Analysis of Mandatory Audit Rotation Regulations in Indonesia

Fitriany
Department of Accounting
Faculty of Economics and Business
Universitas Indonesia
Depok, Indonesia
fitrianyamarullah@gmail.com

Sidharta Utama
Department of Accounting
Faculty of Economics and Business
Universitas Indonesia
Depok, Indonesia
sidhartautama@yahoo.com

Hilda Rossieta
Department of Accounting
Faculty of Economics and Business
Universitas Indonesia
Depok, Indonesia
hilda.rossieta@ui.ac.id

Dwi Martani
Department of Accounting
Faculty of Economics and Business
Universitas Indonesia
Depok, Indonesia
dwi.martani@yahoo.com

Abstract—**This research investigates the impact on audit quality on the regulation requiring mandatory audit rotation in Indonesia. Only a few countries have enacted such a rule about mandatory audit firm rotation. To determine this rule's impact, a sample of company listed on the Indonesian stock exchange, before the regulation (1999–2001) and after the regulation (2004–2008) were analyzed. The study found that before the regulatory period, the relationship between tenure and audit quality was concave (increasing up to 3 years and then declining), but after the regulation, the relationship became convex (decrease in the first 2 years, then rising). After the regulation, the rotation of audit partners increased audit quality, but audit firm rotation did not impact audit quality. Auditor specialization will increase audit quality, but auditor workload and Continuing Professional Education (CPE) will decrease audit quality. The audit committee was not found to have a direct impact on audit quality, nor does it moderate the relationship between the aforementioned variables and audit quality, except for the variable workload. The implication of this research is that mandatory audit firm rotation needs to be evaluated again because the regulation is impairing audit quality, whereas the regulation concerning audit partner rotation needs to be maintained, because it has improved audit quality. The role of the audit committee should be further enhanced.**

Keywords—*c Audit quality, Audit Partner Rotation, Audit Firm Rotation, Audit Tenure, Specialization, CPE, Workload, Audit Committee*

I. INTRODUCTION

Rules on audit rotation in Indonesia were implemented in 2002; these rules require accounting firms to be rotated every five years, and audit partner to be rotated every three years. The regulation was revised in February 2008 to increase the accounting firm rotation span to every six years. Not many countries have such audit rotational rules. Usually, a country will only have mandatory audit partner rotation. Before implementation of this rule, some companies had been audited by the same accounting firm for as many as 18 years. The duration of an audit relationship (termed tenure in this paper) may lead to a decrease in auditor independence, such as seen in the cases of Enron and Arthur Anderson. It is therefore very interesting to investigate the impact of tenure on audit quality in the period before and after the rule of this rotation.

Indonesia makes an interesting case because laws also allow the company to skirt such mandatory rotation through a pseudo or quasi rotation (changing 50% of the audit partner's composition), making it a new accounting firm able to audit its old clients. According to Siregar et al. [1], most audit rotations in Indonesia after 2003 have been pseudo or quasi rotations.

Many studies have examined the influence of auditor rotation on audit quality, with some arguing that rotation will increase the independence, while opponents argue that rotation will lower competence. The effect of tenure on audit quality is therefore not clear-cut. This study argues that the relationship between tenure and audit quality is nonlinear (quadratic). Davis et al. [2] studied the effect of tenure on earning management and concluded that in the period before SOX, tenure had a quadratic effect on earnings management. Fitriany et. al. [3] investigated the impact of tenure on audit quality using four proxies of audit quality; however, the study did not include the audit committee as a moderating variable.

This study will also examine the effect of workload on audit quality. Workload is measured using the ratio of number of clients to number of audit staff. High workload may lead to fatigue and create dysfunctional audit behavior, both of which could reduce the ability of auditors to find errors or irregularities that should be reported. Lopez [4] found that an audit process undertaken under pressure will result in lower quality. Hansen et al. [5] also found that workload will decrease audit quality. With this background, it is interesting to examine the impact of workload on audit quality.

In addition to tenure and rotation, this study will also examine the effect of auditor specialization and Continuing Professional Education (CPE). Furthermore, this study will examine whether audit committee quality directly impacts audit quality, and whether the quality of the audit committee can moderate the effect of tenure, rotation, specialization,

CPE, and workload on audit quality. Understanding the dynamics of these relationships will help address criticism of the weak role of audit committees in the context of developing countries. This study also examines the influence of audit committee quality as a moderating variable in the quadratic model. To the authors' best knowledge, no other studies have taken this approach.

The objectives of this research are to examine the effect of tenure, rotation, specialization, CPE, and workload on audit quality with audit committee as a moderating variable.

II. HYPOTHESES DEVELOPMENT

A. Impact of Audit Tenureon Audit Quality

According to De Angelo [6], audit quality is a combination of an auditor's ability to detect misstatements in financial statements (competency) and how forthcoming the auditor is in reporting any such misstatements (independency). Tenure is predicted to be negatively related to auditor independence because the longer the tenure, the closer the relationship between the auditor and client can become, possibly decreasing the auditor's ability to be critical and/or impartial regarding the client. Some researchers, Dopuch et al. [7], Gavious [8], and Chi et al. [9], found that the longer the tenure, the less independence the auditor displayed.

