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THE INFLUENCE OF BOARD OF COMMISSIONERS AND AUDIT COMMITTEE EFFECTIVENESS, OWNERSHIP STRUCTURE, BANK MONITORING, AND FIRM LIFE CYCLE ON ACCOUNTING FRAUD

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Abstract

Financial statement fraud has cost market participants, including investors, employees, creditors, and pensioners. Capital market participants expect active and vigilant corporate governance to ensure the quality, integrity, and transparency of financial information. Financial statement fraud is a serious threat to market participants' confidence in published audited financial statements. Financial statement fraud has recently received considerable attention from the business community, accounting profession, academicians, and regulators. This paper sheds light on the factors that may increase the likelihood of financial statement fraud. This study empirically tests the impact of board of commissioners and audit committee effectiveness, ownership structure, bank monitoring, and the firm life cycle on the probability of accounting fraud. Hypothesis testing was carried out by using logistic regression model using fraud data from BAPEPAM-LK (Indonesia Stock Exchange Supervisory Agency) during the years of 2005-2011. The result of this study indicates that the audit committee effectiveness and controlled family ownership reduce the fraud probability. However, the effectiveness of board commissioners, foreign ownership, bank monitoring, and the firm life cycle do not have any effect on fraud probability.

Keywords: fraud, board of commissioner effectiveness, audit committee effectiveness, ownership structure, bank monitoring, firm life cycle.

Abstrak

Kecurangan pelaporan keuangan menimbulkan kerugian bagi pelaku pasar, antara lain investor, pegawai, kreditur. Kecurangan ini juga merupakan ancaman yang serius bagi para pelaku pasar modal. Pelaku pasar modal mengharapkan laporan keuangan yang transparan, berkualitas, dan dapat dipercaya integritasnya. Penelitian ini bertujuan menguji pengaruh efektifitas peran dewan komisaris dan komite audit, struktur kepemilikan, peran monitoring bank, dan siklus hidup perusahaan terhadap probabilita terjadinya kecurangan pelaporan keuangan. Pengujian hipotesis dilakukan dengan menggunakan metode regresi logistik dengan menggunakan data sanksi yang dikenakan pada perusahaan yang melakukan kecurangan pelaporan keuangan, yang diperoleh dari Bapepam-LK dari tahun 2005 sampai dengan 2011. Hasil penelitian ini menunjukkan bahwa efektifitas peran komite audit dan struktur kepemilikan keluarga berpengaruh negatif terhadap probabilita terjadinya kecurangan pelaporan keuangan. Hal ini mengindikasikan efektifitas komite audit dan kepemilikan yang dikendalikan oleh keluarga dapat mengurangi probabilita terjadinya kecurangan pelaporan keuangan.

Kata Kunci : *fraud*, *corporate governance*, efektifitas komite audit, struktur kepemilikan, pengawasan bank, siklus hidup perusahaan.

INTRODUCTION

Financial statements, which are required to be reported periodically, represent the company's responsibility to inform its stakeholders about the company's financial condition. As one of the information sources used for decision making by the company's stakeholders, financial statements must provide reliable and relevant information. On the other hand, this important role of financial statements in such decisions also leads to moral hazard situation during the financial reporting process, for example in the case of Enron, WorldCom, and Kimia Farma. Those accounting fraud cases have raised questions about how governance mechanisms are able to ensure a company is well managed based on good corporate governance principles. The existence of effective board of commissioners and audit committee should have a positive impact on good corporate governance practices. Yi et al. (2010) find that the board and audit committee characteristics have negative effects on fraud in the financial report.

As a creditor, banks must manage their credit risks to minimize such risks. Banks must have a high quality monitoring system to prevent the borrower's misconduct which can result in a default position. Therefore, the role of bank monitoring can be considered as an external governance mechanism. Ahn and Choi (2009) find that a higher level of bank monitoring decreases the borrowers' earnings management behavior. Therefore, bank monitoring could prevent borrowers from doing accounting fraud when preparing their financial statements.

The company's ownership structure should have an impact to the good corporate governance. Agency problems between management and owner may not occur in family firms, but may occur between majority and minority shareholders. Family firms are usually owned and controlled by the family as the majority shareholders. The governance mechanisms in family firms tend to not function optimally because there is no urgent need to monitor the management action from the shareholders perspective. Less control and minority shareholders expropriation by majority shareholders could increase the probability of accounting fraud in the firm's financial reporting. Foreign ownership in the company is considered having a positive impact on company's control because the company should follow stricter regulations from the shareholders' home country. Foreign owner has more concern towards the increase of good corporate governance so that it can help with fraud prevention (Chen et al. 2006).

The company financial performance tends to be different in different company life cycle stages. The profit reported will have an important role in the process of the performance evaluation at the mature and young company (Smith and Watts 1992). Therefore, there is a tendency that the manager of mature and young company will be motivated to do an income increasing or income decreasing earnings management in order to maintain or to increase the market value and to get a good performance evaluation. Companies which do not face any difficulties in generating good financial performance should be less motivated to do any fraud.

The contribution of this study is to conclude whether corporate governance related factors, such as governance structure and ownership structure are associated with the probability of accounting fraud. The other contribution is to examine whether the roles of bank monitoring on the borrowers prevent the accounting fraud and also whether the accounting fraud depends on the company's life cycle. Compared to previous research, this study includes bank monitoring and life cycle of the firm, whether they are associated with the probability of accounting fraud. The result from this study confirms that an effective audit committee and a controlled family ownership reduce the probability of accounting fraud.

The remaining parts of this paper will be divided as follows: Section (2) develops the underlying theory of board of director effectiveness, audit committee effectiveness, ownership structure, bank monitoring, life cycle of the firm, and the occurrence of financial statement fraud; Section (3) describes

the hypotheses developments; Section (4) describes the sample selection process; Section (5) details the research design; Section (6) contains the empirical results of the study; and Section (7) concludes the study.

