CORPORATE GOVERNANCE, INFORMATION ASYMMETRY, AND EARNINGS MANAGEMENT

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Abstract

The purpose of this study is to investigate the relationship between corporate governance, information asymmetry, and earnings management. Prior research indicates that information asymmetry negatively correlated with earnings management (Richardson, 2001). As predicted, this study also found negative correlation between bid-ask spread, as a proxy of information asymmetry, and discretionary accruals, as a proxy of earnings management. In addition, we also test whether corporate governance mechanisms will impact the level of discretionary accruals and eventually affect firm value. We use several variables as proxes of corporate governance mechanisms such as institutional ownership, audit quality, independent board, and existence of audit committee. We found that audit committee has significant negative relation with discretionary accruals. This indicates that audit committee existence is effectively constraining the level of earnings management.

This study also has that proportion of independent board and existence of audit committee increase the positive relationship between discretionary accruals and stock return. These indicates that earnings management conducted by firms having higher proportion of independent board and firms having audit committee will be valued higher by the market.

Keywords: corporate governance, information asymmetry, earnings management, firm value.

INTRODUCTION

Research Background

Corporate governance has been an interesting topic for research at present. Poor corporate governance has also been cited as one of the causes of the East Asian financial crisis of 1997-1998 (Stiglitz, 1998; Harvey and Roper, 1999; Greenspan, 1999), including Indonesia. Recent research has highlighted the importance of corporate governance in emerging markets. La Porta et al. (1997, 1998, 1999, 2000) demonstrate that, across countries, corporate governance is an important factor in financial market development and firm value.

Though corporate governance is important, currently measurement index for good corporate governance is not available in Indonesia. There is no single, independent institution can rule out criteria to develop corporate governance index that will be used to rank the implementation of corporate governance in public companies. Indonesian Institute for Corporate Governance (IICG), is one of institution which came up with corporate governance index for public companies in Indonesia. Unfortunately, IICG has only evaluated around 30 public companies out of more than three hundred listed companies in Indonesia.

Company with good index of corporate governance practice is supposed to reveal every relevant information to its stakeholders, including current and potential investors, creditors, government and other parties. This practice will eventually reduce asymmetry information between the principal (i.e. the stakeholders) and the agent (i.e. the company itself).

Asymmetry information was a condition where one party had more information than the others. This condition will result in moral hazard and adverse selection as cited in positive accounting theory. This in turn will disadvantage the whole participants in market and distort the economic condition.

Financial reporting was meant to reduce asymmetry information between the company and its stakeholders. The objective of financial reporting was to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions. However, preparing financial statement will require a lot of judgments and estimation. This provides flexibility for management to manage earnings for their own advantages. Positive accounting theory refers to this practice as opportunistic earnings management. Corporate governance will provide mechanism to limit the flexibility given by the accounting standard in order to prevent opportunistic earnings management.

Accordingly this research is directed towards revealing any relation among the related variables, which are corporate governance, information asymmetry, firm value and earnings management.

Research Problem

Research Questions:
1. Do corporate governance mechanisms affect the level of earnings management?
   Corporate governance mechanisms are supposed to closely monitor the management discretion toward selection of accounting policies. This eventually will reduce opportunistic earnings management since managers are obliged to reveal reasons behind selection of accounting policies. On the other hand, if earnings management is efficient, corporate governance mechanisms may support that kind of earnings management.
2. Do corporate governance mechanisms affect the level of information asymmetry?
   Information asymmetry occurs when outside parties have less information compared to management. Corporate governance mechanisms are directed toward reducing information gap between external and internal parties, through increased disclosure and other means.
3. Do corporate governance mechanisms affect firm value?
   Firms, with good corporate governance should have more effective monitoring mechanism that will make the firm operate more efficiently and this in turn will improve firm value (Fuerst, 2000).

Research Contribution

Previous research had explained about the relationship between corporate governance and earnings management. This research contributes by adding variable, which represent asymmetry information. We include firm value to represent the impact of corporate governance in market.

LITERATURE REVIEW

Corporate Governance

La Porta et al. (2000) define corporate governance as a set of mechanisms through which outside investors protect themselves against expropriation by

insiders. The agency theory suggests that corporate insiders tend to expropriate outside investors. In particular, good corporate governance will constrain the degree of expropriation in bad times. Research on the 1997-1998 Asian financial crisis provides plenty of evidence. For example, Johnson et al. (2000) find that weak legal institutions for corporate governance can exacerbate the stock market decline in the 1997 financial crisis. Mitton (2002) finds that companies with better firm-level governance had better market performance during the Asian financial crisis, and Lemmon and Lins (2001) find that the measure of the likelihood of being expropriated is positively correlated with the decline of Tobin's Q ratios and stock prices during the crisis.

Several mechanisms contribute to the practice of corporate governance, such as board independence, existence of audit committee, audit quality, and institutional ownership.

The board of directors (BOD) is central to the link between corporate governance and performance of the management. Jensen (1993) contends that, while the ostensible role of the BOD is to provide high-level counsel and oversight to the management, corporate internal control problems often originate from the BOD itself. He attributes the BOD's governance failures to factors such as CEO's agenda-setting power, low equity ownership of the board members, overcrowding of the board, and a board culture that encourages consent rather than dissent. Independence of the board and the ownership of the board are two most often discussed attributes of the BOD. The role of outside directors is emphasized with respect to board independence. Fama (1980), Fama and Jensen (1983), and others argue that including outside directors as professional referees enhances the viability of the board and also reduces the probability of top management colluding to expropriate shareholder wealth. There is no general consensus on the perceived benefits of outside directors, however. For example, Crystal (1991) argues that since outside directors are essentially hired by the CEO, they are unlikely to assume an adversarial position to the CEO. Mace (1986) and Patten and Baker (1987) offer similar views. Byrd and Hickman (1992) note that a clever CEO may hire more outside directors to give shareholders a false impression of having a high-quality governance system. Weisbach (1988) finds that firms with outsider-dominated boards are more likely to remove the CEO than firms with insider-dominated boards. Byrd and Hickman (1992) report that, in the case of acquisitions, bidding firms dominated by outside directors (board with more than 50% of outside directors) have higher announcement-date stock price reaction than other bidding firms. Rosenstein and Wyatt (1990) report that announcements of outside director appointments are associated with positive excess returns. On the other hand, Yermack (1996) and

Mehran (1995) find no meaningful relation between the percentage of outside directors and financial performance or firm value. Hermalin and Weisbach (1991), and Bhagat and Black (1998) report similar results, showing little correlation between various measures of board composition and firm performance. In a related study, Core et al. (1999) report that the CEO is paid more if the board has more outside directors, indicating that outsider-dominated board may not be as effective a monitoring device as argued by many.