However, tenure can also be positively related to auditor competence because a longer tenure allows the auditor to gain a better understanding of the company's internal controls, accounting information systems, and company-specific risks. This learning process means that more or less additional knowledge could be gained at the beginning of the year than in subsequent years, depending on whether the curve is convex

Combining various measures of independence and competence will produce various audit quality curves, which may be concave, convex, or linear. The shape depends on whether independence and competency is dominant. The shape also depends on whether the independence and competency curve is convex or concave.

Based on the above explanation, it is predicted that tenure has a quadratic effect on audit quality; it may be concave, conventional, or linear, depending on whether increased competence or decreased independence predominates.

H1: Audit tenure affects audit quality quadratically

B. Impact of Rotation on Audit Quality

Arguments have been made opposing and supporting the rotation requirement. One research opposing the rotation requirement is that of St Pierre and Anderson [10]. They state that many of the audit failures and legal issues in fact occur in the early years of audit engagement. Furthermore, Davis et al. [11] state that high frequency of auditor rotation will increase overall audit costs. Such cost rises are attributed to the rotation, which means that each time an accounting firm is new, it will still have to study the client more closely because deep understanding of the company has not yet been developed.

However, there are some proponents of the rotation requirement. For instance, Gietzmann and Sen [12] find that even though auditor rotation costs more, it increased auditor independence relatively more than the costs in several big clients.

According to the literatures mentioned above, audit rotation can have positive (increase independency) or negative (decrease competency) impacts. Thus, the hypothesis about the impact of audit rotation to audit quality will be assessed using a two-tailed test.

H2: Audit rotation affects audit quality

C. Impact of Audit Specialization on Audit Quality

A specialized auditor is an auditor with extensive experience in a certain industry. Such experience can increase the auditor's knowledge about the audit risks specific to that industry. This specialization can improve the auditor's efficiency and effectiveness in assessing the reliability of client's financial statements and estimations, better allowing the auditor to detect errors or unusual items in firms within the specialized industry. Therefore, a specialized auditor will be less likely to make mistakes compared to a non-specialized auditor [13].

Compared to non-specialized auditors, specialized auditors will always protect their reputation by improving compliance with auditing standards [14]. A specialized auditor will be more confident in determining inherent risks and more capable in detecting errors and financial fraud. Therefore, a company audited by a specialized auditor will produce better earning quality because of lower discretionary accrual and higher earnings coefficients [15].

H3: Auditor specialization positively affects audit quality

D. Impact of Auditor Workload on Audit Quality

Workload shows how much work an auditor is expected to perform. Workload can be measured by the number of clients that should be handled by an auditor or the time limit available to do an audit process. Lopez [4] defines workload as the busy season that occurs in the first quarter of the year because many companies end their financial year in December. Fatigue and a strict time budget can reduce the auditor's ability to find errors or fraud. Lopez [4] finds that audits conducted under workload pressure have lower audit quality than ones performed with no workload pressure.

Experimental studies confirm that budget constraints trigger auditors to perform low-quality audit works [16-20].

Hansen et al. [5] identified audit capacity stress stemming from increases in new clients coming from the Andersen Public Accounting Firm after the firm closed after the Enron's case. Blouin et al. [21] and NyBerg [22] also provide similar argument about Enron's collapse. Audit capacity stress can reduce audit quality so that the earnings quality will be also decrease [5]. This research examines whether workload will affect audit quality. We predict that when workload increases, audit quality will decrease.

H4: Auditor workload level is negatively correlated with audit quality

E. Impact of CPE on Audit Quality

CPE is a needed to remain a certified Public Accountant. In Indonesia, the Ministry of Finance requires a public accountant to earn least 30 credits CPE per year. It is hoped that CPE will increase public accountants' knowledge so that their audit quality improves. Adityasih [23] studies the relationship between CPE and audit quality and shows that the CPE is positively correlated with audit quality.

H5: CPE is positively correlated with audit quality

F. Direct Impact of Audit Committee on Audit Quality

An audit Committee has several important roles: (1) engaging in monitoring to guarantee the quality of financial statements and corporate accountability [24]; and (2) assisting the Board of Commissioners to improve the quality of the audit process, in which an external auditor can trigger a deeper audit to identify and rectify any errors in financial reporting by management, whether intentional or not [25, 26]. Furthermore, Zhang et al. [27] also conclude that companies' ability to identify errors in internal control is higher when the audit committee has financial accounting expertise.

Meanwhile, an effective audit committee will be able to limit managers' scope to engage in earning management [28]; an audit committee with independence from the CEO will be more effective in monitoring the financial accounting reporting process [29].

Dhaliwal et al. [30] argue that audit committee quality can be measured from by its size independence, and meeting frequency. Robinson and Jackson [31] define audit committee characteristics in terms of independence, financial experts, job commitment, company knowledge, and governance expertise. Peivy [32] and Sari [33] measure the audit committee's role in terms of the extent to which a company discloses four aspects (evaluations of internal control and management control, reviews financial reports, and assists the company to comply with laws) in the audit committee report. Hermawan [34] investigates the activity and size of the audit committee but excludes its independence.

From those researches, we can conclude that audit committee quality can affect audit quality by limiting earnings management and monitoring the audit process.

H6: Audit committee quality is positively related to audit quality.