LITERATURE REVIEW

Financial Statement Fraud

Most of previous studies have found that the quality of financial statement can be affected by the existence of earnings management. As Healy and Wahlen (1999) and similarly Schipper (1989) define, earnings management occurs when managers use judgment in financial reporting and in structuring transaction to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers. Low earnings quality can result in incorrect decision making. For example, in the context of IPO (Initial of Public Offering), investor may overpay the shares because of this earnings management. Teoh et al. (1998) state that investment in firms with high earnings management tend to perform poorly in future periods. Earnings management is sometimes distinguished from earning manipulation since earnings tend to be managed by using discretionary accruals, which is based on judgment, but still comply to accounting standard. Earning management which violates the accounting standard compliance will be considered as accounting fraud. Perols and Lougee (2011) explain that a fraud exists if the manager uses his valuation when making the financial report and when it engineers the transaction so that the financial report will give a different result from the real economic situation of the company, and this act is done by violating the Generally Accepted Accounting Principles (GAAP). They find fraud firms are more likely to have managed earnings in prior years and that earnings management in prior years is associated with a higher likelihood that firms meet or beat analyst forecasts or inflate revenue.

Good Corporate Governance

Good corporate governance is expected to prevent the occurrence of financial statement fraud. Cheng et al. (2010) state that the main factors affecting the accounting fraud of listed companies are the ownership structure and internal governance control responsibilities. The good corporate governance principle is to make companies more accountable to their stakeholders. Therefore, companies that have a strong governance mechanism are expected to be less likely to do accounting fraud.

Board of Commissioners

One of the internal governance structures is the board of commissioners[1] who has the main function to supervise and monitor the management action. The objective of good corporate governance can be achieved only if the board of commissioners can perform their responsibilities effectively. The effectiveness of the board of commissioners is affected by its characteristics, i.e. independence, activity, size, and competence (Hermawan 2009).

The purpose of having independent commissioners as the board member is to ensure the unbiased decision making to prevent the minority shareholders expropriation. Bhagat et al. (2008) state that the more independent the board of directors, the better the performance of the company. Ramos and Olalla (2011) also find that the existence of the independent directors have a positive effect towards the company's performance when the company is run by the founder. Jia et al. 2009 find that inside director composition has positive relationship with the probability of financial statement fraud.

The meeting activity organized by the board of commissioners is one aspect that can affect the effectiveness of the monitoring role. The active board of commissioners, which regularly organizes meetings, will know the

[1] Indonesia adopts two-tier management system which completely separates supervisory function of the board of commissioners and executive function. Therefore, the board of commissioners in this study is similar to the board of directors in the one-tier management system in other countries

problems more in detail and earlier so that the monitoring will be more systematically and can be done earlier. Ramos and Olalla (2011) find that board meetings are positively associated with the company's performance, but it will become weaker when the family business is run by the founder. The board size can also affect the effectiveness of the board. Beasley (1996) finds the positive association of the board size and the possibility of fraud in the financial report. Klein (2002) finds that audit committee independence increases with board size. Cheng et al. (2008) find the smaller board size is better, and this condition will improve the performance of the company. Competence of the board members is an important factor for the effectiveness of the board. This competence will affect the ability of the board to carry out their monitoring functions. Some studies have shown that a negative relationship between expertise in the financial field and the probability of a deviation in the financial reporting, profit management, fault, and restatements (Cunningham 2007). Chen et al. (2006) also find that the chairman of the board who has only a partial experience will have a low capability to detect a fraud.

Audit Committee

In performing their duties, board of commissioner is supported by audit committee. The main purpose of the audit committee function is to ensure the quality and the reliability of financial report. Therefore the likelihood of accounting fraud should be reduced by an audit committee which performs effectively. Similar to the board of commissioner effectiveness, the audit committee effectiveness is also influenced by their characteristics independence, activity, size, and competence (Hermawan 2009). Persons (2005) finds some aspects of the audit committee, such as whether the member of the audit committee is the director of another company and the tenure of this audit committee member, have a direct implication towards the improvement of the corporate governance in the future. Bronson et al. (2009) find that the advantage of the independent audit committee can only be achieved when the whole audit committee is really independent (100% independent). Jackson et al. (2009) also conclude that the probability of fraud is negatively associated with the independent audit committee.

The activity of the audit committee represents whether the audit committee performs its function effectively. The audit committee activities are represented by the number of meetings that have been taken place by the audit committee in one year. Persons (2009) finds that companies that employ early voluntary ethics disclosure have the tendency to have a larger audit committee, a more independent audit committee, and an audit committee which organize more meetings, and also have lower tendency to exercise fraud in its financial report. Lin et al. (2006) find a negative association between the size of audit committee and the occurrence of earnings restatement. Kalbers and Fogarty's (1993) research suggests that a large audit committee tends to enhance the audit committee's status and power within an organization.

The competence that must be possessed by audit committee is the ability to have an adequate understanding of accounting, audit, and the system that are being applied in the company. The audit committee member must also have the ability and knowledge of how to analyze a financial report. Zhang et al. (2007), Hoitash et al. (2009), and Sharma et al. (2009) state that the audit committee with only a few accounting and financial expertise with no finance and accounting background is related with a weaker internal control of the company.

Bank Monitoring

Banks have a specific interest for monitoring the borrower's activities to manage their credit risk. Banks have some privilege in monitoring the borrowers because they can have the information needed directly from the borrowers. Ahn and Choi (2009) find that

a borrowing firm's earnings management behavior generally decreases as the strength of bank monitoring increases. The strength of bank monitoring seems to be affected only by (1) the magnitude of a bank loan, (2) the reputation (rank) of a lead bank, and (3) the length of a bank loan. As stated by Perols and Lougee (2011), earnings management could becomes an indicator the firms that has conducted fraud, a company that have a high monitoring level by the banks should have lower possibility to commit accounting fraud.

Ownership Structure

Companies that are controlled by families have a structure which will lessen the agency conflict between the shareholders and the manager, and the creditor believes that companies which are controlled by families are more concerned with creditors' interest and have less monitoring cost according to Fama and Jensen (1983). The result of Arifin's (2003) study shows that the public company in Indonesia controlled by the family or by the state or by the financial institution has less agency problem if compared to companies that are controlled by the public or without a prominent controller. According to him, in companies that are controlled by families, there are less agency problems because of the decrease of conflicts between the principal and the agent. If the family ownership is more efficient and the agency is better, there is no problem between the interest of the agent and the principal, which means that the management will lead the company as well as possible for the benefit of the "family" so that the company will be run efficiently and honestly. Jiang and Peng (2011) find that the presence of CEO who has family relationship can enhance companies' stock return (in Indonesia and Taiwan). Therefore, a company with a high family ownership will have a low tendency to conduct fault compared to companies that have a low family ownership.