Audit committee is another corporate governance mechanism. The audit committee must be composed of entirely non executive members to be effective. A major shortcoming of this criterion is that non executive may not be entirely independent of firm's management. The board of directors may choose non-executive audit committee members who have an affiliation or business ties with client firm and are less likely to be an effective monitor. However, non-executive audit committee should provide effective monitoring mechanism due to their independent nature. Therefore, their existence should improve the practice of good corporate governance in the firm, which in turn will reduce information asymmetry and opportunistic earnings management.

Audit quality according to DeAngelo (1981) is the probability an auditor will (1) discover fraud in accounting system and (2) report the fraud. Therefore audit quality should reinforce the quality of firm financial reporting and in turn will reduce information asymmetry between firm management and firm shareholders. Prior studies also report that good audit quality constrains opportunistic earnings management (Becker et al 1998, Francis et al 1999).

Institutional ownership is another corporate governance mechanism in the company. Institutions have the resources, abilities and opportunities to monitor and discipline managers to focus more on long-term appreciation of firm-values.

The business community has expressed concern about the increasing power of institutional investors in the market and their influence over corporate policies (El-Gazzar 1998). Nussbaum and Dobrzynski (1987) report that institutions hold blocks of securities and continually monitor corporate performance. Institutions with a large stock ownership within a firm are likely to trigger more voluntary disclosures by managers of that firm and can impose their investment objectives on firms by introducing motions and proposals at annual meetings, which counter management policies (Hessel and Norman 1992).

Institutions with substantial investment in a firm's common stock have heightened incentives to monitor firm-management. Firms having concentrated institutional shareholdings experience greater institutional monitoring and as a consequence, have lower flexibility to use accruals to manage earning. According to the Financial Economists Roundtable Statement on Institutional Investors and

Corporate Governance (1999), with an increase in institutional investment in an entity, the institutional interest to monitor management actions increases because of the increasingly large economic stakes. Substantial ownership provides strong incentives to institutions to actively monitor and influence management actions and its various policy decisions.

Information Asymmetry

Bhattacharya & Spiegel (1991) suggest that information asymmetry caused an unwillingness to trade and increases the cost of capital as investors "price protect' themselves against potential losses from trading with better informed market participants. Lev (1998) argues that observable measure of market liquidity be used to identify the perceived level of information asymmetry facing participants in equity markets. Bid ask spreads are one such measure of market liquidity that has been used extensively in previous research as a measure of information asymmetry between management and firm shareholders. As evidence of the ability of bid ask to capture information environment of the firm is provided by Healy et al (1995) who report evidence of negative relationship between bid ask spread and the firm disclosure policy.

Gul & Qiu (2002) shows that firms in countries with strong legal protection/law enforcement and corporate governance are associated with lower information asymmetry. Firms in countries with more developed markets are also associated,with lower information asymmetry.

Analytical models have demonstrated that the existence of information asymmetry between firm management and firm shareholders is a necessary condition for the practice of earnings management. However there has been little empirical work investigating this relationship. Lobo & Zhou (2001) argues that there is a positive relationship between information asymmetry and earnings management.

The magnitude of information asymmetry affects the magnitude of earnings management practiced by firm managers. When information asymmetry is "high", stakeholders do not have the necessary information to "look through" the manipulated earnings. Earnings management may also result when shareholders have insufficient resources, incentives, and access to relevant information to monitor managers' actions, which may give rise to the practice of earnings management (Warfield et al, 1995).

Earnings Management

The nature of accrual accounting gives managers a great deal of discretion in determining the actual earnings a firm reports in any given period. Management has considerable control over the timing of actual expense items (e.g., advertising expenses or outlays for research and development). They also can to some extent alter the timing of recognition of revenues and expenses by, for example, advancing recognition of sales revenue through credit sales, or delaying recognition of losses by waiting to establish loss reserves (Teoh et al., 1998a).

In many companies, managers are compensated both directly (in terms of salary and bonus) and indirectly (in terms of prestige, future promotions, and job security) depending on a firm's earnings performance relative to some pre-established benchmark. This combination of management's discretion over reported earnings and the effect these earnings have on their compensation leads to a potential agency problem. Beyond the management compensation problem, earnings management may impact investors by giving them false information. Capital markets use financial information to set security prices. Investors use financial information to decide whether to buy, sell, or hold securities. Market efficiency is based upon the information flow to capital markets. When the information is incorrect, it may not be possible for the markets to value securities correctly. Hence, we can view earnings management as an agency cost.

Firm Value

Firms with good corporate governance should have more effective monitoring mechanism that will make the firm operate more efficiently and this in turn will improve firm value, as reported by previous study (Fuerst, 2000).

Previous research had tried to formulate relationship between firm value and other factors related to corporate governance. Rosenstein and Wyatt (1990) report that announcements of outside director appointments are associated with positive excess returns. On the other hand, Yermack (1996) and Mehran (1995) find no meaningful relation between the percentage of outside directors and financial performance or firm value. In a related study, Core et al. (1999) report that the CEO is paid more if the board has more outside directors, indicating that outsider-dominated board may not be as effective a monitoring device as argued by many.

