policies of large enterprises will have greater impact on the public interest as compared to small companies. For investors, company policies will have implications on cash flow prospects in the future. For the government, they will have an impact on the amount of tax that would be acceptable, as well as the effectiveness of the role of providing protection to the general public (Pambudi & Sumantri, 2014).

1.5. Leverage

LEV is the amount of company assets financed by debt. The higher the LEV ratio, the higher the risk the company's inability to pay its obligations. This led the company likely to show a good performance to give credence to the creditors of the company's ability to pay its obligations (Rice, 2013). Watts and Zimmerman (1990) stated in a debt covenant hypothesis the company, that in the in terms of offense debt requirements based on accounting numbers, the managers are more likely to choose accounting procedures that earlier recognized the future profits period to the current period. Research conducted by Saleh et al. (2005), Tarjo (2008) and Lin et al. (2009) found that the LEV has a positive correlation to EM (Jao & Pagalung, 2011).
1.6. Earnings management

According to Schipper (1989), EM is a management which directs intervention with a specific purpose in the process of arranging external financial reports to gain unilateral advantages (Jaryanto, 2008). According to Sugiri (1998) in Indriani et al. (2014), EM is the behavior of the manager to increase or reduce the current reported earnings of a unit where the manager is responsible without resulting in an increase or decrease in the long run of the economic profitability of the unit. Thus, in general, the EM is manager’s actions that perform processing of profits in order to gain unilateral advantages.

Scott (2000) in Jaryanto (2008) stated some motivations, which make companies perform EM: (1) bonus purposes: managers have the information contained in the net income the company will act opportunistic to manage earnings by maximizing current earnings. Manager tried to adjust reported earnings to maximize bonuses that they will receive, (2) political motivations: EM is used to reduce reported earnings in a public company. Companies tend to reduce reported earnings for their public pressure resulted in the government setting more stringent regulations. Large companies and other strategic industries tend to lower their profits to reduce its visibility especially during periods of high prosperity. This action is done to gain the government incentives and facility, (3) taxation motivations: taxation is one of the main reasons why companies reduce reported earnings. Tax savings motivate most real EM. By reducing reported earnings, the company can minimize the amount of paid tax to the government, (4) change of CEO: CEO who is out of duty or retired will conduct a profit-maximizing strategy to increase the bonus. Similarly, low performance of the CEO will tend to maximize profits in order to prevent or cancel his dismissal and (5) initial public offering (IPO). At the time the companies are going public, the financial information contained in the prospectus is an important source of information. This information can be used as a signal to potential investors about the company’s value. Managers can influence the decision of potential investors by seeking to increase reported earnings.

According to Luhgiatno (2008), EM is often performed by the company, namely (a) taking a bath: this technique occurs during the reorganization. Cost in future periods will be recognized in the current period and so future profit will be high despite of the unfavorable conditions, (2) income minimization: company policies to remove capital goods and intangible assets, the imposition of advertising expense, and rapid development. The patterns can minimize the profit because of political motivation, or minimize taxes, (3) income maximization: management will maximize profit to receive larger bonus. This action can also be done to avoid a breach of the long-term debt contract and (4) income smoothing: companies prefer to report the stable earnings growth trend rather than earning drastically changing. According to Sulistyanto (2008), there are three approaches to detect EM, namely (1) the aggregate accrual-based model is a model that used to detect the EM by using discretionary accruals (DA) as a proxy for EM. The model was developed by Healy (1985), DeAngelo (1986), Jones (1991), Dechow, Sloan and Sweeney (1995), (2) model-based specific accruals approach is calculating the accrual proxy for EM by using the particular financial statement of particular industries as well, such as the loss reserve accounts of the insurance industry. This model was first developed by Mc Nichols and Wilson (1988), and (3) model-based distribution of earnings after management is an approach by conducting statistical analysis to the components of profit to detect factors that affect the EM. This model was first developed by Burgthaler and Dichev (1997). Aggregate accrual-based model is a model that provides the most robust results in detecting EM. The reason is that the empirical model is in line with the accrual basis of accounting used by businesses and empirical models using all components of the financial statements for the detection of financial engineering. Several empirical models based on aggregate accruals for detecting EM is (1) Healy model (1985). Healy model detects EM by calculating the total value which is to reduce the accrual accounting income earned during a particular period to operate cash flow for the period. Healy models calculate non-discretionary accruals (NDA) by dividing the average total accruals (TA) by total assets of the previous period. There is a fundamental flaw in the Healy model indicated by Dechow et al. (1995) that the TA are used as a
proxy for EM containing NDA. In fact, NDA and TA are components not bias managed or administered by the manager, as well as components of DA, (2) DeAngelo model (1986): DeAngelo model measures NDA which is calculated using the period end TA scaled by total assets of the previous period. If NDA is constant all the time and DA has an average equal to zero during the estimation period, both models will measure DA without error, but if accrual changes from period to period, then both of models will measure DA with error, (3) Jones model (1991): Jones model is no longer used assuming that the NDA is constant. The model uses two basic assumptions, namely the development of the current accruals and gross property, plant, and equipment. Implicitly, Jones model assumes that revenue is non-discretionary. If profit is managed using discretionary income accrual, then this model will remove part of the profits run for a proxy DA and (4) Jones modified model (Dechow, Sloan, & Sweeney, 1995). Modified Jones model is a modification of the Jones model designed to eliminate the tendency to use a biased estimate one of the Jones model to determine DA when income exceeds discretion. This model uses DA as a proxy for EM. The surplus, this model breaks down the TA into four main components, namely the current DA, current NDA, long-term DA and NDA. Current NDA and DA are derived from current assets, whereas long-term DA and NDA are the accruals of non-current assets.