On the contrary, some studies suggest that higher family ownership raise other types of agency problem, i.e. between the family and non-controlling shareholders (majority and minority). This problem main induce family to commit accounting fraud to hide their expropriation of firms wealth. Higher family ownership has higher probability of financial statement fraud (Geriesh 2003). Families are also capable of expropriating wealth from the firm through excessive compensation, related-party transactions, or special dividends (Anderson and Reeb 2003). DeAngelo, DeAngelo, and Skinner (2000) suggest that the family's desire for special dividends can impact the firm's capital expansion plans, leading to poor operating and stock price performance.

Contrary to the notion that family ownership increases other type agency problem between the family and non controlling shareholders, Villalonga and Amit (2006) in their studies found that the classic owner manager conflict in nonfamily firms is more costly than the conflict between family and nonfamily shareholders in founder CEO forms. Their studies emphasize that the family ownership will reduce the problem between the shareholder's and agent to commit accounting fraud. Anderson and Reeb (2002) also found minority stockholders actually have advantage from family ownership, and minority share holders are not adversely affected by family ownership, suggesting that family ownership is an effective organizational structure.

Companies that are fully or partially owned by foreign investor usually should comply with the foreign regulation which is compulsory by the regulator of investor home country. The long distance location sometimes also needs higher quality of controlled system to enable the high return for foreign investor. The regulation concerning corporate governance in other country usually has higher standard than in Indonesia which is known to have weak corporate governance. Chen et al. (2006) explain that companies with foreign ownership tend to commit less fraud, because of the existence of foreign ownership, and the monitoring level is higher which will help to prevent fraud.

Company Life Cycle

The ability to generate profit in a company generally depends on the life cycle stages. During the introductory stage, company operation is usually unstable and therefore the profit is also uncertain. In the mature stage, the competition is usually more intense and the demand is not expanding anymore, therefore the company's ability to generate profit is getting more difficult.

Managers in companies which are in the growth stage of the life cycle generally will take steps to lessen profit if they feel that their profit is superfluous (Al Najjar and Riahi-Belkaoui 2001). In companies that are in the mature stage of their life cycle, the investment activities are no more a priority and the operational environment is more stable if compared with companies that are still growing (Balkin and Gomez-Mejia 1987). The profit reported will have an important role in the process of the performance evaluation at the mature company (Smith and Watts 1992). Because the reported net income will become important in the performance evaluation, it becomes the bases for value management performance. In order to maintain or increase the market value and to get a good performance evaluation, the manager of mature company tends to increase their reported net income.

Earning management has become an indicator to detect companies that have conducted fraud (Perols and Lougee 2011). Companies that are in the young life cycle stage (growth stage) will conduct a management to reduce profit, and companies that are in the mature life cycle have tendencies to maximize company's profit. According to the definition proposed by Perols and Lougee (2011), they define manipulation of the financial report or have been conducting a profit management (or both). Thus, companies that are at the young and mature stage will frequently commit fraud.

Hypotheses Development

Board of Commissioners and Probability of Accounting Fraud

The effectiveness of the board of commissioners' performance will prevent management from opportunistic behavior. The board of commissioners effectiveness is affected by its characteristics, i.e. independence, activity, size, and competence (Hermawan 2009). Chen et al. (2006), Wagner (2011), and Beasley (1996) examine some characteristics of the board and they find that there is a positive relationship between characteristic of the board with the quality of the financial report. A financial report is considered to have a high quality if it can be relied upon as a source of timely and accurate information. High quality of financial reporting means that financial statements are free from fraud. Higher quality financial report should have a significant effect on reducing the likelihood of financial statement fraud (Beasley 1996). Therefore, an effectiveness score is made based on the four characteristics. The higher score of effectiveness will reflect the better performance of the board, which should be able to reduce probability of fraud.

H_1a: Higher board of commissioners effectiveness score reduces the probability of accounting fraud.

Audit Committee and Probability of Accounting Fraud

The role of the audit committee is to ensure the quality and the reliability of financial report. If audit committee has an effective role, company should present higher quality of financial reports. Bronson et al. (2009) and Jackson et al. (2009) state that the effectiveness of the audit committee will also affect some characteristics which are proven by previous study: independence, activity, size, and competence of the audit committee. The purpose of audit committee is to monitor management performance, including company's operations and financial reporting. Higher quality of audit committee will also improve the quality of management performance, which ultimately leads to the good quality of financial reporting. Firm with higher quality of audit committee will result higher quality of financial report and will be less likely to be sanctioned for fraudulent reporting (Abbot et al. 2000). Therefore, the likelihood

of accounting fraud should be reduced by an audit committee which performs effectively. An audit committee effectiveness score is also developed based on the characteristics of activity, size, and competence. Independence is automatically assumed for audit committee in Indonesia.

H_2a: Higher audit committee effectiveness score reduces the probability of accounting fraud.

Bank Monitoring and Probability of Accounting Fraud

Bank as a creditor have some privileges in monitoring the borrowers because they can have the information needed directly from the borrowers. Monitoring of the bank can increase the quality of corporate governance. Ahn and Choi (2009) find that a borrowing firm's earnings management behavior generally decreases as the strength of bank monitoring increases. The strength of bank monitoring seems to be affected only by (1) the magnitude of a bank loan, (2) the reputation (rank) of a lead bank, and (3) the length of a bank loan. This study used the reputation of bank to measure monitoring quality.

H_3a: Higher amount of loan from bank with high monitoring quality reduces the probability of accounting fraud.

Ownership Structure and Probability of Accounting Fraud

Dispersed ownership structure is found only in the Unites States of America and Britain (Murhadi 2008). Whereas, in most developing countries, the ownership structure of company is under family control (concentrated ownership structure). Theoretically, family ownership reduces agency problem type I between management and stock holder (Jensen and Meckling 1976), however recent research show that concentrated ownership will result in emergence agency problem type II between majority and minority (Morck, Shleifer, and Vishny 1988). There are 2 (two) types of agency problem: the first type (Type I) is an agency problem conflict which arise between management (agent) with stock holder (principal), while the second type (type II) conflict arise between majority stock holders with minority stock holder.