G. Moderating Impact of Audit Committee Quality on Tenure and Audit Quality

Related to Hypothesis 1, the relationship between tenure and audit quality is expected to be quadratic. Thus, a period of audit engagement exists wherein the audit quality will peak. When audit committee quality increases, this maximum point will shift to the right (become higher). This means that the period of audit engagement will increase the optimum audit quality. For instance, if audit quality is maximum when tenure is 5 years, a high-quality audit committee could mean that audit quality will be maximized when tenure is longer, for instance, 6 years.

The audit committee has important roles in monitoring financial statements quality [24]. Previous research mostly finds that an accounting and finance background is positively related to financial statement quality [28, 30, 35-39]. This indicates that an audit committee possessing knowledge of accounting and finance has the ability to detect a lack of internal controls, specifically related to financial reporting. An audit committee that has an accounting and finance background will be able to critically evaluate whether the audit process performed by the external auditor is in accordance with audit standards. The audit procedure does not shrink if an auditor is familiar with management. If an external auditor performs an audit that is not in accordance with the standard, audit committee will be able to communicate such a situation so that audit quality can be maintained.

Klein [29] finds that an independent audit committee is more effective in monitoring the process of the financial accounting company. Xie et al. [28] show that an audit committee can protect investors' interests by limiting the ability of management to engage in earnings management. Other researches find a positive impact from an independent audit committee on reliable financial statements [28, 39, 40]. This shows that an independent audit committee has the ability to report to the Board of Commissioners when management engaged in fraud or manipulation of financial statements. When management compromises with the external auditor, the quality of financial statements also decreases. Even when an auditor and management have become familiar with each other, audit quality will be maintained if an independent audit committee exists to ensure that auditor independence will not be impaired by the length of audit engagement.

The audit committee also affects the relationship between tenure and audit quality. Menon and Williams [41], Beasly et al. [42], Anderson et al. [43], Xie et al. [28], and Zhou and Chen [38] show that the higher the frequency of audit committee meetings, the better the quality of the financial statements. An audit committee's activities include actively evaluating the company's internal controls by holding meetings, reviewing financial statements, analyzing company risks, and overseeing the audit process done by the auditor. Thus, the audit committee does not perform the audit procedure as done by auditors. Accordingly, the audit committee will be able to detect if a compromise has been struck between management and auditor or if an auditor is not following audit procedure due to reduced auditor critical assessment due to longer tenure. Based on these arguments, the following hypothesis is proposed:

H7: A high quality audit committee will strengthen (weaken) the positive (negative) relationship between tenure and audit quality.

H. Moderating Impact of Audit Committee Quality on the Relationship between Rotation and Audit Quality

Hypothesis 2 stated that auditor rotation can positively or negatively influence audit quality. Rotation can have positive influence by increasing auditor independence. However, rotation can have negative influence because it can reduce auditor competence. Dhaliwal et al. [30] find that an audit committee with accounting expertise has a positive impact on

accruals quality. Abbott et al. [37] find that companies that have an independent, expert and diligent audit committee have a lower probability of making a restatement. Hermawan [44] finds that audit committees with an accounting and finance background will have be able to detect and report any errors or fraud in the financial statements, as well as weaknesses in the company internal controls, to the Board of Commissioners. Companies with a competent, independent, and effective audit committee tend to have better internal controls so that when auditor rotation occurs, the positive impacts from rotation is stronger than the negative impacts. Thus, overall, the audit quality will increase. An audit committee with an accounting and finance background will tend to have better internal controls. An audit committee with an accounting and/or finance background will also be able to evaluate the audit process and provide input to the auditor. These traits mean that when auditor rotation occurs, the positive impacts will be stronger than the negative impacts. Thus, overall, the audit quality will increase.

When rotation occurs, an independent committee audit will help enhance the impact of rotation on audit quality. An independent audit committee will be stricter in terms of approving an auditor change because the management wants to get a better audit opinion or make more compromise with the auditor. Thus, even when companies have already performed a rotation, the positive impact of rotation will be stronger than the negative impact from the rotation. The audit committee will act critically regarding the audit process so that rotation will increase auditor independence by more than auditor competence will decline.

When auditor rotation occurs, an effective audit committee will evaluate internal controls, review financial statements, analyze company risks, and monitor the auditor's audit process so that the positive impacts from rotation will be stronger than the negative impacts. If the audit committee is effective and actively monitors audit process, even the case of new external audit, the probability of audit failure is lower.

H8: A high-quality audit committee will strengthen (weaken) the positive (negative) relationship between audit rotation and quality.

I. *Moderating Impact of Audit Committee Quality on Specialization and Audit Quality*

Based on hypothesis 3, we predict that specialization will have positive impacts on audit quality. An audit committee that is competent, independent, and active will

1. be able to understand various complex financial transactions, detect errors/frauds in financial statements and weaknesses in the company internal controls to communicate such issues to the specialized auditor;

2. critically act regarding the works performed by specialized auditor to prevent any collusion between auditor and major shareholders that will harm minority shareholders while maintaining its own independence in evaluating the auditor and ensuring the audit is performed based on the audit plan; and

3. actively perform their role in monitoring the specialized auditor, to ensure that specialized

auditor performs the audit in accordance with auditing standards.

Based on this explanation, we can conclude that a high-quality audit committee (competent, independent and active) will strengthen the positive impacts of auditor specialization on audit quality.