Board size is often linked to BOD effectiveness. Jensen (1993) argues that an "overcrowded" board is less likely to function effectively and is easier for the CEO to control. They thus recommend limiting the board size to fewer than seven

or eight. Empirically, Yermack (1996) finds an inverse association between board size and firm value (Tobin's Q).

RESEARCH METHOD

Hypothesis Development

Lobo & Zhou (2001) argues that there is a positive relationship between information asymmetry and earnings management. When information asymmetry is high, stockholders do not have the necessary information to discover earnings management. There are two types of earnings management: efficient and opportunistic. From efficient perspective, management will conduct earnings management (positive relationship) in order to decrease information asymmetry. But from opportunistic perspective, this situation could induce management to engage in earnings management (also positive relationship) to exploit it for their self-interest. As Richardson (1998), we use bid-ask spread as a proxy for information asymmetry.

H1a : Bid-ask spread has positive relationship with the level of discretionary accruals

Bushee (1998) finds that institutional inventors create less incentive for management to cut research and development expenditures to attain short-term target, which indicated that institutional investors play a role in monitoring management actions. Jiambalvo et al. (1999) find that absolute discretionary accruals have negative association with institutional ownership. Balsam et al. (2000) conclude that because institutional investors have access to more timely and relevant information, they could identify earnings management faster and easier than non institutional investors. The results of these studies suggest that there is feedback effect from institutional ownership in monitoring earnings management activity. We expect that if EM is efficient, higher institutional ownership will increase discretionary accruals and if opportunistic, it will decrease discretionary accruals.

H1b : Institutional ownership affects the level of discretionary accruals

We argue that the existence of corporate governance practices in a firm will limit opportunistic earnings management. In our study we use audit quality, proportion of independent board, and audit committee as a proxy for corporate governance practices. Becker et al. (1998) and Francis et al. (1999) use auditor size as a proxy for audit quality. They find that earnings management in firms

audited by big 6 auditors is smaller than in firms audited by non big 6 auditors. Chtourou et al. (2001) find that independent board will constrain earnings management activity. Klein (2002) concluded that less independent the audit committee will increase discretionary accruals. We expect that expect that the higher audit quality, the higher the proportion of board independent, and the existence of audit committee will restrain opportunistic EM and will support efficient EM.

H1c : The level of discretionary accruals in firms audited by Big 4 is different from the level of discretionary accruals in firms audited by non Big 4.

H1d : Proportion of independent board affects the level of discretionary accruals

H1e : The level of discretionary accruals in firms with audit committee is different from the level of discretionary accruals in firms without audit committee

As explained in hypothesis 1a, efficient earnings management will lower information asymmetry, while opportunistic earnings management will increase information asymmetry.

H2a : Level of discretionary accruals has relationship with bid-ask spread

Institutions with substantial investment in a firm's common stock have heightened incentives to monitor firm-management. According to he Financial Economists Roundtable Statement on Institutional Investors and Corporate Governance (1999), with an increase in institutional investment in an entity, the institutional interest to monitor management actions increases because of the increasingly large economic stakes. Substantial ownership provides strong incentives to institutions to actively monitor and influence management actions and its various policy decisions. Hence, we suggest that the monitoring role of institutional investors will lower the information asymmetry.

H2b : Institutional ownership has negative relationship with bid-ask spread

We argue that the existence of corporate governance practices in a firm will provide other monitoring mechanisms, which in turn will lower information asymmetry.

H2c : Bid-ask spread in firms audited by Big 4 is lower than bid-ask spread in firms audited by non Big 4.

H2d : *Proportion of independent board has negative relationship with bid-ask spread*

H2e : *Bid-ask spread in firms with audit committee is lower than bid-ask spread in firms without audit committee*

The results of previous studies (Bushee, 1998; Jiambalvo et al, 1999; Balsam et al., 2000) suggest that there is feedback effect from institutional ownership in monitoring earnings management activity. They will have active monitoring role, which in turn will constraint opportunistic earnings management. Consequently, market will value this positively. Therefore, we formulate this following hypothesis.

H3ai : *Institutional ownership will increase positive relationship between discretionary accruals and stock return*

H3aii : *Institutional ownership will increase positive relationship between discretionary accruals and Tobin's q*

The same concept applies for corporate governance. Corporate governance practices will provide monitoring mechanisms, which will restrain opportunistic earnings management. Hence, it will increase market valuation on firms' earnings management.

H3bi : *Relationship between discretionary accruals and stock return is higher in firms audited by Big 4 than that in firms audited by non Big 4*

H3bii : *Relationship between discretionary accruals and Tobin's q is higher in firms audited by Big 4 than that in firms audited by non Big 4*

H3ci : *Proportion of independent board will increase positive relationship between discretionary accruals and stock return*

H3cii : *Proportion of independent board will increase positive relationship between discretionary accruals and Tobin's q*

H3di : *Relationship between discretionary accruals and stock return is higher in firms with audit committee than that in firms without audit committee*

H3dii : *Relationship between discretionary accruals and Tobin's q is higher in firms with audit committee than that in firms without audit committee*

Research Model

We use three independent models to test whether variables of corporate governance will influence the level of discretionary accruals, information asymmetry, and firm's performance. While in the same time we also test the

possibility of relationship between earnings management and information asymmetry.

Model to test hypotheses 1:

$$\text{ABSDAC}_{it} = \alpha_0 + \alpha_1 \text{BIDASK}_{it} + \alpha_2 \text{INST}_{it} + \alpha_3 \text{AUDIT}_{it} + \alpha_4 \text{BOD}_{it} \\ + \alpha_5 \text{AUDCOM}_{it} + \alpha_6 \text{SIZE}_{it} + \alpha_7 \text{DEBT}_{it} + \alpha_8 \text{GROWTH}_{it} + \varepsilon \qquad (1)$$

Where:

ABSDAC	=	**the absolute value of discretionary accrual**
BIDASK	=	**mean bid-ask spread at the end of the month for 12 period ending March 31.**
INST	=	**proportion of institutional ownership**
BOD	=	**proportion of independent board**
AUDCOM	=	**existence of audit committee**
AUDIT	=	**dummy variable for audit quality, 1 for big 4 firms and 0 for others**
SIZE	=	**natural logarithm of market capitalization**
DEBT	=	**ratio of total debt to total asset**
GROWTH	=	**sales growth**

Expectation: $\alpha_1 > 0$, $\alpha_2 \neq 0$, $\alpha_3 \neq 0$, $\alpha_4 \neq 0$, $\alpha_5 \neq 0$

As per the arguments presented above, α_1 should be positive and significantly different from zero; α_2, α_3, α_4 and α_5 might be positive or negative and significantly different from zero.