La Porta et al. (1999) reported that 85% of companies in Spain are still under the family control. Likewise, in Indonesia, the majority of companies in the Indonesians are still under control of the founding family (Arifin 2003). Structure of family control ownership reduces agency conflicts between shareholders and creditors, and the lender assumes ownership of the family concerned to creditors, in the presence of control family, monitoring cost will be lower (Fama & Jensen 1983). Anderson and Reeb (2003) found that a company owned by the family has better performance because of the existence of family founders**.**

Furthermore, company which is owned and controlled by family will have lower probability to do financial statement fraud. Arifin's (2003) study shows that the public companies in Indonesia controlled by the family or by the state or by the financial institution have a less agency problem if compared to companies that are controlled by public or without a prominent controller. Jiang and Peng (2011) have evidence that the present of a CEO who has family relations will have higher equity return (in Indonesia and Taiwan) compared with companies in which the CEO does not have family relations. Higher equity return signed that investor (in Indonesia and Taiwan) has believed to management performance, in which the management has family relationship. The classic owner manager conflict in nonfamily firms is more costly than the conflict between family and nonfamily shareholders in founder CEO forms (Villalonga and Amit 2006). Their study emphasize that the family ownership will reduce the problem between the shareholder's and agent to commit accounting fraud. Anderson and Reeb (2002) also find minority stockholders who actually have advantage from family ownership and minority share holders are not adversely affected by family ownership, suggesting that family ownership is an effective organizational structure.

H_4a : Companies which are owned and controlled by family have lower probability of accounting fraud.

The foreign capital ownership is one way to create good corporate governance. Usually, the foreign investors have a high standard of corporate governance in their home country. Due to their global integrity, the foreign investors ensure management to work well in the developing countries. Chen et al. (2006) and Chevalier et al. (2006) find that when the company has foreign ownership, the company's performance will be positive, and the financial report published will be more trustworthy.

H_5a : Higher proportion of foreign ownership reduces the probability of accounting fraud.

Company Life Cycle and Probability of Accounting Fraud

Every company has a life cycle stages. Owen and Yawson (2010) divide the company life cycle into three cycles: young, mature, and old. Life cycle of the firm affects the component of company's balance sheet, income statement and cash flow report (Savich and Thompson 1978). It means that companies which have different firm life cycle will perform different earning management. Savich and Thomson (1978) also find that companies in the young and mature life cycle stage have tendency to do earning management. This paper draws on two separate views of an old stage firm life cycle:

1. Old stage firm life cycle has incentives to inflate earnings due to earnings decline.
2. Old stage firm life cycle has lower incentives to inflate earnings due to the declining financial condition of company. In this stage, the pressure to perform earning management is lower than the other stage (young and mature). This study refers to the second view and it is supported by the studies of Fouad and Riahi (2001). They find that companies which are in the young stage tend to choose accounting method which lowers the reported earnings because they need free cash flow for expansion and new investment. Companies which are in the mature stage tend to choose accounting method which increases reported earnings because they often using *reported earnings-based bonus plans* as a fixed salary component (Skinner 1996). Therefore, reported earnings will play an important role in management performance evaluation (Smith and Watts 1992). According to Perols and Lougee (2011), if GAAP rules are broke, managed reported earnings (lowering or increasing reported earnings) will be charged as a fraud. Since the number of reported earnings seems to be very important for the young and mature firms, the tendency to perform earnings management that violates GAAP rules is higher for young and mature firm (commit to do fraud). Thus, companies that are at the young and mature life cycle stage will frequently conduct earnings management that leads to financial statement fraud.

H_6a: Companies which are in the young life cycle stage have higher probability of accounting fraud.

H_7a: Companies which are in the mature life cycle stage have higher probability of accounting fraud.

Companies with a high debt ratio have incentive to violate the loan agreement because of the pressure on management to comply with the loan agreement, with assumption that the underperform company is under pressure to incorrect financial statements (Perols and Lougee 2011). Leverage is also a ratio to measure financial difficulties, and companies that have high leverage ratios tend to be investigated by the Chinese Securities Regulatory Commission (CSRC) (Chen et al. 2006). Leverage has a positive correlation with accounting policies which increase earnings. Companies with a high leverage ratio tend to be motivated to accrued smaller liability or larger asset in order to avoid violating debt covenant. From the previous research above, it is concluded that leverage has a positive correlation to companies' probability of committing accounting fraud.

Researches on the size in relation to fraud produce various conclusions. Park and Pastena (1991) conclude that the targeted companies penalized by SEC is over-the-counter firm which is relatively small. Persons (1995) states that firm size is negatively correlated to accounting fraud. Lee and Choi (2002) also find that small companies has a tendency to do earnings management more frequently to avoid losses than large firms. However, Rezaei (2012) proves that the bigger the company, the more likely it is to commit earning management so that there will be a relationship between the positive discretionary accruals and profits in the future. Suwito and Herawaty (2005) find evidence that the larger companies have a greater incentive to perform income smoothing compared to the smaller companies. It is because the larger companies become the subject of examination (government and public pay more attention to the larger companies). Firm size is not just a number that stated the company's scale. Firm size can also determine what policy will be taken by the company in certain circumstances.

DATA AND METHOD

Sample Selection and Description

The population of this study is all non-financial companies which are registered in Indonesian Stock Exchange in the years of 2005–2011. The samples are all companies which were reported to have some accounting frauds by BAPEPAM-LK during those years. There are 47 companies reported as companies with problems in their financial reports. Then, 47 companies which do not have problems with their financial reports are taken as paired samples. The total samples in this study are 94. The criteria of sample selection are: (i) companies engaged in financial industry, insurance and banking were excluded from the sample; (ii) companies that do not have data or incomplete financial statements are not included; (iii) companies selected as the paired sample is a company that does not do fraud, has total assets of +/ - 30% of fraud firm total assets, and also in the same industry with the fraud firm. Sample selection is done through the matching process, following Beasley (1996) and Chen et al. (2006). The sample selection can be seen in Table 1.

The 47 fraud companies which are the sample of this study are divided into 9 industrial sectors classified by the BEI (Indonesian Stock Exchange). The sample distribution can be seen in Table 2.

Table 3 shows the category of the financial reports with problems based on the BAPEPAM-LK valuation.