H9: A high-quality audit committee will strengthen the positive impact of specialized auditors on audit quality

J. *Moderating Impact of Audit Committee Quality to the Workload and Audit Quality*

Related to auditor workload, we suggest that an audit committee with accounting and finance competence will be able to communicate well with the auditor and therefore provide any information required. This will help audit process in terms of auditor workload. If the auditor does not possess accounting competence, communications between auditor and audit committee will not be smooth so that the auditor's workload could increase and/or could increase other stresses on the auditor beyond workload. Thus, we predict that audit committee competence will reduce the negative relationship between workload and audit quality.

An independent audit committee will always act independently, including notifying an auditor who does not perform well because of the workload. Thus, the independent audit committee is expected to reduce the negative relationship between workload and audit quality.

Abbott et al. [37] investigate the relationship between annual earning restatements and four audit committee characteristics: independence, financial expertise, diligence (measured by meeting frequency), and size. Their research suggests that companies with an independence, expert, and diligent audit committee are less likely to issue a restatement. A competent and independent (expert) audit committee has a better ability to find and report an unsatisfactory audit performed by an external auditor. A diligent audit committee will monitor the external auditor's output, which can prevent dysfunctional audit behavior caused by auditor workload. Active monitoring performed by a competent and independent audit committee is therefore expected to reduce the negative relationship between workload and audit quality. Thus, the following hypothesis is formulated:

H10: A high-quality audit committee will weaken the negative impact between auditor workload and audit quality

K. *Moderating Impact of Audit Committee Quality on CPE and Audit Quality*

CPE taken by public accountants can improve audit quality [23]. The audit committee plays an important role in monitoring the works performed by public accounting firms. Anderson et al. [43] and Xie et al. [28] find that the higher the frequency of audit committee meetings, the better the quality of a firm's financial statements. Abbot et al. [37] and Dhaliwal et al. [30] find that an audit committee with an accounting and finance background positively impacts the quality of financial statements. A diligent audit committee will actively monitor the external auditor's works and thus prevent dysfunctional audit behavior caused by a lack of

auditor's knowledge. In the companies audited by public accountants who undertake less CPE, audit quality is likely to be low. However, an independent audit committee qualified to monitor the auditor can reduce the negative impacts and vice versa. Companies audited by public accountants with high CPE levels are likely to have higher audit quality. A high-quality audit committee will strengthen the positive relationship. Thus, the following hypothesis is formulated:

H11: A **high-quality audit committee will strengthen the positive impact between CPE and audit quality**
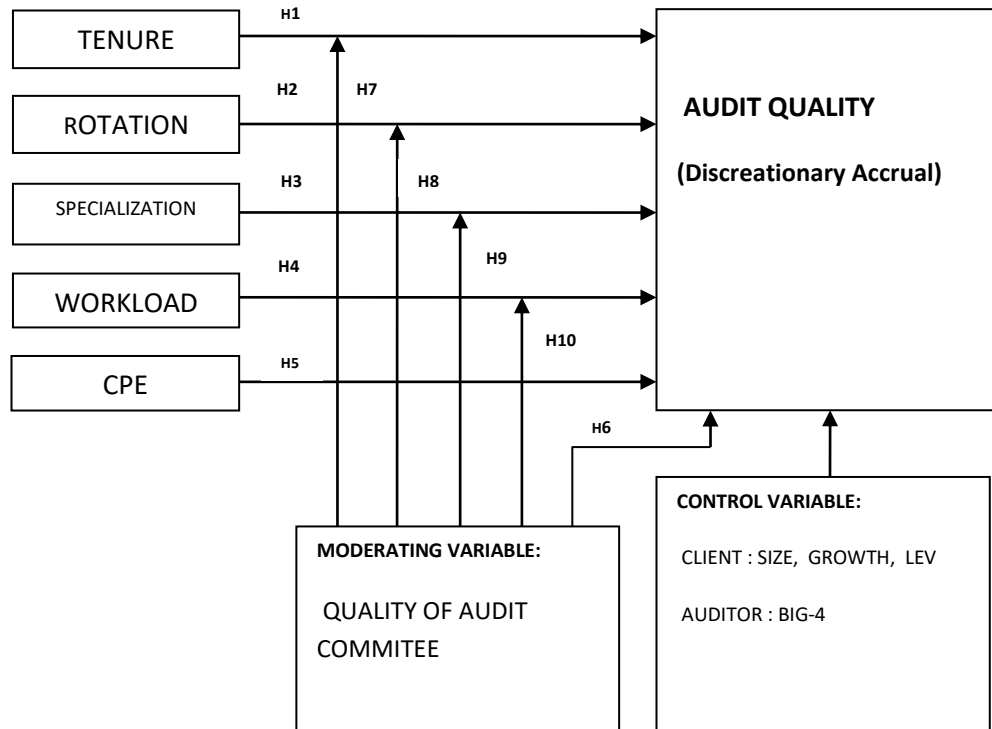
III. RESEARCH METHOD

Fig. 1. Conceptual Framework

TABLE I. SAMPLE SELECTION

	Pre Regulation			Post Regulation Period					
Year	1999	2000	2001	2004	2005	2006	2007	2008	Total
Public Listed Company in Indonesia Stock Exchange	307	307	323	330	339	343	343	343	2635
Financial Company (Bank, Insurance, Leasing, Investment)	-51	-56	-55	-63	-69	-70	-76	-76	-516
Non Financial Company	256	251	268	267	270	273	267	267	2119
Data Not Obtained	-153	-148	-165	-164	-167	-170	-164	-164	-1295
Sample	103	103	103	103	103	103	103	103	824
Total		309				515			824

A. Methodology

This research used data covering 3 years before the regulation (1999–2001) because of the limitations of financial statement data that could be obtained. Data covering 5 years after the regulation (2004–2008) are used because the research was conducted in 2009, so the latest financial statements obtained were from 2008. Sample selection can be seen in Table 1.