Based on previous empirical evidence (Albrecth & Richardson, 1990; Lee & Choi, 2002), we include SIZE as one of control variables. We expect that the large firms are less likely to manage earnings opportunistically and more likely to engage in efficient EM, than small firms, hence SIZE coefficient is predicted can be positive or negative ($\alpha_6 \neq 0$).

DEBT is included as controlling variable because prior research (Richardson 1998; Mitra 2002) find that it infulence the level of discretionary accruals. DEBT coefficient is predicted to be positive ($\alpha_7 > 0$).

McNichols (2000) finds that growth has incremental power in explaining discretionary accruals (DAC) calculated from the Jones or the modified Jones model. Firms with high growth exhibit high DAC adjustments that might be correlated with firm performance rather than incentives to manipulate earnings. This finding indicates that high-growth firms are likely to exhibit positive DAC and that a comparison of such firms with low-growth firms can lead to a

conclusion of greater earnings management by high-growth firms. In view of high growth, the DAC adjustment may be the result of unusual business operations, not the result of managerial discretion. Unless this variable is controlled, the result may lead to an erroneous conclusion regarding earnings management (Mitra, 2002). GROWTH coefficient is predicted to be positive ($\alpha_8 > 0$).

Model to test hypotheses 2:

$$BIDASK_{it} = \alpha_0 + \alpha_1 ABSDAC_{it} + \alpha_2 INST_{it} + \alpha_3 AUDIT_{it} + \alpha_4 BOD_{it} + \alpha_5 AUDCOM_{it} + \alpha_6 SIZE_{it} + \alpha_7 STDRET_{it} + \alpha_8 TRADVOL_{it} + \varepsilon \quad (2)$$

Expectation: $\alpha_1 \neq 0$, $\alpha_2 < 0$, $\alpha_3 < 0$, $\alpha_4 < 0$, $\alpha_5 < 0$
Where:
STDRET   =   standard deviation of daily stock return during test period
TRADVOL =   average trading volume during test periode
Other variables as defined previously.

For the second model, discretionary accruals should have positive significant correlation with bid-ask as a proxy of information asymmetry. Therefore, α_1 should be positive. And since element of corporate governance should lower the information gap, However α_2, α_3, α_4, and α_5 should be negative and significantly different from zero since element of corporate governance should lower the information gap between management and users of financial statements.

As in Richardson (1998), we include several control variables, which has been shown in previous research as being explanatory determinants of bid-ask spreads. Firm size is often used as a proxy of information availability in the market. Information on large firms should be more available in the market than that of small firms. STDERT is included in order to capture the disagreement or dispersion in beliefs of the market. If information asymmetry is high, investors will be reluctant to trade on company's stock. Coefficient of SIZE, STDRET, TRADVOL is expected to be negative ($\alpha_6 < 0$), positive ($\alpha_7 > 0$), and negative ($\alpha_6 < 0$), respectively.

Model to test hypotheses 3:

$$RET_{it} = \beta_0 + \beta_1 CFO_{it} + \beta_2 NDAC_{it} + \beta_3 DAC_{it} + \beta_4 DAC_{it}*INST_{it} + \beta_5 DAC_{it}*AUDIT_{it} + \beta_6 DAC_{it}*BOD_{it} + \beta_7 DAC_{it}*AUDCOM_{it} + \beta_8 SIZE_{it} + \beta_9 BM_{it} + \beta_{10} EP_{it} + \varepsilon \quad (3a)$$

$$TQ_{it} = \beta_0 + \beta_1 CFO_{it} + \beta_2 NDAC_{it} + \beta_3 DAC_{it} + \beta_4 DAC_{it}*INST_{it}$$
$$+ \beta_5 DAC_{it}*AUDIT_{it} + \beta_6 DAC_{it}*BOD_{it} + \beta_7 DAC_{it}*AUDCOM_{it} + \varepsilon \quad (3b)$$

Expectation: $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 > 0$, $\beta_6 > 0$, $\beta_7 > 0$
Where:
RET = **market adjusted return**
CFO = **cash flows from operation**
NDAC = **non discretionary accruals**
DAC = **discretionary accruals**
TQ = **Tobin's Q**
Other variables as defined previously.

This model tries to seek relationship between discretionary accruals and firms return and Tobins' q, as a proxy for firms' performance. Market will react positively when accruals are controlled by the existence of other parties such as institutional investors, big audit firm, independent board and audit committee. Consequently, interacting variables i.e. β_4, β_5, β_6, and β_7 should be positive and significantly different from zero.

SIZE, BM and EP are variables that represent risk (Fama & French, 1992). Coefficient is expected to be positive ($\beta_8 > 0$, $\beta_9 > 0$, $\beta_{10} > 0$)

Sample Selection

The sample for the study is comprised of all firms listed on BEJ that are non-regulated and non-financial in nature. In addition, the firms selected have fiscal year end of December 31. The sample period is from 2000 through 2002. The following criteria are applied in selecting firms for the sample:
1. Firms have a December 31 fiscal year-end.
2. The data on the variables used in the models are available for each year in the sample period.
3. Financial, telecommunication, and real estate and property companies are excluded.
   Based on criteria listed above, we select 144 firms as our samples.

Variables Operationalization

Corporate Governance

1. **Institutional Ownership** is ownership by financial institutional, such as insurance companies, bank, pension, and investment banking (Koh, 2003).