1.7. Theoretical framework

As a basis for formulating hypotheses, the theoretical framework shows the influence of variables INST, MOWN, BOARDMEET, ACMEET, SIZE, and LEV on EM as follows:

1.8. Hypotheses

Based on the theoretical framework, the first hypothesis (H1) is formulated that INST, MOWN, BOARDMEET, ACMEET, SIZE, and LEV have simultaneously significant effect on EM.

1.8.1. Institutional ownership and earnings management

INST is share owned by the non-financial and financial institutions. INST ownership is considered better able to limit the actions of EM; this is due to the institutional regarded as a sophisticated investor, so they are not easily fooled by management (Kusumaningtyas, 2012). The smaller the percentage of INST, the greater it will have of tendency managers in taking certain accounting policies to manipulate earnings reporting (Widyastuti, 2009). Based on these explanations, the second hypothesis (H2) can be formulated that INST has a significant effect on EM.

1.8.2. Managerial ownership and earnings management

MOWN is the amount of shares held by the manager in a company. In view of the theory of accounting, EM is determined by the motivation of the company’s managers. Different motivations produce a different amount of EM, such as of the manager who also serves as a shareholder and a manager who is not a shareholder. Two of these criteria affected the EM. In the MOWN, a manager will also determine the policies and decisions of the accounting methods applied to the companies. Research of Efendi and Daljono (2013) proves that MOWN is able to reduce EM. Based on this,
the third hypothesis \((H3)\) can be formulated that \(MOWN\) has a significant effect on \(EM\).

1.8.3. **Frequency of board meetings and earnings management**

\(BARDMEET\) are important in determining the effectiveness of the board of directors in carrying out monitoring and controlling. \(BOARDMEET\) is a medium to communicate and coordinate between members of the board of directors in carrying out their duties as supervisory management. Chen et al. (2006) found that more \(BOARDMEET\) can reduce the possibility of fraud, because the regular meetings allow the council to identify and solve potential problems, especially those related to the quality of financial reporting (Prastiti & Meiranto, 2013). Based on this, the fourth hypothesis \((H4)\) is formulated that \(BOARDMEET\) has a significant effect on \(EM\).

1.8.4. **Frequency of meetings of the audit committee and earnings management**

The majority of \(ACMEET\) are held to improve the effectiveness of \(AC\) in overseeing the management and are not to attempt to optimize its own interests. Agency theory argues that the \(AC\) provides effective oversight of management. When the \(AC\) has more meetings and is more independent, the manager may not be able to manipulate earnings. Xie et al. (2003) find that \(AC\) that meet regularly become better supervisors in overseeing the financial reporting process. Thus, the fifth hypothesis \((H5)\) is formulated that \(ACMEET\) has a significant effect on \(EM\).