The research model is divided into two parts. one without audit committee, workload, and CPE and one that includes those variables. This is because regulations requiring companies to disclose information on audit committees were issued in 2006. This study performs a separate regression between PTENURE and FTENURE variables to avoid the multicolliniarity problem between the two variables.

Model 1A

$$ABS\_DAC_{it} = a_0 + a_1 FTENURE_{it} + a_2 FTENURESQ_{it} + a_3 FROTATION_{it} + a_4 SPEC_{it} + a_5 BIG4_{it} + a_6 LEV_{it} + a_7 GROWTH_{it} + a_8 SIZE_{it} + a_9 D\_LOSS_{it} + a_{10} CFO_{it} + \varepsilon_{it}$$

Where

ABS_DAC^{it} absolute discretionary accruals as proxy of audit quality

FTENURE firm tenure, the number of years an accounting firm audits a client, based on international affiliate name, not name of a local partner

FTENURESQ audit firm tenure squared

FROTATION dummy variable, 1 if there is audit firm rotation and 0 otherwise

SPEC dummy variable, 1 if the company is audited by specialized auditor (have > 10% market share in an industry, based on its client's total assets) and 0 otherwise.

BIG4 dummy variable, 1 if the company is audited by Big4 and 0 otherwise

LEV debt-to-total asset

GROWTH price-to-book value

SIZE natural logarithm of ending book value of total assets

Model 1B

$$ABS\_DAC_{it} = a_0 + a_1 PTENURE_{it} + a_2 PTENURESQ_{it} + a_3 PROTATION_{it} + a_4 SPEC_{it} + a_5 BIG4_{it} + a_6 LEV_{it} + a_7 GROWTH_{it} + a_8 SIZE_{it} + a_9 D\_LOSS_{it} + a_{10} CFO_{it} + \varepsilon_{it}$$

Where

PTENURE : audit partner tenure, measured as number of continuous years that the audit partner has engaged with the company

PTENURESQ : audit partner tenure squared

PROTATION : dummy variable, equal to 1 if there is audit partner rotation and 0 otherwise

Model 2A

$$ABS\_DAC_{it} = a_0 + a_1 PTENURE_{it} + a_2 PTENURESQ_{it} + a_3 PROTATION_{it} + a_4 SPEC_{it} + a_5 CPE_{it} + a_6 WL_{it} + a_6 CMTE_{it} + a_7 PTENURE_{it}*CMTE_{it} + a_8 PTENURESQ_{it}*CMTE_{it}\ a_9 PROTATION_{it}*CMTE_{it} + a_{10} WL_{it}*CMTE_{it} + a_{11} SPEC_{it}*CMTE_{it} + a_{12} CPE_{it}*CMTE_{it} + a_{13} BIG4_{it} + a_{14} LEV_{it} + a_{15} GROWTH_{it} + a_{16} SIZE_{it} + a_{17} D\_LOSS_{it} + a_{18} CFO_{it} + \varepsilon_{it}$$

Model 2B

$$ABS\_DAC_{it} = a_0 + a_1 FTENURE_{it} + a_2 FTENURESQ_{it} + a_3 FROTATION_{it} + a_4 SPEC_{it} + a_5 CPE_{it} + a_6 WL_{it} + a_6 CMTE_{it} + a_7 FTENURE_{it}*CMTE_{it} + a_8 FTENURESQ_{it}*CMTE_{it}\ a_9 FROTATION_{it}*CMTE_{it} + a_{10} WL_{it}*CMTE_{it} + a_{11} SPEC_{it}*CMTE_{it} + a_{12} CPE_{it}*CMTE_{it} + a_{13} BIG4_{it} + a_{14} LEV_{it} + a_{15} GROWTH_{it} + a_{16} SIZE_{it} + a_{17} D\_LOSS_{it} + a_{18} CFO_{it} + \varepsilon_{it}$$

Whereas:

WL: *Workload* measured by the ratio of the number of audit clients are handled by an audit firms in each year to the number of auditors in the audit firms

CPE: Number of credits training within one year that has been followed by an audit partner who audited the company

CMTE: Audit committee quality measured based on its level of competence and activities

B. Measurement of Variables

1) Audit Quality

Audit quality is proxied by the value of absolute discretionary accrual (ABSDAC), following Francis and Khrishnan [45]; Bartov et al. [46]; Geiger and Raghunandan [47]; Myers et al. [48]; and Francis and Wang [49]. ABSDAC is a measure of financial statement quality (output of the audit process). A greater ABSDAC value indicates that the quality of financial statements is decreasing, which means that audit quality is also declining, because the auditor cannot prevent earnings management by the company. ABSDAC is measured using the Kaznic model:

$$TACC_{it}/TA_{i,t-1} = \alpha_1(1/TA_{i,t-1}) + \alpha_2(\Delta REV_{it} - \Delta REC_{it})/TA_{i,t-1} + \alpha_3 PPE_{i,t}/TA_{i,t-1} + \alpha_3 \Delta CFO_{i,t}/TA_{i,t-1} + \varepsilon_{it}$$

2) Audit Committee

The audit committee is analyzed from competence and effectiveness perspectives, with scoring based on IICD and Hermawan [44]:

- Activity; if the responsibility is fulfilled: Good and if not: Poor.