Proportion of institutional ownership is calculated by dividing number of shares owned by institutional investors by total number of shares outstanding.

2. **Board independence**: prportion of independent board is calculated from total number of independent board divided by board size. It is gathered from BEJ Independent Board Announcement.

3. **Audit committee**: a dummy variable, where 1 for firms with audit committee in accordance with BEJ rule and 0 for otherwise. The existence of audit committee is gathered from BEJ Audit Committee Announcement.

4. **Audit quality** is proxy by auditor size, where the companies whose audit done by Big 4 are considered have high audit quality and the companies whose audit done by Non Big 4 are considered have low audit quality.

Information Asymmetry

Information asymmetry is measured using mean of bid-ask spread at the end of month for 12 period ending March 31.

Earnings Management

Earnings management is measured using discretionary accruals. Our approach in decomposing accruals into nondiscretionary and discretionary component is based on the modified Jones model in Kasznik (1999):

$$ACCR_t/TA_{t-1} = \alpha [1/TA_{t-1}] + \beta [\Delta REV_t/TA_{t-1} - \Delta REC_t/TA_{t-1}] + \gamma [PPE_t/TA_{t-1}] + \delta [CFO_t/TA_{t-1}] + e_t$$

Where:

$ACCR_t$	= **total accrual (net income before extraordinary items less cash flow from operation)**
ΔREV_t	= **change in sales revenue in year t**
ΔREC_t	= **change in net receivables in year t**
PPE_t	= **gross value of property, plant, and equipment in year t**
TA_{t-1}	= **total assets previous year**
CFO_t	= **cash flow from operation**

Where the fitted value is the nondiscretionary accruals and the residual is the discretionary accruals.

For sensitivity analysis purpose, we will use another model to compute discretionary accruals:

1. **Jones (1991)**
   $$ACCR_t/TA_{t-1} = \alpha_1 [1/TA_{t-1}] + \alpha_2 [\Delta REV_t /TA_{t-1}] + \alpha_3 [PPE_t/TA_{t-1}] + e_t$$

2. **Dechow et al. (1995):**
   $$ACCR_t/TA_{t-1} = \alpha_1[1/TA_{t-1}] + \alpha_2[\Delta REV_t/TA_{t-1} - \Delta REC_t/TA_{t-1}] + \alpha_3 [PPE_t/TA_{t-1}] + e_t$$

Firm value

1. Return.
   Return is measured using market adjusted return, which is the difference between firm cumulative return and market return, for 12 months ending 3 months (March 31) after fiscal year end.

2. Tobin's q
   Tobin's q = (MVCS + BVD) / BVTA
   Where:
   MVCS   = the market value of the firm's common stock shares;
   BVLTD = the book value of the firm's debt;
   BVTA   = the book value of the firm's total assets.

EMPIRICAL RESULT

Preliminary Analysis

This research aims to convey relation between corporate governance, information asymmetry, and earnings management. The first and second model is designed to reveal if discretionary accruals as proxy of earnings management correlates significantly with bid ask spread as a proxy of information asymmetry. Model 1 and model 2 is developed to test if any relation exists.

Model 1:

$$ABSDAC_{it} = \alpha_0 + \alpha_1 BIDASK_{it} + \alpha_2 INST_{it} + \alpha_3 AUDIT_{it} + \alpha_4 BOD_{it} + \alpha_5 AUDCOM_{it} + \alpha_6 SIZE_{it} + \alpha_7 DEBT_{it} + \alpha_8 GROWTH_{it} + \varepsilon \qquad (1)$$

Model 2:

$$BIDASK_{it} = \alpha_0 + \alpha_1 ABSDAC_{it} + \alpha_2 INST_{it} + \alpha_3 AUDIT_{it} + \alpha_4 BOD_{it} + \alpha_5 AUDCOM_{it} + \alpha_6 SIZE_{it} + \alpha_7 STDRET_{it} + \alpha_8 TRADVOL_{it} + \varepsilon$$

These models should be regressed using two-stage least square (2 SLS) provided if Haussman test prove that simultaneity exist between the models. However, Haussman test provides insignificant result, which proves that simultaneity does not exist; therefore these models will be regressed separately.

Regression Result

Descriptive statistics for models 1 and 2 is provided in Table 1, while Table 2 and 3 report results for regression (1) and (2). Descriptive statistics shows that, the average for institutional ownership is only 8,58%, which indicates that institutional bodies have only small percentage of ownership in listed companies in Indonesia. Eventually this small percentage will not guarantee an effective control of the firms.

Table 1 Descriptive Statistics

	Mean	**Median**	**Maximum**	**Minimum**	**Std. Dev.**
ABSDAC	0.0809	0.0628	0.3968	0.0007	0.0771
BIDASK	0.8221	0.8047	13.2232	-12.0055	2.0316
INST	0.0858	0.0000	0.7737	0.0000	0.1548
BOD	0.3355	0.3333	0.8000	0.0000	0.1374
SIZE	11.8900	11.8886	16.6279	7.6709	1.7085
DEBT	0.7785	0.6604	5.3509	0.0392	0.6775
GROWTH	0.1229	0.0986	4.6492	-0.8953	0.4853
STDRET	0.0413	0.0377	0.1206	0.0000	0.0219
TRADVOL	10.4465	10.6010	17.4008	0.0000	3.7415

	Proportion of Dummy =1	**Proportion of Dummy = 0**
AUDIT	80.21%	19.79%
AUDCOM	60.07%	39.93%

ABSDAC = absolute value of discretionary accruals, BIDASK = the mean bid ask spread on the last trading of March scaled by the average of bid ask prices for 12 previous months., INST = proportion of institutional ownership, AUDIT = dummy variable for audit quality, 1 for big five audit form and 0 for others, BOD = proportion of independent board, AUDCOM = dummy variable for audit committee, 1 if audit committee exists and 0 for otherwise, SIZE= log of market capitalization, DEBT = ratio of total debt to total assets, GROWTH = growth of sales