Research Design

To test the hypothesis of this study, the regression logistics was used. The dependent variable in this study is a binary variable, that is, whether company was practicing fraud or not in their financial report. In this study, to determine the relationship between

Table 1
Sample Description

Sample Description	Amount	Percentage
Number of sample in 2005	1	2.13%
Number of sample in 2006	3	6.38%
Number of sample in 2007	12	25.53%
Number of sample in 2008	17	36.17%
Number of sample in 2009	3	6.38%
Number of sample in 2010	9	19.15%
Number of sample in 2011	2	4.26%
Total Sample	**47**	**100%**

Table 2
Distribution of the Sample Based on the Industry Sector

No	Industry Sector	Fraud Financial Statement	Percentage
1	Agriculture	3	6,38%
2	Mining	5	10,64%
3	Basic Industry and Chemical	7	14,89%
4	Miscellaneous Industry	4	8,51%
5	Consumer Goods Industry	3	6,38%
6	Property, Real Estate and Construction	4	8,51%
7	Infrastructure, Utility and Transportation	9	19,15%
8	Trade, Service and Investment	12	25,53%
	Total Sample	**47**	**100%**

Table 3
Category of the Financial Reports With Problems

Fraud Financial Statement Category	Amount	Percentage
Unintentional Misstatement	12	26%
Not in accordance with PSAK	6	13%
Deliberately Misstatement	5	11%
Disclosure	10	21%
Materiality and delays in the delivery of information material	14	30%
Total	**47**	**100%**

effectiveness of the board of commissioners, effectiveness of the audit committee, the role of bank monitoring, structure of family ownership, structure of foreign ownership, age, and life cycle of the company with fraud in their financial report, the following equation was used:

$$P(FRAUD)_{i,t} = \alpha + \beta_1 SCOREBD_{i,t} + \beta_2 SCOREAC_{i,t} + \beta_3 CREDITOR_{i,t} + \beta_4 FAMOWN_{i,t} + \beta_5 FOREIGN_{i,t} + \beta_6 YOUNG_{i,t} + \beta_7 MATURE_{i,t} + \beta_8 LVRG_{i,t} + \beta_9 SIZE_{i,t} + \sum_{j=1}^{7} \beta YEARS_{i,t} + \sum_{i=1}^{8} \beta INDUSTRY_{i,t} + \varepsilon_{i,t}$$

Where:

$P(FRAUD)_{i,t}$: Company *i* that is fraudulent at its financial report (fraud) at year *t*. This variable is originated from the information as given by the Bapepam-LK (Badan Pengawas Pasar Modal dan Lembaga keuangan- The Stock Exchange and Financial Institute Monitoring Board).

β1 $SCOREBD_{i,t}$: Score index of the board of commissioners, that is the total score obtained divided by maximal score (that is 51).

β2 $SCOREAC_{i,t}$: Score index of the audit committee obtained, that is the total score obtained divided by the maximal score (that is 33).

β3 $CREDITOR_{i,t}$: ratio of the amount of credit from bank with a good credit monitoring quality divided by total asset of the company *i* at the year *t*.

β4 FAMOWN $_{i,t}$: Variable dummy (1,0) with a value of 1 when the proportion of the Family's ownership is > 50% and 0 if the proportion of the family is < 50%.

β5 FOREIGN$_{i,t}$: The foreign capital ownership is a proportion of the shares owned by the foreigner(s) from the total shares circulated.

β6 YOUNG$_{i,t}$: The dummy variable (1,0) with a value of 1 if the company is in the Young life cycle category and 0 if others.

β7 MATURE$_{i}$: The dummy variable (1,0) with a value of 1 if the company is in the Mature life cycle category and 0 if others.

β8 LVRG$_{i,t}$: The value received from total liabilities divided by total asset.

B9 SIZE$_{i,t}$: The natural logarithm from the book value of total asset of the company at the end of the fiscal year.

β10 YEARS$_{i,t}$: The dummy variable for the years effect.

β11 INDUSTRY$_{i,t}$: The dummy variable for the industry effect

Variable Construction

The dependent variable in this study is accounting fraud. The data regarding this accounting fraud is derived from BAPEPAM-LK from the years 2007-2011 in the form of sanctions published by BAPEPAM-LK. Based on this data, it has identified companies that have committed accounting fraud during the period of 2005-2011. The indicator used to value the dummy variable is the value 1 for companies which have committed accounting fraud.

The effectiveness score of board of commissioners and audit committee is calculated based on the values cumulated from the checklist as arranged by the characteristics of board of commissioners and audit committee, which include independency, activity, size, and competence. This checklist is developed by Hermawan (2009) and is used in the study to calculate the effectiveness score of the board of commissioners and the audit committee. The score is calculated based on the total point from each question in the checklist. Each questions can obtained maximum value 3 (three) for "Good" answer, 2 (two) for "Fair" answer, and minimum value 1 (one) for "Poor" answer. The total number of the questionnaire is 28 questions.

To calculate the score of board of commissioner, the questionnaire have 17 checklist questions, consist of 6 questions to measure board independence, 6 questions to measure board activities, 1 question to measure board size, and 4 questions to measure board expertise and competence. Therefore, maximum score of board of commissioner can be obtained from the questionnaire is 51 (17 questions x 3 for "Good" answer) and minimum score is 17 (17 questions x 1 for "Poor" answer).

To calculate score of audit committee, the questionnaire have 11 checklist questions, consist of 8 questions to measure audit committee activities, 1 question to measure audit committee size, and 2 questions to measure audit committee expertise and competence. Therefore, maximum score of audit committee can be obtained from the questionnaire is 33 (11 questions x 3 for "Good" answer) and minimum score is 11 (11 questions x 1 for "Poor" answer).

Indonesia has adopted a two-tier system in the company's board structure, the board of commissioners and the board of directors. Board of commissioners is separated with the board of directors. The board of commissioners plays a role in providing supervision and overseeing the board of directors in managing the company. In the studies conducted in other countries that are mostly one-tier system, the term of board of directors does not have the same meaning as the one used in Indonesia, but its role are similar to the role of the board of commissioners in companies in Indonesia. Thus, in this study, the term of board will be used for the board of directors in a one-tier system, while the term of board of commissioners will be used for companies that adopt a two tier system.