1.8.5. **Company size and earnings management**

Moses (1997) suggests that companies are more likely to have a greater impetus for income smoothing (one form of earnings management) compared with small companies, as it has a greater political cost. Political costs appear high due to the profitability of the company that can attract the attention of the media and consumers. Based on this, the sixth hypothesis \((H6)\) is formulated that firm size has a significant effect on \(EM\).

1.8.6. **Leverage and earnings management**

\(LEV\) measures the company’s assets are debt financing. The higher the value of this ratio, the higher risk to the lender in the form of the company’s inability to pay all its obligations (Rice, 2013). Companies have a high leverage ratio; it means that the proportion of debt is higher than the proportion of assets. Companies will tend to manipulate earnings. The companies having a high leverage tend to adjust reported earnings by raising or lowering the earnings in current period (Agustia, 2013). Thus, the seventh hypothesis \((H7)\) can be formulated that leverage has a partially significant effect on \(EM\).

\[1.8.6. \text{Leverage and earnings management}\]

LEVs measures the company’s assets are debt financing. The higher the value of this ratio, the higher risk to the lender in the form of the company’s inability to pay all its obligations (Rice, 2013). Companies have a high leverage ratio; it means that the proportion of debt is higher than the proportion of assets. Companies will tend to manipulate earnings. The companies having a high leverage tend to adjust reported earnings by raising or lowering the earnings in current period (Agustia, 2013). Thus, the seventh hypothesis \((H7)\) can be formulated that leverage has a partially significant effect on \(EM\).

\[2. \text{RESEARCH METHODOLOGY}\]

2.1. **Population and sample**

The research population is manufacturing companies listed in IDX in 2010–2014 and population in total is 45 companies. The sampling technique used in this research is purposive sampling technique. The criteria in the selection of samples in this study are the following: (1) companies that are successful in LQ 45 listed in the IDX, which have published the annual report, (2) the audited financial statements for 2010–2014, (3) the company large profit for the period 2010–2014, and (4) the company which has complete data on indicators of \(GCG\), \(SIZE\), and \(LEV\) and \(EM\). Based on the above criteria, the companies which can be sampled are as many as 21 companies for 5 years \((21 \cdot 5 = 105)\).

2.2. **Operational definition and measurement of variables**

\(INST\) is a ratio that compares the number of shares owned by institutional parties on the number of shares outstanding (Jao & Pagalung, 2011). \(INST\) formula is expressed as follows:

\[
INST = \frac{\text{Number of share is owned by Institutional}}{\text{Total of Outstanding Share}}
\]

\(MOWN\) is measured by a dummy variable, score 1 if there is a \(MOWN\) and score 0 if there is no \(MOWN\). This formula is measured by Christianty (2008) as follows:

\[
MOWN = \frac{\text{Number of share is owned by Management}}{\text{Total of Outstanding Share}}
\]

\(BOARDMEET\) is measured by a dummy variable, score 1 if \(BOARDMEET\) is greater than the sample
average and score 0 if it is smaller than the average of the samples.

ACMEET is measured by a dummy variable, score 1 if ACMEET is greater than the sample average, and score 0 if it is smaller than the sample average.

The company size is using the formula of the natural logarithm of total assets. This formula is based on Pambudi and Sumantri (2014) as follows:

\[ \text{Size} = \ln \text{Total Assets}. \] (3)

Leverage is a ratio that measures the amount of total assets which is financed by creditors. The leverage ratio can be calculated in several ways, but in this study, we used the debt ratio to show the company’s ability to meet long-term liabilities. This formula is based on Pambudi and Sumantri (2014) as follows:

\[ \text{LEV} = \frac{\text{Total of Liabilities}}{\text{Total Asset}}. \] (4)

2.2.1 Earnings management

EM is the dependent variable measured by DA. DA is using as a proxy for EM. EM is calculated using the modified Jones model. Dechow et al. (1995) stated that modified Jones model has a better ability to detect EM rather than Healy, De Angelo, Jones, and Dechow and Sloan model (Nuryaman, 2008). Modified Jones model estimates accrual rates as a function of the difference between the change in revenue and receivable changes, as well as the level of property, plan, and equipment. The model can be written as follows:

Calculating the value of total accruals by the equation:

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

We calculate the estimated total accrual with Ordinary Least Squares (OLS) as follows:

\[ \frac{TAC_t}{A_{t,1}} = \alpha_1 \left( \frac{1}{A_{t,1}} \right) + \alpha_2 \left( \frac{\Delta REV_t - \Delta REC_t}{A_{t,1}} \right) + \alpha_3 \left( \frac{PPE_t}{A_{t,1}} \right) + e, \] (5)

where \(TAC_t\) – total accruals in period \(t\), \(A_{t,1}\) – total assets in the end of year \(t - 1\), \(\Delta REV_t\) – change of revenue from the year \(t - 1\) to \(t\), \(\Delta REC_t\) – change of account receivable from year \(t - 1\) to \(t\), \(PPE_t\) – gross property plant and equipment in year \(t\), \(e\) – error, \(\alpha_1, \alpha_2, \alpha_3\) – regression coefficient.

By using the above regression coefficient, NDA score is calculated by following models:

\[ NDA_t = \alpha_1 \left( \frac{1}{A_{t,1}} \right) + \alpha_2 \left( \frac{\Delta REV_t - \Delta REC_t}{A_{t,1}} \right) + \alpha_3 \left( \frac{PPE_t}{A_{t,1}} \right), \] (6)

where \(NDA_t\) – nondiscretionary accruals in period \(t\), \(\alpha_1, \alpha_2, \alpha_3\) – fitted coefficients.

We calculate the DA as follows:

\[ DA_t = \frac{TAC_t}{A_{t,1}} - NDA_t. \] (7)

Detection of EM is identified by increasing and decreasing profits. Setiawan (2009) explains that the companies are not doing of EM, if the total accrual is equal to the \(NDA\) score = 0. The DA is positive which indicates that the company performed EM by increasing income patterns (increased), while the DA is negative which indicates that the company performed EM with income patterns decreasing (reduction).

2.3 Data analysis

2.3.1 Multiple regression models

The used analysis is multiple linear regression which is to investigate the influence of \(INST\), \(MOWN\), \(BOARDMEET\), \(ACMEET\), \(SIZE\) and \(LEV\) on EM. The model tested in this study is expressed in the regression equation below:

\[ DAC_t = \alpha + \beta_1 \cdot INST_t + \beta_2 \cdot MOWN_t + + \beta_3 \cdot BOARDMEET_t + \beta_4 \cdot ACMEET_t + + \beta_5 \cdot SIZE_t + \beta_6 \cdot LEV_t + e, \] (8)

where \(\alpha\) – constant, \(\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6\) – coefficient of multiple linear regression, \(DAC_t\) – discretionary accrual in year \(t\), \(INST_t\) – institutional ownership in year \(t\), \(MOWN_t\) – managerial ownerships in year \(t\), \(BOARDMEET_t\) – board
of commissioners frequency meeting in year $t$, $ACMEET$, – audit committee frequency meeting in year $t$, $SIZE$, – firm size in year $t$, $LEV$, – leverage in year $t$, $\varepsilon$ – error.

2.3.2. Determination coefficient (adjusted $R^2$)

The coefficient of determination measures the ability of the model in explaining the dependent variable. Coefficient of determination is between 0 and 1. The coefficient of determination value close to 0 indicates that the ability of independent variables in explaining the dependent variable is very limited. A value which is close to 1 indicates that the information of independent variable provides almost all the information needed to predict the dependent variable.

2.3.3. Hypotheses testing

Simultaneous testing (F-test)

This test is to determine the independent effect of the simultaneous effect on the dependent variable. If the probability is less than 0.05, it can be concluded that all the independent variables together have an effect on the dependent variable.

Partial testing (t-test)

This test is to determine how the individual independent variables affect the dependent variable. If the probability is less than 0.05, it can be concluded that independent variables have affected the dependent variable.

3. RESULT AND DISCUSSION

3.1. Multiple regression analysis

Multiple regression analysis is used to determine the independent variables which can predict the dependent variable. The results of multiple linear regression analysis can be seen in the below table.