- Number of meetings: Good: more than 6 times; Fair: 4 – 6; Poor: fewer than 4 times

- Attendance: Good: more than 80%, Fair: 70 – 80%; Poor: less than 70%

- Number of audits committee: Good: more than 3, Fair: 3; Poor: less than 3

- Accounting background: Good: more than 1 person has an accounting background, Fair: only 1; Poor: none

- Age: Good: more than 40 years old, Fair: between 30 and 40, Poor: below 30 years

- Score: Good: 3, Fair: 2, Poor: 1. The highest audit committee score is 27, and the lowest 12.

IV. RESULTS AND DISCUSSION

A. Descriptive Statistics

Table 2 shows that in the pre-regulation period, average firm tenure was 6.2 years and maximum tenure was 21 years. In the post-regulation period, average firm tenure was 6.93 years and maximum tenure was 20 years (Table 3). The data show that after the rotation rule came into effect, many firms continued to be audited by the same accounting firm even after the regulatory limit (6 years) had passed. This is because the regulation on mandatory audit firm rotation can be met simply by changing the name of the local audit firm so that it is considered a new accounting firm. Thus, many accounting firms changed the name of their local accounting

firm partner while its international affiliation remained unchanged.

In the pre-regulation period, only 9% of sample firms changed their accounting firm and 32% changed audit partner. In the post-regulation period, 15% of companies changed their accounting firm, and 50% percent changed audit partner. In the pre-regulation period, 59% vs 41% of firms were audited by specialized versus non-specialized auditors. Following the regulation, the number of companies

audited by specialized and non-specialized auditor became equal (50% vs 50 %).

At the pre-regulation period, most sample firms (86%) were audited by Big Four (Big Five). At the Post-regulation, companies audited by Big Four (Big Five) firms decreased significantly to 57%. Average of work load (WL) is quite high, 44.50. This means that in a year, every partner handle about 44.50 clients. The average of audit committee score (KMTE) is still low (19.94 from maximum score 30).

TABLE II. DESCRIPTIVE STATISTICS MODEL 1 – PRE-REGULATION PERIOD (1999–2001)

	Minimum	Maximum	Mean	Std. Deviation	Skewness
CFO t+1	-0.51	5.55	0.20	0.63	5.65
INC	-1.02	1.49	0.03	0.19	0.35
EPS	-5.67	6.19	0.19	1.43	0.42
R	-1.86	4.84	0.48	1.16	1.21
ABSDAC	0.00	1.04	0.11	0.12	3.16
CAR	-2.27	3.88	0.30	1.04	1.12
UE	-8.64	8.27	-0.15	2.34	0.38
PTENURE	1.00	12.00	3.50	2.81	1.26
FTENURE	1.00	21.00	6.20	3.71	0.73
PROTATION	0.00	1.00	0.32	0.47	0.79
FROTATION	0.00	1.00	0.09	0.29	2.80
SPEC	0.00	1.00	0.59	0.49	-0.38
BIG4	0.00	1.00	0.86	0.35	-2.10
LEV	0.03	4.60	0.74	0.57	3.17
GROWTH	-6.51	9.64	1.19	1.80	1.45
SIZE	17.35	24.79	20.35	1.37	0.35
D_LOSS	0.00	1.00	0.28	0.45	1.01
ST DEV	0.00	0.37	0.10	0.05	1.68
CFOt	-0.48	3.77	0.15	0.40	6.13
TA (Rp 000 000)	34.31	58275.21	2064.10	5113.19	6.68
Valid N (listwise)	309.00				

TABLE III. DESCRIPTIVE STATISTICS MODEL 1 POST-REGULATION PERIOD (2004–2008)

	Minimum	Maximum	Mean	Std. Deviation	Skewness
CFO t+1	-1.63	6.78	0.09	0.36	13.28
INC	-0.63	0.94	0.03	0.11	0.73
EPS	-4.40	4.35	0.05	0.62	-0.34
R	-2.01	4.85	0.25	0.62	1.40
ABSDAC	0.00	0.84	0.06	0.07	4.72
CAR	-2.01	2.63	0.29	0.76	0.75
UE	-6.51	6.50	-0.01	1.72	-0.07
PTENURE	1.00	5.00	1.71	0.80	0.68
FTENURE	1.00	20.00	6.93	5.26	0.57
PROTATION	0.00	1.00	0.50	0.50	0.02
FROTATION	0.00	1.00	0.15	0.36	1.95
SPEC	0.00	1.00	0.50	0.50	-0.01
BIG4	0.00	1.00	0.57	0.49	-0.30
LEV	0.00	4.37	0.60	0.38	3.92
GROWTH	-10.98	21.26	1.47	2.45	3.87
SIZE	11.52	25.24	20.52	1.92	-1.19
D_LOSS	0.00	1.00	0.23	0.42	1.28
ST DEV	0.00	0.55	0.08	0.05	3.10
CFOt	-0.41	25.22	0.11	1.11	22.34
TA (Rp 000 000)	0.101	610000	6783.90	39713.60	13.11
Valid N (listwise)	515.00				