Table 4
Descriptive Statistics of the Board of Commissioners

Category	Number of Questions *	Fraud / Pairsample	Min	Max	*Mean*	Median	Standard deviation
Independence	6	Fraud	7	15	9.77	10	2.20
		Pairsample	7	15	10.64	10	1.97
		Total	**7**	**15**	**10.20**	**10**	**2.12**
Activity	6	Fraud	6	18	12.53	14	3.60
		Pairsample	6	18	12.79	12	2.89
		Total	**6**	**18**	**12.66**	**13**	**3.25**
Size	1	Fraud	1	3	1.64	1	0.94
		Pairsample	1	3	1.74	1	0.97
		Total	**1**	**3**	**1.69**	**1**	**0.95**
Competency	4	Fraud	4	12	9.72	10	2.07
		Pairsample	6	12	10.19	10	1.33
		Total	**4**	**12**	**9.96**	**10**	**1.75**
Total Score	**17**	Fraud	**21**	**44**	**33.66**	**34**	**21**
		Pairsample	**24**	**48**	**35.36**	**35**	**24**
		Total	**21**	**48**	**34.51**	**34.5**	**5.19**

* Each questions can obtain a value of 1 for the lowest value and 3 for the highest

The bank as a creditor has the capacity to control the company which has become its debtor in the framework to ensure the safeness of the given loan. The controlling level done by the banks can be different from each other, depending on the quality of credit monitoring system from each bank. A bank which has a good performance, especially in its credit management, is a reflection of corporate governance of the company. This study has determined the classification of the bank that has good monitoring abilities (Hermawan 2009 and Ahmadina 2011) based on the following criteria: (1) Bank is bank which has a total asset of above IDR 1 trillion based on the ranking data of Infobank publication 2006-2012; (2) Bank must have a "very good" and "good" rating according to Infobank publication 2006-2012; (3) Bank has a Non Performing Loan (NPL) rating under 5% based on the ranking data of Infobank publication 2006-2012. The bank which fulfills these three criteria is considered to be the bank that has conducted the debtor monitoring well, so that it has become one of the mechanism of corporate governance. Ahn and Choi (2009) have used the proxy to measure the monitoring rate using the loan amount given by the bank compared to the total asset owned by the company, the amount of loan which is calculated is the loan received by the bank which is included in the group of banks that have fulfilled the criteria as explained before.

According to Arifin (2003), companies with family ownership are defined as companies in which their shares of ownership is > 5% (in which their names are mentioned in financial reports) and are not owned by government, financial institution, or society (individual whose ownership is not mentioned in the financial report). In this study, the dummy variable (1, 0) is used with a value of 1 if the company with family ownership proportion is > 50% and 0 if the family ownership proportion is ≤ 50%.

According to Said et al. (2009), the foreign ownership is explained in the form of the amount of proportion of shares owned by a foreign party compared to the total shares circulated. Data of the foreign ownership is obtained from KSEI (Kustodian Sentral Efek Indonesia/The Indonesian Central Stock Custodian).

This study has divided the life cycle of company into three stages of life cycles

Table 5
Descriptive Statistics Audit Committee Score

Category	Number of Questions *	Fraud / Pairsample	Min	Max	*Mean*	Median	Standard deviation
Activity	8	Fraud	8	23	14.91	15.00	4.79
		Pairsample	8	23	16.06	16.00	3.82
		Total	**8**	**23**	**15.49**	**15.00**	**4.35**
Size	1	Fraud	1	3	2.04	2.00	0.55
		Pairsample	1	3	2.00	2.00	0.36
		Total	**1**	**3**	**2.02**	**2.00**	**0.46**
Competency	2	Fraud	2	6	4.13	5.00	1.70
		Pairsample	2	6	5.09	5.00	1.21
		Total	**2**	**6**	**4.61**	**5.00**	**1.55**
Total Score	11	Fraud	**11**	**32**	**21.09**	**22.00**	**6.16**
		Pairsample	11	31	23.15	23.00	4.58
		Total	**11**	**32**	**22.12**	**22.00**	**5.50**

* Each questions can obtain a value of 1 for the lowest value and 3 for the highest

(young, mature and old), that is: The category of companies that may have a possibility to conduct fraud (companies that are in the young and mature stages of their life cycle), and the category of companies that have a low tendency to conduct fraud (companies that are in the old stage of their life cycle). Base on DeAngelo et al. (2006) study, retained earnings, which is measured as proportion of total equity (RE/TE), is used as a proxy to calculate company's life cycle stage. This proxy can measure whether the firms use financing that rely on internal or external parties for funding. Companies with the lower levels of RE/TE tend to be in the growth phase stage capital formation, while firms with a higher level of RE/TE tend to be in the mature and old stage with profits that have been accumulated so that the company can make self-financing.

$$LIFECYCLE_{i,t} = \text{Retained Earnings}_{i,t} : \text{Total Equity}_{i,t}$$

Explanation:
$LIFECYCLE_{i,t}$: Dummy variable (1,0) from the company's life cycle *i* at year *t*, that is:

1. $Young_{i,t}$ = 1 for companies with a young life cycle and = 0 if others
2. $Mature_{i,t}$ = 1 for companies with a mature life cycle and = 0 others

$Retained\ Earnings_{i,t}$: company's retained earnings *i* at year *t*
$Total\ Equity_{i,t}$: total value of the company's equity *i* at year *t*

The company's life cycle is determined by putting the companies in the right order based on RE/TE proxy ratio, after which, 25% companies with the highest RE/TE are categorized in the old stage of their life cycle, whereas 25% the companies with the lowest RE/TE are categorized as companies which are in the young stage of their life cycle. The rest are categorized into companies which are in the mature stage of their life cycle.

RESULT

Descriptive Statistics

The mean score for the board of commissioners is 34.51. It can be concluded that all research observation has an effective board of commissioners (Table 4).

In general, the board of commissioners in the whole research observation does not have a good independency characteristic (mean 10.22, whereas the maximum value can be obtain is 18). Mean for the activity category (total number of board meeting) is 12.66, where as the maximum value can be obtain is 18, this figure explains that the activity

characteristics of board of commissioners in this observation has an averaged of good activity. The mean for the category size of board of commissioners is 1.69, which means that most of the observations in this study have less than five members of commissioners board. For the competence category, the mean is 9.96 which mirrors that the board of commissioners in this observation study has a relative good competence. In total, the average score of board of commissioners is 34.5, which means that the board of commissioners in this study has a medium level of effectiveness in average.

Table 5 shows that the average mark of activity characteristics is 15.49, which means that in average the audit committee in this observation study has a relative medium activity. The valuation criteria used when the minimum members of the audit committee are based on the minimum standard decided by the BEI and BAPEPAM-LK, three persons, will have a fair mark. Therefore, the average value for the category size of the audit committee is 2.02. For the category competence, the mean is 4.61, indicates that most of the observation studies of audit committee member have educational background in accounting. In addition, this value also indicates that the age of audit committee members in this observation study is relative young. In total, audit committee has an average score of 22.12, which means that the effectiveness of audit committee role in this observation study in the average is at the medium level. In general, companies which are fraudulent have in average after lower score compared to the pair sample companies. This can indicates that the effectiveness of audit committee role of the fraudulent company is lower compared to the pair sample company.