Based on that Table 1 above, the multiple regression equation results of this study are as follows:

$$
Y = 0.268 + 0.00013\text{INST} + 0.008\text{MOWN} - 0.045\text{BOARDMEET} + 0.018\text{ACMEET} + 0.000046\text{SIZE} - 0.24\text{LEV}.
$$

Considering the results of multiple regression equation given above, it can be interpreted that:

1. Constant value of 0.268 means that if the value of each independent variable is 0 (zero), then the earnings management action will still occur at 0.268. Constant positive value indicates that the company will perform earnings management by increasing profit by 0.268.

2. The regression coefficient of 0.00013 for the $\text{INST}$ means every increasing of 1% $\text{INST}$, and then EM will increase to 0.00013.

3. The regression coefficient of 0.008 for the variable $\text{MOWN}$ means that company which has the $\text{MOWN}$ (code = 1) will take management action to 0.8% higher profit than companies that do not have $\text{MOWN}$ (code = 0).

### Table 1. Multiple regression analysis results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>$T$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>0.268</td>
<td>0.271</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>INST</td>
<td>0.00013</td>
<td>0.001</td>
<td>–0.008</td>
</tr>
<tr>
<td></td>
<td>MOWN</td>
<td>0.008</td>
<td>0.043</td>
<td>0.012</td>
</tr>
<tr>
<td></td>
<td>BOARDMEET</td>
<td>–0.045</td>
<td>0.04</td>
<td>–0.083</td>
</tr>
<tr>
<td></td>
<td>ACMEET</td>
<td>0.018</td>
<td>0.039</td>
<td>0.033</td>
</tr>
<tr>
<td></td>
<td>SIZE</td>
<td>0.00046</td>
<td>0.015</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>LEV</td>
<td>–0.24</td>
<td>0.103</td>
<td>–0.22</td>
</tr>
</tbody>
</table>

Note: * Dependent variable: DAC.
4. The regression coefficient of $-0.045$ for the BOARDMEET means the probability the company that have the lower BOARDMEET (code = 0) is higher than 0.0045 performing the EM compared by higher ones (code = 0).

5. The regression coefficient of 0.018 for the ACMEET means the probability than the companies that have the higher ACMEET (code = 1) is higher than 0.0018 performing the EM compared to those with lower ones (code = 0).

6. The regression coefficient of 0.00046 for the SIZE means every increase of 1% SIZE, and then the EM will increase to 0.00046.

7. The regression coefficient of $-0.24$ for the LEV means every increase of 1% LEV, and then EM will decrease to 0.24.

3.2. The coefficient of determination (adjusted $R^2$)

The coefficient of determination is used to describe the magnitude of the correlation value advance of the dependent variable to the independent variables. Adjusted $R^2$ is as follows:

**Table 2. Coefficient of determination (adjusted $R^2$)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3.039</td>
<td>6</td>
<td>.506</td>
<td>11.624</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>4.270</td>
<td>98</td>
<td>.044</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7.308</td>
<td>104</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: a. Predictors: (Constant), LEV, INST, ACMEET, MOWN, BOARDMEET, SIZE; b. Dependent variable: DAC.

$F$-test results can be seen in the Table ANOVA at significance column. This study uses the 5% significance level (0.05), where if sig. < 0.05, it can be stated that there is a significant difference simultaneously between the independent variables and the dependent variable. Significant value is 0.000, so it can be concluded that the variables INSTOWN, MOWN, BOARDMEET, ACMEET, SIZE, and LEV simultaneously have a significant influence on EM. This shows that if INST, MOWN, BOARDMEET, ACMEET, SIZE, and LEV increase, the EM will increase. Based on these explanations, $H1$ is accepted.

3.3. Hypotheses test

3.3.1. Simultaneous testing (F-test)

The $F$-test was conducted to determine the influence of the independent variables as together (simultaneously) in explaining the dependent variable. $F$-test value is as follows:

**Table 3. Simultaneous test**

Based on the results in Table 2 above, the coefficient of determination (adjusted $R^2$) is 0.646, or 64.6%, which means a combination of independent variables such as INST, MOWN, BOARDMEET, ACMEET, SIZE, and LEV which can explain the dependent variable (EM is proxied DAC) as 64.6%, while the remaining 35.5% is explained by other variables excluded from this study. The use of the value of adjusted $R^2$ in this study is more better than $R^2$ value. The value of $R^2$ will increase if there is an additional variable, but the value of adjusted $R^2$ can rise and fall based on the significance of the independent variables (Ghozali, 2009).