Table 2 Regression Result of Equation (1)

Variable	Estimation	Coefficient	t-Statistic	p value	
C		0.1401	11.4687	0.0000	
BIDASK	a. +	0.0001	0.1043	0.9170	
INST	b. +/-	0.0350	17.2350	0.0000	***
AUDIT	c. +/-	-0.0073	-2.7994	0.0055	***
BOD	d. +/-	0.0032	0.2650	0.7912	
AUDCOM	e. +/-	-0.0170	-5.5427	0.0000	***
SIZE	+/-	-0.0060	-7.8721	0.0000	***
DEBT	+	0.0258	8.7968	0.0000	***
GROWTH	+	0.0014	0.4370	0.3313	

Dependent variable: ABSDAC = absolute value of discretionary accruals.
Independent variables: BIDASK = the mean bid ask spread on the last trading of March scaled by the average of bid ask prices for 12 previous months, INST = proportion of institutional ownership, AUDIT = dummy variable for audit quality, 1 for big four audit firm and 0 for others, BOD = proportion of independent board, AUDCOM = dummy variable for audit committee, 1 if audit committee exists and 0 if otherwise SIZE= log of market capitalization, DEBT = ratio of total debt to total assets, GROWTH = growth of sales N = 275, excluding outliers of three times deviation.
*** significant at α 1%   ** significant at α 5%   * significant at α 10%

Table 3 Regression Result of Equation (2)

Variable	Estimation	Coefficient	t-Statistic	p value	
C		0.2871	2.0321	0.0431	
ABSDAC	a. +/-	0.0056	0.0249	0.9801	
INST	b. -	-0.1228	-2.4216	0.0081	***
AUDIT	c. -	-0.0252	-0.4810	0.3155	
BOD	d. -	-0.1177	-0.8678	0.1932	
AUDCOM	e. -	-0.0081	-0.3908	0.3482	
SIZE	+	0.0042	0.4492	0.3269	
STDRET	+	1.0242	1.1862	0.1183	
TRADVOL	-	0.0406	7.7878	0.0000	***

Dependent Variable = BIDASK the mean bid ask spread on the last trading of March scaled by the average of bid ask prices for 12 previous months. Independent Variables: STDRET = deviation standard of return for 12 months ending March 31, TRADVOL = the average of trading volume for 12 months ending March 12, other variables as defined previously. N = 275, excluding outliers of three times deviation.

*** Significant at α 1%   ** significant at α 5%   * significant at α 10%

Most of firms included in the sample uses big. 4 accounting firms as auditors (80,21%) and 60.07% has audit committee as required by regulating board (Jakarta Stock Exchange). Mean (median) percentage of independent board members is about 33,55% indicating that composition of independent board appointed by sample firms is approximate the minimum percentage required by regulating board (which is 30%).

Table 2 presents regression summary statistics for equation (1). Coefficient on BIDASK is insignificantly different from zero. This result indicates that bid-ask spread might not be good indicators of information asymmetry. Other estimation for information asymmetry, which is used widely in other studies, is dispersion in analysts' forecast (Brown and Han, 1992). Unfortunately this data is not available in Indonesia.

Institutional ownership, INST, has significant positive correlation with discretionary accruals. The positive sign indicates that higher institutional ownership correlates with higher discretionary accruals. This findings, however, is different from other studies which shows negative correlation (Mitra, 2002; and Koh 2003). Negative relationship may indicate that institutional ownership constrain opportunistic earnings management. The negative coefficient is also found in Indonesia (Midiastuty & Machfoedz 2003).

Nevertheless, there are several possible explanations for positive relationship between institutional ownership and discretionary accruals. First, earnings management might also derived from "efficient" motive instead of "opportunistic" one. In this case institutional ownership might encourage firms to manage earnings for the sake of the company. Positive correlation might indicate "efficient" earnings management. Other explanation relates to monitoring function of institutional ownership as provided by previous findings (Bushee, 1998 and Cheng & Reitenga, 2001). Institutional ownership might have short term or long-term intention to hold their shares. Institution with short term holding intention might encourage firms to manage earnings in order to generate "better" current earnings at the expense of future earnings, as in "opportunistic" earnings management. And, this difference may stem from small proportion of institutional ownership in our sample compared to other studies.

Audit firms, however, have significant impact in controlling earnings management. AUDIT coefficient is negative and significantly different from zero. Firms audited by big 4 audit firms reported less discretionary accruals compares to firms audited by smaller firms. This finding is consistent with previous studies, Becker et al. (1998) and Francis et al. (1999).

Coefficient of Board of directors (BOD) is insignificantly different from zero. This insignificant result might indicate that the role of board of directors is ineffective. However, two years observation may not be sufficient to evaluate to role of board of directors in controlling earnings management. Audit committee (AUDCOM) has negative significant coefficient, which means firms having audit committee, reported lower discretionary accruals compares to firms with no audit committee. As for control variables, coefficient of DEBT is positive and significant as predicted.

Regression result of equation (2) shows that only coefficient of institutional ownership is significantly different from zero. Institutional ownership has positive significant coefficient, which indicates that firms with higher institutional investment have lower information asymmetry. Institutional ownership apparently performs efficient monitoring which eventually reduced information asymmetry. This result confirms the first hypotheses relating to earnings management. Institutional ownership, though correlates negatively with information asymmetry, has positive significant relationship with earnings management. This result indicates that institutional ownership encourages "efficient" earnings management and at the same time reduced the level of information asymmetry.

Other coefficients, ABSDAC, AUDIT, BOD, and AUDCOM are insignificantly different from zero. Two possible explanations are neither these variables significantly influence information asymmetry nor bid ask is a good estimation of information asymmetry. Coefficient of control variable TRADVOL is negative and significantly different from zero as expected. Firms with lower level of information asymmetry will have higher trading volume, as informed investors will likely to trade more.