Empirical Tests

Table 6 shows that the categories of questions about the independency have a *P value* < 0.05, which means that for the non normal distribution data, there is a significant difference in the independence between fraudulent companies and those that do not conduct fraud.

Table 6
Difference Test Score of the Effectiveness of the Board of Commissioners

Category	Significance
Activity	0.753
Independence	0.035 *
Size	0.566
Competency	0.616

* Significance level at α=5%

Based on Table 7, the questions about the competence have a *P value* < 0.05. Therefore, it can be concluded that for the non normal distribution data, there is significant difference regarding the competence between the fraudulent and non fraudulent companies.

This study uses logistic regression to test the effectiveness of board of commissioners, effectiveness of audit committee, monitoring bank, family ownership, foreign ownership, and the firm life cycle in the probability of fraud occurrence. The logistic regression test is presented in Table 8. Looking at Count R^2 = 63% and the total significant variables at Table 8, it can be concluded that the model can predict 63% accurately.

Table 7
Difference Test of the Audit Committee

Category	Significance
Activity	0.202
Size	0.660
Competency	0.014 *

* Significance level at α=5%

Based on the result of logistic regression in Table 8, it can be seen that variable SCOREBD has a negative coefficient, however it is not significant at α= 10%. The result of the test shows that the score of board of commissioners does not have any effect on the probability of fraud. This means that an effective board of commissioners will not lessen the probability of fraud occurance in financial report. Hence, this result does not support the hypothesis 1a so that hypothesis 1a is rejected. The result of this study is consistent with the study conducted

by Jia et al. (2009), which examined some characteristics of the board, among others, number of meeting, board's size, board's tenure, and age of the board members. Some of those variables do not show a significant testing result. The variable that does not show the effects are the board size, tenure of board, and age of the board members. The studies of Uzun et al. (2004) and Chen et al. (2006) do not find any association between the size of board and the number of meetings with fraud.

Based on the logistic regression in Table 8, it can be seen that the variable SCOREAC has a consistent negative effect, and is significant at α= 5%. The result of its testing shows that the value of audit committee affects the probability that fraud will occur. This means that fraud in financial report can be decreased by an effective audit committee. The result supports hypothesis 2a, so that hypothesis 2 cannot be rejected. The existence of the effect of effective audit committee on the probability of fraud as proved in this study supports the results of the study conducted by Rezaee (2003). He finds that the function of an effective audit committee will prevent the probability of fraud occurrence. Rezaee also includes some frauds in some American companies, due to the ineffectiveness of audit committee. The study of Jackson et al. (2009) finds that the probability of fraud occurrences in financial reports is related to the audit committee's independence and the number of meetings of the audit committee.

The result of the regression in Table 8 shows that the variable CREDITOR has a negative coefficient, however, it is not significant at α = 10%. The result of the test shows that the value of CREDITOR does not affect the probability that fraud will occur. This means that the role of monitoring from the bank could not decrease the possibility that fraud will happen in financial report. This result does not support hypothesis of 3a, so that the hypothesis 3a is rejected. Most studies in the past have not dealt with the role of the creditor as a mechanism of corporate governance. Until recently, only the study of Ahn and Choi (2009), Hermawan (2009) and Ahmadina (2011) have become the basis for this study. In contrast to earlier findings by Ahn and Choi, this study finds that the role of the monitoring bank will not influence towards the lessening the probability to conduct fraud. This may have been caused by the low proportion of bank loan, especially from banks with good monitoring ability towards the capital structure of this observation study. This indicates that the bank, as the external party in corporate governance of company, has not played the monitoring role well. The monitoring bank is not as effective as the monitoring role of the company's internal. One of the reasons is the limitation of information which may have been obtained by the external party because of its position outside the company.

The result of the regression in Table 8 shows that variable FAMOWN has a negative coefficient, and is significant at α= 10%. The result shows that the control of family affects the probability of fraud occurrence, so this study supports hypothesis 4a, and thus the hypothesis 4a is not rejected. This means that fraud in financial report can be decreased by the increasing of controlled family ownership. The result of this testing supports Arifin's (2003) study which shows that public companies in Indonesia controlled by families have less agency problem if compared to companies controlled by public or without a majority shareholders. According to him, in companies that are controlled by families, there is less agency problems because of the decrease of conflicts between principal and agent. If the family ownership is more efficient and the agency is better, there is no problem between the interest of agent and principal, which means that the management will lead the company as well as possible for the benefit of the "family", so that the company will be run efficiently and honestly.

The testing of hypothesis 5a shows that FOREIGN variable has negative coefficient. However it is not significant at α = 10%. This testing means capital structure which owned by foreign has no significant influence to the probability of fraud occurrence in Indonesia.

Table 8
Logistic Regression Result

$$P(FRAUD)_{i,t} = \alpha + \beta_1 SCOREBD_{i,t} + \beta_2 SCOREAC_{i,t} + \beta_3 CREDITOR_{i,t} + \beta_4 FAMOWN_{i,t} + \beta_5 FOREIGN_{i,t} + \beta_6 YOUNG_{i,t} + \beta_7 MATURE_{i,t} + \beta_8 LVRG_{i,t} + \beta_9 SIZE_{i,t} + \sum_{j=1}^{7} \beta YEARS_{i,t} + \sum_{i=1}^{8} \beta INDUSTRY_{i,t} + \varepsilon_{i,t}$$

Variables	Exp. Sign	Coefficient	Std. Error	z-Statistic	Prob
C		-0.353	6.421	-0.055	0.478
SCOREBD	-	-2.933	2.992	-0.980	0.163
SCOREAC	-	**-2.789**	**1.732**	**-1.611**	**0.054***
CREDITOR	-	-1.891	2.382	-0.794	0.214
FAMOWN	-	**-0.787**	**0.554**	**-1.419**	**0.078***
FOREIGN	-	-1.239	1.104	-1.122	0.131
YOUNG	+	0.486	0.715	0.679	0.248
MATURE	+	0.421	0.609	0.691	0.245
LVRG	+	**0.809**	**0.503**	**1.606**	**0.054***
SIZE	+	0.124	0.217	0.573	0.283
YEAR2006		0.420	1.931	0.217	0.414
YEAR2007		0.951	1.584	0.600	0.274
YEAR2008		1.148	1.597	0.719	0.236
YEAR2009		2.448	1.939	1.263	0.103
YEAR2010		1.524	1.690	0.902	0.183
YEAR2011		0.454	1.873	0.242	0.404
ANINDUSTRI		-0.554	1.486	-0.373	0.355
INDBRGKONS		-0.294	1.198	-0.245	0.403
INDDSRKIMIA		0.321	1.319	0.244	0.404
DGNGJASAINV		-0.132	1.483	-0.089	0.465
PERTAMBANGAN		0.007	1.107	0.006	0.498
PROPERTI		-0.183	1.484	-0.123	0.451
TRANSINFRA		-0.578	0.986	-0.586	0.279
McFadden R-squared		0.089	Count R^2		63%