3.3.2. Partial testing (t-test)

The t-test was used to determine the effect of partially independent variables (individual) in explaining the variance of the dependent variable. Based on Table 3, the results of multiple regression analysis show the effect of each independent variable on the dependent variable:

1. **INST** has a positive regression coefficient of 0.00013 and sig. 0.891. This value is greater than significance level (0.891 > 0.05). It can be concluded that **INST** has no significant effect on EM, and $H2$ is rejected.

2. **MOWN** has a positive regression coefficient of 0.008 and significant 0.859. This value is greater than significance level (0.859 > 0.05). It can be concluded that the **MOWN** has no significant effect on EM, and $H3$ is rejected.
3. **BOARDMEET** has a negative regression coefficient of −0.045 and sig. 0.257. This value is greater than significance level (0.257 > 0.05). It can be concluded that **BOARDMEET** has no significant effect on EM, and H4 is rejected.

4. **ACMEET** has a negative regression coefficient of 0.018 and sig. 0.65. This value is greater than the level of significance (0.65 > 0.05). It can be concluded that **ACMEET** has no significant effect on EM, and H5 is rejected.

5. **SIZE** has a positive regression coefficient of 0.00046 and sig. 0.976. This value is greater than significance level (0.976 > 0.05). It can be concluded that **SIZE** has no significant effect on EM, and H6 rejected.

6. **LEV** has a negative regression coefficient of −0.24 and sig. 0.023. This value is smaller than significance level (0.023 < 0.05). It can be concluded that **LEV** has significant effect on EM, and H7 is accepted.

4. **DISCUSSION OF RESULTS**

4.1. Effect of institutional ownership on earnings management

**INST** in this study was measured by the percentage of outstanding shares ownership institutionally. The results of this study prove that **INST** has no significant effect on EM; **INST** has no significant effect on EM. The results support of Guna and Herawaty (2010) and Rice (2013). Based on these results, institutional investors do not act as sophisticated investors, that is, capable of monitoring the management of the company to create value in the long term, but investors are acting as the owner while focusing on current earnings (Yang et al., 2009). It is very possible to lead managers compelled to meet the profit goals of the investors and then they do of EM. The results of this study differ to those of Jao and Pagalung (2011). According to the results, **INST** may limit the actions of EM significantly due to institutional investors acting as an investor is sophisticated so that it can perform monitoring functions more effectively and do not believe in manipulation by managers as management actions profits, so the existence of **INST** can reduce EM. The different results between this study to Jao and Pagalung (2011) can be caused either because the difference in the sample studied. This study used a sample of 21 companies that entered into the ranks of LQ 45, while Jao and Pagalung (2011) use a sample of manufacturing firms comprising as many as 28 companies.

4.2. The effect of managerial ownership on earnings management

**MOWN** is measured with a dummy, which the company has the **MOWN** score 1, and companies do not have **MOWN** score 0. These results indicate that **MOWN** has not significant effect on DAC. It means the **MOWN** can not reduce EM actions significantly. The results support by Guna & Herawaty (2010), and Agustia (2013). Causes of **MOWN** can not reduce of EM are (1) managers who own the company shares have tendency to make a policy to manage earnings in light of the desire of investors, for example, by increasing reported earnings and many investors are interested to invest and it will raise the stock price of the company (Agustia, 2013), (2) management who own the company share and, management will be opportunistic, where the management will try to increase profits by manipulating earnings for the purpose of their self-interest.