B. Impact of Partner Tenure on Audit Quality

Table 5 shows the regression results for model 1 regarding the effect of accounting firm tenure on audit quality. Columns 1 and 2 show the effect of the audit partner tenure on audit quality, and columns 3 and 4 show the effect

of firm tenure audit on audit quality. For easier analysis, the regression results in Table 5 are given in Table 7. Whether the relationship between variables is quadratic can be determined using two variables. If PTENURE is significantly negative and PTENURESQ is significantly positive, then the relationship of partner tenure to discretionary accruals is

convex. Because audit quality is inversely related to discretionary accrual, the impact of tenure partner on audit quality is concave. The calculation of the maximum point can be seen following Table 5. The maximum point occurs when tenure is 3 years (Table 7 column 1).

These results indicate that audit quality will increase for the first 3 years. After 3 years, audit quality will decrease. This finding is in accordance with the results of Davis et al. [2] and Siregar et al. [1].

Table 7 column 2 indicates that in the period after regulation, the relationship between tenure partner and audit quality is the convex, i.e., it decreases first, then rises. The minimum point is 2 years. These results indicate that audit quality will decrease in the first 2 years of an auditor's tenure, then rise. The difference in outcomes between post regulation and pre-regulation may be due to pre-regulation period, rotation is natural, whereas in post-regulation period, rotation is not natural (mandatory).

TABLE IV. DESCRIPTIVE STATISTICS- MODEL 2

	Minimum	Maximum	Mean	Std. Deviation	Skewness
ABSDAC	0.00	0.56	0.07	0.07	3.12
CAR	-1.70	2.92	0.37	0.77	0.72
UE	-5.70	4.92	0.37	0.77	0.72
CFO t+1	-1.63	2.36	0.09	0.24	1.95
INC	-0.46	0.43	0.04	0.10	0.51
EPS	-1.95	1.70	0.03	0.35	-2.28
R	-2.01	2.83	0.24	0.62	0.69
PTENURE	1.00	5.00	1.79	0.83	0.60
FTENURE	1.00	20.00	7.25	5.59	0.60
PROTATION	0.00	1.00	0.47	0.50	0.11
FROTATION	0.00	1.00	0.15	0.36	1.96
SPEC	0.00	1.00	0.53	0.50	-0.11
WL	0.63	199.00	44.50	24.07	1.47
CMTE	12.00	28.00	19.94	3.97	-0.37
CPE	5.00	99.00	39.29	17.41	0.41
BIG4	0.00	1.00	0.56	0.50	-0.25
LEV	0.05	2.88	0.59	0.33	3.21
GROWTH	7.72	21.26	1.63	2.68	4.19
SIZE	11.52	25.24	20.54	2.15	-1.49
D_LOSS	0.00	1.00	0.18	0.38	1.68
STDEV	0.00	0.11	0.08	0.05	1.85
CFOt	-0.41	25.22	0.15	1.50	16.70
TA (Rp 000 000)	0,101	610000	9481.20	52582.40	10.09
Valid N (listwise)					285

TABLE V. REGRESSION RESULT MODEL 1

		AUDIT PARTNER BEFORE REGULATION				AUDIT PARTNER AFTER REGULATION				AUDIT FIRM BEFORE REGULATION				AUDIT FIRM AFTER REGULATION			
		Column 1				Column 2				Column 3				Column 4			
Variable	Pred.	Coefficient	Prob.		VIF	Coefficient	Prob.		VIF	Coefficient	Prob.		VIF	Coefficient	Prob.		VIF
C		-0.343	0.001			0.074	0.000			-0.142	0.020			0.085	0.000		
TENURE?	+/-	-0.021	0.000	***	7.5	1.269	0.000	***	7.8	0.016	0.000	***	2.8	0.270	0.000	***	13.4
TENURESQ?	+/-	0.003	0.000	***	5	-0.316	0.000	***	7.6	0.000	0.136		2	-0.013	0.000	***	13.3
ROTATION?	+/-	-0.037	0.000	***	2.8	-0.001	0.000	***	1	0.082	0.000	***	1.7	-0.004	0.150		1.1
SPEC?	-	0.040	0.000	***	1.2	0.000	0.366		1.6	0.029	0.000	***	1.2	-0,000	0.436		1.7
BIG4?	-	-0.004	0.296		1.2	8,40E	0.463		1.5	-0.048	0.002	***	1.4	-0.001	0.349		1.6
LEV?	+/-	0.000	0.989		1.2	-0.002	0.125		1.2	0.006	0.091	*	1.2	0.010	0.149		1.2
GROWTH?	-	0.003	0.018	**	1	0.000	0.094	*	1.1	0.004	0.012	**	1	0.001	0.021	**	1.1
SIZE?	+/-	0.020	0.000	***	1.1	0.000	0.034	**	1.1	0.012	0.000	***	1.1	-0.001	0.011	**	1.1
D_LOSS?	-	-0.005	0.080	*	1.1	6,42E	0.461		1.2	-0.015	0.000	***	1.1	-0.002	0.219		1.2
CFO?	-	0.011	0.158		1	0.000	0.148		1	0.021	0.000	***	1.1	-0.002	0.000	***	1
Adjusted R-squared		0.686				0.99				0.756				0.863			
Durbin-Watson stat		2,916				2.67				3,053				1,542			
Prob(f-statistic)		0.000				0.000				0.000				0.000			