Table 4 and 5 shows descriptive statistics of equation (3a). Coefficient of discretionary accruals appears to be insignificantly different from zero. The table also shows regression result on discretionary accruals interaction with institutional ownership and discretionary accruals interaction with audit firm. Interaction of discretionary accruals with institutional ownership and audit firm shows negative significant relationship with returns, contradicts with our previous hypothesis. It appears that firms with higher level of discretionary accruals and higher institutional ownership tend to have lower return. Market also reacts negatively for firms with higher level of discretionary accruals and audited by big 4 audit firms.

Equation (3a) reveals regression result using variables that represent interaction between earnings management and corporate governance variables, i.e. audit committee, proportion of independent board, as well as earnings

management and audit quality and institutional ownership. Table 5 Panel A shows that, as posited in equation (3), the DAC*INST interaction term and DAC*AUDIT interaction term has a negative association with market adjusted returns. While DAC*BOD has positive insignificant association with market adjusted returns, DAC*AUDCOM has positive significant relationship with market adjusted returns as predicted.

      Coefficient of interaction variable between discretionary accruals and institutional ownership is not consistent with regression result of equation (1) and (2). Findings from equation (2) show that institutional ownership has significant negative correlation with bid-ask spread as a proxy of information asymmetry. The result implies that institutional ownership reduced the level of information asymmetry between firms and outside parties. Reduced level of information asymmetry is assumed to be able to limit the level of discretion to manage earnings on "opportunistic" motive, therefore; provide basis for the existence of "efficient" earnings management.

Table 4 Descriptive Statistics

	Mean	Median	Maximum	Minimum	Std. Dev.
RET	0.0977	0.1259	1.4105	-1.2636	0.4344
TQ	1.129338	0.974101	4.831731	0.313267	0.675393
CFO	0.0679	0.0544	0.4307	-0.2783	0.1067
NDAC	-0.0457	-0.0399	0.1998	-0.3403	0.0719
DAC	-0.0022	0.0007	0.3968	-0.3859	0.1072
DAC*INST	0.0000	0.0000	0.2772	-0.1176	0.0226
DAC*AUDIT	-0.0047	0.0000	0.3968	-0.3859	0.0973
DAC*BOD	0.0004	0.0000	0.2381	-0.1560	0.0415
DAC*AUDCOM	0.0034	0.0000	0.3968	-0.3745	0.0836
SIZE	11.9661	11.9452	16.6279	8.1197	1.5991
BM	0.5581	1.1905	20.0000	-33.3333	5.4979
EP	0.1970	0.1304	12.5000	-8.3333	2.0741

RET = market adjusted return, TQ = Tobin's Q, CFO = cash flow from operating activities, NDAC = nondiscretionary accruals, DAC = discretionary accruals, DFAM = dummy variable for family ownership, 1 if firm is non conglomerate with high family ownership or 0 if otherwise., INST = proportion of institutional ownership, AUDIT = dummy variable for audit quality, 1 for big five audit form and 0 for others, BOD = proportion of independent board, AUDCOM = dummy variable for audit committee, 1 if audit committee exists and 0 if otherwise, SIZE = log of market capitalization, BM = book-to-market, EP = earnings-to-price.

Table 5 Regression Result of Equation (3)

Panel A: Return

Variable	Hypothesis	Coefficient	t-Statistic	p value	
C		-0.0163	-0.1884	0.8507	
CFO	+	0.4623	4.6603	0.0000	***
NDAC	+	0.0992	0.5584	0.2886	
DAC	+/-	0.7978	1.4226	0.1561	
DAC*INST	a. +	-1.7532	-2.8156	0.0027	***
DAC*AUDIT	b. +	-1.1018	-4.2689	0.0000	***
DAC*BOD	c. +	1.4390	1.1263	0.1306	
DAC*AUDCOM	d. +	0.6418	2.7152	0.0036	***
SIZE	+	0.0048	0.6541	0.2569	
BM	+	0.0019	0.6134	0.2701	
EP	+	0.0466	6.6815	0.0000	***

Dependent variable: RET = market adjusted return. Independent variables: CFO = cash flow from operating activities, NDAC = nondiscretionary accruals, DAC = discretionary accruals, DFAM = dummy variable for family ownership, 1 if firm is non conglomerate with high family ownership or 0 if otherwise., INST = proportion of institutional ownership, AUDIT = dummy variable for audit quality, 1 for big five audit form and 0 for others, BOD = proportion of independent board, BOD = percent of independent board, AUDCOM = dummy variable for audit committee, 1 if audit committee exists and 0 if otherwise, SIZE = log of market capitalization, BM = book-to-market, EP = earnings-to-price, other variables as defined previously.

N = 265, excluding outliers of three times deviation.

*** significant at α 1%   ** significant at α 5%   * significant at α 10%

However, interaction of institutional ownership and discretionary accruals do not correspond positively with market reaction, as shown in Table 5. There are several possible explanations for the inconsistency. Xie (2001) found that market misprice discretionary accruals. It is possible that market regards accrual as derived by opportunistic motive and reacts negatively toward it. Another possible explanation is that bid-ask spread might not be appropriate proxy for information asymmetry, hence; regression result of equation (2) might not be reliable. Meanwhile negative coefficient of DAC*AUDIT interaction term might indicates that the big 4 audit firms do not necessarily associated with higher quality audit.