The result of this study contradict to those of Jao and Pagalung (2011), Kusumawardhani (2012), and Anggana and Prastiwi (2013). All three of these studies use the manufacturing companies as a sample. In measuring of **MOWN**, the three studies are using of the percentage of share owned by management. This can be the reason for the disparity of the results of this study. According to the results of the three studies, the **MOWN** will harmonize or unify the interests of managers and shareholders, thereby reducing opportunistic behavior. The manager will come to feel the benefits of the decision and bear the losses as a consequence of making the wrong decision. **MOWN** have seen to align the potential difference between the interests of shareholders with management (Jensen & Meckling, 1976), and then the problem will disappear when the agency assumed a manager also as an owner. The greater the proportion of **MOWN**, the harder management tends to try to meet the interests of shareholders as well, including their self-interested.
4.3. Effect of frequency meeting of board of commissioner on earnings management

BOARDMEET in this study were measured with a dummy variable, which the company considered BOARDMEET then given a value of 1, and the company categorized meeting rarely rated 0. The results of this study stated that BOARDMEET has no significant effect on EM. It means BOARDMEET do not significantly reduce the EM. The results support Prastiti and Meiranto (2013). Board of commissioners cannot reduce of EM due to (1) the board of commissioner is the body that they part-time, (2) only met once in a while, (3) do not know well with each other, (4) less experience in business filed and (5) more 50 years old. The board of commissioners may also not have the time and expertise necessary to understand in detail the company’s business, so it can not perform oversight functions effectively. Supervision less than commissioners will encourage management to commit fraud such as EM. The results of this study contrast with Chen et al. (2006). These differences can result due to differences in the measurement of the variables, and the sample of companies as research object. Chen et al. (2006) measured BOARDMEET with the absolute value of the number of board meetings, besides, the object used is a company located in China. According to the research findings, BOARDMEET could reduce the EM, because by doing meetings regularly, allowing the commissioners to identify and resolve potential problems, especially related to the quality of financial reporting, so that management will be more restrictive measures of EM. The results of this study differ from those of Xie et al. (2003). The AC meeting on a regular basis would be a better watchdog overseeing the financial reporting process. With the AC effective oversight, it will protect management to do the fraud such as EM. Differences in results of the study of Xie et al. (2003) may be due to differences in measurement of ACMEET, where the study was to measure with a dummy variable, while Xie et al. (2003) measure the absolute value of the number of AC meetings. Other caused by research object and time period. This research, the research object is the LQ 45 Company and research period is from 2010 to 2014, while according to Xie et al. (2003), the research object is incorporated company in the S&P500 for period of 1992, 1994, and 1996.

4.4. Effect of frequency meetings of the audit committee on earnings management

ACMEET in this study were measured with a dummy variable, where companies often carry out an ACMEET is given a value of 1, while companies that rarely carry out an ACMEET is given a value of 0. The results of this study stated that the ACMEET has no significant effect on EM, which often means whether or not the ACMEET, then it can not reduce significantly EM actions. The results of this study are supported by Pamudji and Trihartati (2009) and Prastiti and Meiranto (2013). Results of the study indicate that ACMEET has no significantly effect to EM. It is caused by ACMEET is only mandatory regulatory advise the AC hold regular meetings at least once in three months. The AC has not carried out its duties and responsibilities to the maximum so that the function and its role to oversee the management is not effective (Prastiti & Meiranto, 2013). Sometimes, the AC members do not have accounting or financial academics background. This is what can be motive for the management to be able to manipulate, especially in financial reporting. The results of this study differ from those of Xie et al. (2003). The AC meeting on a regular basis would be a better watchdog overseeing the financial reporting process. With the AC effective oversight, it will protect management to do the fraud such as EM. Differences in results of the study of Xie et al. (2003) may be due to differences in measurement of ACMEET, where the study was to measure with a dummy variable, while Xie et al. (2003) measure the absolute value of the number of AC meetings. Other caused by research object and time period. This research, the research object is the LQ 45 Company and research period is from 2010 to 2014, while according to Xie et al. (2003), the research object is incorporated company in the S&P500 for period of 1992, 1994, and 1996.