** Significance level α = 5% (*one-tailed*)
* Significance level α = 10% (*one-tailed*)

Total Observation is 94, FRAUD = Companies that get the sanction from Bapepam-LK; SCOREBD = Board of Director effectiveness score; SCOREAC = Audit Committee effectiveness score; CREDITOR = Ratio of Total Amount of Lending from Bank which have good monitoring divided by company total asset; FAMOWN = dummy variable (1,0) value with 1 if family ownership proportion > 50% and value with 0 if family ownership proportion < 50%; FOREIGN = proportion of stock owns by foreign divided by total outstanding stock; YOUNG = dummy variable (1,0) with value with 1 if firm on young life cycle stage and value with 0 if others; MATURE = dummy variable (1,0) value with 1 if firm on mature life cycle stage and value with 0 if others; LVRG = Total liabilities divided by total asset; SIZE = Natural logarithm from total asset book value at the end of fiscal year

This result support Jia et al. (2009) and Chen et al. (2006) study, which shows that foreign ownership doesn't have effects on the probability of fraud.

The life cycle of firm doesn't have significant effect on the probability of fraud. Table 8 shows that variable YOUNG and MATURE have positive coefficient, although

it is not significant at α= 10%. One possible reason that cause this test is not significant is fraud does not occur through earnings management, such as misstatement, materiality, violated disclosure, and disclosure of facts material that is not true, therefore the effect cannot be captured through measurement of the company life cycle stage. Other possible reason is the proxy of this variable cannot accurately capture at which stage the life cycle of the firm.

Based on Table 8, the control variable leverage has a positive coefficient at level 5%. This means that the greater the leverage of a company, the greater the probability of fraud will occur. This result has been supported by the following studies. Perols and Lougee (2011) have observed that companies which have a high debt ratio have the potential to conduct violations towards loan agreements, because there is a strong pressure towards the management to obey the loan agreement, assuming that companies with bad performances are pressured to conduct fraud in their financial reports. Leverage is positively correlated with the accounting policy to increase profit. If the management policy of increasing the profit is not sufficient to avoid violation of the debt covenant, manager will tend to be motivated to acknowledge the smaller obligation or to admit larger asset (Persons 2005).

Based on Table 8, control variable size has a positive coefficient. However, it is not significant at level of 10%. The result of the test shows that size does not affect fraud probability. This study support the previous study of Jia et al. (2009) which have proven that size does not affect the probability of fraud occurrence. The other control variable years and industry also have positive coefficient, but it is not significant at level of 10%. This means that time and type of industry do not affect the probability of fraud occurrence.

CONCLUSION

This study is aimed at testing whether there are effects of the effectiveness score of board of commissioners, effectiveness score of audit committee, monitoring role of bank, family ownership, control of capital from the foreign capital, and the life cycle of company on the fraud occurrence on financial report. Based on the analysis of results discussed above, the following conclusion can be drawn:

The effectiveness score of board of commissioners has no effect on the probability of fraud occurrence in financial report. This means that the performance of effective board of commissioners does not make lower the probability of fraud. The effectiveness score of audit committee has a negative and significant effect on the probability that fraud will occur in financial report. This indicates that the more effective the performance of audit committee, the smaller the probability of fraud occurrence. There is a distinction among the independency characteristics of the board of commissioners between companies doing fraud and not. Whereas, for the audit committee characteristics, there is a difference between the characteristics of competence between companies which conduct fraud and not conduct.

The role of monitoring of bank does not affect the probability of fraud occurrence. This means that the loan ratio from the bank with the ability of good monitoring divided by the total asset will not lower the probability of committing fraud. This indicates that banks as the external party in the corporate governance of company fail to play the monitoring role well. The role of monitoring by bank as the external party in the corporate governance of company cannot be as effective as the monitoring role played by the company's internal part.

The ownership structure of the company shows that the company with foreign ownership could not lessen the probability of the fraud occurrence.

The life cycle of company at the young stage has no significant effect on the probability of fraud occurence . This means that fraud can happen at different stages of the life cycle of company. The life cycle of company at the mature stage will not significantly affect the probability of fraud occurrence in financial

report. This means that fraud can happen at different stages of company life cycle.

These findings provide implications that can become contributions for some parties, such as for a company, based on the above results, the company is expected to make thoughtful considerations when deciding the company's policies of company, such as increase in the application of good corporate governance, especially the improvement of the audit committee role effectiveness. In the election company's capital structure, ownership of which is controlled by the family will have a lower probability to commit fraud, so it would be better if a company's capital structure to have larger portion for family (> 50%).

Several limitations of this study need to be acknowledged. First, this study focuses only on the BAEPEPAM-LK fraud report of the year 2007-2011. As data become available in the upcoming years, future studies may re-examine the issue. Second, corporate governance is measured by effectiveness score of board of commissioner and audit committee only. There are other criteria mechanism to measure corporate governance, such as competency, duration, director's independence, internal audit report mechanism, and competency of external audit firm. This study relies only on secondary data in evaluating the score board of commissioner and audit committee. The proxy of firm life cycle may not be able to describe the stages of the cycle accurately.

In future research, it might be possible to extend the research period, such as (i) using other variables in measuring corporate governance, such as the board of directors variables (age, gender, hours of work, competencies, and outside or inside director), internal audit (whether the internal audit is reported to audit committee or to management, competency members of the internal audit), or external audits (Big Four or non Big Four); (ii) obtaining an index score of boards of commissioners and audit committees by using data other than secondary data (annual financial report) with questionnaires or surveys to better reflect the condition of board of commissioners and audit committees; (iii) using different ways for control sample selection; or (iv) use another proxy in measuring life cycle stages, such as average sales growth or dividend pay-out rate.

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