Table 5 Regression Result of Equation (3)
Panel B: Tobin's Q

Variable	Hypothesis	Coefficient	t-Statistic	p value	
C		1.2399	80.1252	0.0000	
CFO	+	0.1983	2.8945	0.0021	***
NDAC	+	2.6056	14.1304	0.0000	***
DAC	+/-	0.7053	1.4842	0.1389	
DAC*INST	a. +	-1.5962	-4.9260	0.0000	***
DAC*AUDIT	b. +	-0.5519	-3.0225	0.0014	***
DAC*BOD	c. +	0.9884	0.9501	0.1715	***
DAC*AUDCOM	d. +	-0.2401	-1.6718	0.0479	**

Dependent variable: TQ = Tobin's Q.
Independent variables: as defined previously.
N = 265, excluding outliers of three times deviation.
*** significant at α 1% ** significant at α 5% * significant at α 10%

However, interaction of institutional ownership and discretionary accruals do not correspond positively with market reaction, as shown in Table 5. There are several possible explanations for the inconsistency. Xie (2001) found that market misprice discretionary accruals. It is possible that market regards accrual as derived by opportunistic motive and reacts negatively toward it. Another possible explanation is that bid-ask spread might not be appropriate proxy for information asymmetry, hence; regression result of equation (2) might not be reliable. Meanwhile negative coefficient of DAC*AUDIT interaction term might indicates that the big 4 audit firms do not necessarily associated with higher quality audit.

Interaction variable of earnings management and BOD shows insignificant association with market returns. This insignificant finding is consistent with regression result of equation (1) which shows that percentage of independent board has insignificant association with discretionary accruals. DAC*AUDCOM has significant positive relationship with market returns. Market tends to react positively towards earnings management within firms, which have audit committee as required by regulators. Control variable, EP, as a proxy of risk, also shows statistically significant positive relationship with market returns, as predicted.

Table 5 Panel B shows regression result of equation (3b). Coefficient of discretionary accruals appears to be insignificantly different from zero, consistent with regression result of equation (3a). Result on interaction variable DAC*INST and DAC*AUDIT is qualitatively similar with those using return as firm

performance. However, result on DAC*BOD and DAC*AUDCOM is not similar. DAC*BOD in both regression have positive coefficient, which insignificant in equation (3a) and significant in equation (3b). Contradictive result is on DAC*AUDCOM, which shows positive and significant coefficient in Panel A but in Panel B its coefficient, is negative and significant.

Sensitivity Analysis

One concern is on how to separate the discretionary part of accruals from the non-discretionary part. We reported above result under the Kasznik model (1999). Other available models, i.e. Jones model (1991) and modified Jones model (Dechow et al., 1995) is used to test robustness of the result (Regression results are available in author upon request). The result shows different findings. In relation with discretionary accruals as dependent variable (equation 1), BIDASK and INST shows significant relationship. Consistent with Kazsnik model, institutional ownership shows positive coefficient. However, regression for bid ask shows different sign with Kazsnik model as previously explained. Using Dechow model, bid ask and audit committee shows significant association with discretionary accruals. The sign for audit committee coefficient is consistent with Kazsnik model, while bid ask shows contradictive sign.

Sensitivity analysis for regression result of equation (2) shows that the only variable consistent with Kasznik model is institutional ownership. This variable shows negative significant relationship with bid ask spread as a proxy of information asymmetry. We also find that market does not respond positively toward discretionary accruals using the three models. Under Kasznik and Jones model, coefficient of discretionary accruals is negative and insignificantly different from zero. Dechow model shows that discretionary accruals have negative and significant relationship with market returns and Tobin's Q, which confirms market negative views of discretionary accruals.

Relatively different results among discretionary accruals measurement model may indicates that the ability of these models to separate discretionary and non discretionary models is still questionable.

CONCLUSION, LIMITATION, AND SUGGESTION FOR FUTURE RESEARCH

Conclusion

Our study examines whether corporate governance mechanisms are related to both earnings management and information asymmetry. In this study, we use institutional ownership, audit quality, independent board, and existence of audit committee as proxy for corporate governance mechanism. In relation to earnings management, we find institutional ownership is positively associates with earnings management. Meanwhile audit quality and existence of audit committee is proved to be negatively associated with earnings management. Result from regression models suggest that firms with higher institutional ownership are related to higher earnings management, on the other hand the existence of audit committee and big 4 audit firms limit management discretion to manage earnings. However, these findings are mixed as explained in sensitivity analysis. Control variable, leverage, is the only variable whose coefficient remained significantly different from zero.

Institutional ownership has negative significant relationship with information asymmetry. This result proves to be consistent considering the sensitivity analysis. We do not find evidence that other variables significantly associated with bid ask spread as a proxy of information asymmetry. Even though institutional ownership reveals a robust result relating to various measurement of discretionary accruals, other variables proves otherwise. Selection of model to separate component of accruals into discretionary and nondiscretionary will alter regression result of equation (2). However control variable, trading volume, shows significant negative coefficient constantly despite the different models used to measure discretionary accruals.

Discretionary accrual shows insignificant relation to return (one of the models shows significant negative coefficient), which indicates that market is aware of opportunistic motivation beneath the practice of earnings management conducted by the firms. Consequently, higher discretionary accrual will lead to lower return. Interacting variables between discretionary accrual and audit committee has significant positive correlation with return as predicted. Interaction between earnings management and institutional ownership and audit quality show significant result, however, the sign is different from our hypotheses. These findings are not robust concerning measurement model of discretionary accruals as explained previously.

Limitation

1. This study use Jones and modified Jones model to segregate discretionary and nondiscretionary components of accruals. This model has several limitations, which in turn will affect the result of the study. As previously explained the regression result is mixed in regard with the model chosen.
2. Measurement of institutional ownership requires further detailed data of major investors industry. This specific information was not provided for all sample used in this research. Firms with no further details on investors industry was classified as having no institutional ownership. Consequently proportion of institutional ownership for sample used is possibly undervalued which could explain insignificant coefficient of institutional ownership.
3. Measurement of corporate governance was represented through audit quality, independence board member and existence of audit committee. These three variables could not measure comprehensively the practice of corporate governance within firms. These variables were used as proxy of corporate governance. The available corporate governance performance index (CGPI) published by Swa Magazine is not available for all samples.

Suggestion for Future Research

1. Future research could try to develop better model to segregate discretionary and nondiscretionary components of accruals (e.g. develop separate model for each industry).
2. Conduct thorough examination to identify company industry in order to better measure proportion of institutional ownership.
3. Develop index of corporate governance, which may be done by conducting a corporate governance survey for public companies.

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