4.5. Effect of company size on earnings management

SIZE in this study was measured by Ln of the total assets of the company. The result of this study explains that SIZE is not a significant effect on EM. It means size of company does not affect on the company motive to perform EM significantly. This result is supported by Nasution and Setiawan (2007), and Pambudi and Sumantri (2014). Large-sized company will reduce EM action, because large companies are always considered by the people so that they will be more careful in its financial reporting (Effendi & Daljono, 2013). This is because the financial statements published by the large scale company are usually more transparent than the small-scale company. The more transparent in presenting the financial statements will minimize the opportunity for management to perform the EM. The results of this study differ to those of Yendrawati and Setyo (2012). This difference may be due to measurement of firm size. In this study, SIZE is measured.
by Ln total assets, while according to Yendrawati and Setyo (2012), SIZE is measured by Ln total sales. The different results are caused also by differences of sample and time, where Yendrawati and Setyo (2012) examined the LQ 45 Company from year 2008 to 2010. The results also contradict the theory of Moses (1997). The theory suggests that a larger company has a greater impetus to EM compared with small companies. It is caused by large companies having political costs greater than that of large enterprises have the potential to make a EM, because large companies have operational activities more complex than small enterprises, making it possible to perform the EM.

4.6. Effect of leverage on earnings management

LEV is measured by ratio of the DER. The results of this study stated that leverage has a significant effect on EM. Results from this study illustrates that companies with a high LEV, where most assets are financed by debt, hence significantly will tend to act of EM. The results are supported by Guna and Herawaty (2010) and Agustia (2013). These results are supported by debt covenants hypothesis by Watts and Zimmerman (1986), which states that companies that have a ratio value high LEV can perform EM by lowering or raising profits. It caused by the closer the company to breach its debt agreements based accounting, allowing managers companies to choose accounting procedures move reported earnings from future periods to the current period. With a value of greater profits, it will reduce the chances of the company’s inability to pay its debts in the future. These results are differing to research of Jao and Pagalung (2011), and Pambudi and Sumantri (2014). Companies has the high leverage level due to the amount of total DER will face a high default risk that threatened the company was unable to meet its obligations. EM measures can not be used as a mechanism to avoid such a default. Fulfillment of obligations must still be done and can not be avoided with EM (Jao & Pagalung, 2011).

CONCLUSION AND REMARKS

Based on the results and discussion of this research, it can be concluded that:

- INST, MOWN, BOARDMEET, ACMEET, SIZE and LEVERAGE have a simultaneous significant influence on EM.
- INST has no significant effect on EM. As institutional investors do not act as sophisticated investors, and focus on current earnings, the management is forced to increase the short-term profit.
- MOWN has no significant effect on EM. The management can intervene in reporting the performance of companies that aim to the company’s interests or the interests of the management itself.
- BOARDMEET has no significant effect on EM. The limited time and the expertise of the board of commissioners to oversee the performance of management in the company.
- ACMEET has no significant effect on EM. The AC e meeting is mandatory only against the rule set, and then the role of AC in performing oversight functions have not been effective to reduce EM action.
- SIZE has no significant effect on EM. The due to large-sized companies are more public attention that would be more cautious in their financial reporting.
- LEV has a significant effect on EM. The companies have high leverage ratios, debt covenant and closed to debt violations would raise income in order to gain confidence from investor that the company is unable to repay its debts.

Research limitations

This study has limitations that need improvement and development in subsequent studies. The limitations of this study are:

- The independent variables were used in this study was limited to six variables: INST, MOWN, BOARDMEET, ACMEET, SIZE and LEV.
- Samples were LQ 45 companies, and there are only 21 companies with a total 105 observation data.
Suggestions

• Advice that can be given related to the results of this study include:
• Next researcher can add other variables such as financial expertise commissioners and the financial expertise of the AC to be re-examined in future studies.
• Future researcher can investigate all the companies listed on the IDX in order to obtain more samples so that the results of research can be generalized.

Theoretical implications

Theoretically, the results of this study can be used as additional knowledge about the factors that influence DAC action. The result is expected to be a reference for further researches.

Practical implications

This research has practical implications for management and investors. For management, the results of this study can provide information about what factors are protecting the EM, one of them by the GCG, although the results of this study explain that GCG has no significant effect on EM. It is expected that management can optimize the mechanism of GCG in the company, so that these mechanisms can function properly. For investors, this study also provides information about the factors that can trigger management to do the EM as SIZE and LEV. Investors who will invest are expected to be wary of companies that have a high debt ratio, because the company is likely to make a EM to keep getting capital.

REFERENCES