Audit Partner: (column 1) :
-b/2a = - PTENURE / (2 * PTENURESQ) = - (-0.021) / (2x 0.003) = 3.1 years
Audit Partner: (column 2) :
-b/2a = - PTENURE / (2 * PTENURESQ) = - (1.269) / (2x- 0.316) = 2 years
Audit Firm (column 4) :
-b/2a = - FTENURE / (2*FTENURESQ) = - (0.270) / (2x- 0.013) = 10.1 years

It is estimated that the decrease in independence in the early years of audit was higher in the post-regulation period compared with the decrease in the pre-regulation period due to the three-year rotation rule. In the first and second years,

auditors seek to obtain an assignment by clients, so they comply with client requests. This caused the quality of audits to fall. After as the regulation, mandatory partner rotation meant that an auditor must demonstrate a good audit quality because the audit will likely be examined by another auditor.

Another explanation for the decline in auditor independence in first two years of tenure is because many companies change their audit firm due to the regulation. Based on the theory of low-balling, to obtain and retain new clients, auditors charge a lower audit fee on the early years of providing auditing services. Audit fees will continue to increase with increasing period of engagement [6]. Thus, an auditor whose tenure is still low will have a greater need to maintain a relationship with the client so that their cooperation will endure and the auditors' losses in the early years can be covered. This will lead to poor audit quality and low earnings quality [50]. After auditor losses during the early years are covered and auditors gain more in-depth knowledge about the company, the auditors will feel more secure, leading them to be more independent and able to limit the earnings management, so that the quality of audits will increase again.

C. Impact of Audit Firm Tenure on Audit Quality

Table 7 column 3 shows that in the pre-regulation period, the relationship between firm tenure and audit quality is negatively linear. This means that the longer the firm's tenure, the more the quality of the audit will decrease.

Table 7 column 4 shows that after the regulation came into effect, relationship between audit firm tenure and audit quality became convex with a minimum point of 10 years. These results indicate that the quality of the audit will decrease for the first 10 years of the auditor–firm relationship, and after that, the quality of the audit will increase. Because the decline lasts for a quite long period (about 10 years), it can be concluded that its relationship is negative. The results show no difference between pre-regulation and post-regulation periods, both of which show a negative relationship. This result is in accordance with the findings of Knechel and Vanstraelen [51] of a negative relationship between tenure and audit quality.

D. Impact of Audit Firm Rotation on Audit Quality

In the pre-regulation period, firm rotation had a significant positive effect on audit quality, but in the post-regulation period, firm rotation has no significant effect on audit quality. This is likely due to rotation not being mandatory in the pre-regulation period. Therefore, in that period, firm rotation was more due to a disagreement between the client and auditor, so a change in auditor led to a decrease in audit quality. This decrease is probably due, at least in the beginning of the assignment, to the audit firm not yet being sufficiently knowledgeable about the business and client's risk.

In the post regulation period, rotation became mandatory. However, many firms skirted this requirement by simply renaming the audits firm, making the rotation merely a pseudo rotation that would not affect audit quality. These results indicate that the rotation rule has not attained its intended goal of improving audit quality. This result is consistent with Fitriany and Rosita [3], who found that audit firm rotation does not affect audit quality

E. Impact of Audit Partner Rotation on Audit Quality

Table 5 columns 1 and 2 show that audit partner rotation negatively affects discretionary accruals. This means that partner rotation has had a positive effect on audit quality both before and after the audit rotation regulations came into effect. This result supports the findings of Hamilton et al. [52] that partner rotation results in a decrease in the value of a discretionary accrual and improves audit quality.

F. Impact of Audit Committee Quality on the Relationship between Tenure and Audit Quality

Table 6 shows the regression result before and after including the audit committee as a moderating variable. Table 6 column 1 shows that PTENURE is not significant but PTENURESQ is negatively significant. This shows that a concave quadratic relation exists between PTENURE and ABSDAC, or convexity quadratic relationship between PTENURE and audit quality. This means that audit quality will initially decrease and then will increase. This agrees with the finding in model 1 where the audit quality decreases for the first 2 years and then increases.

Table 6 column 2 shows that after including audit committee as a moderating variable, PTENURE and PTENURESQ are no longer statistically significant; however, CMTE_PTENURE is positively significant and CMTE_PTENURESQ is negatively significant. This shows that the longer the audit partner's tenure, the better the audit quality, and the audit committee is positively related to the relationship between audit partner tenure and audit quality. If the audit committee's quality is low, audit partner tenure does not have any impact on audit quality. Meanwhile, if audit committee quality is high, tenure convexity affects the audit quality.

Table 6 columns 3 and 4 also show that no significant relationship exists between FTENURE, FTENURESQ, CMTE_PTENURE and CMTE_PTENURESQ with ABS_DAC (AUDIT QUALITY). Therefore, we can conclude that audit committee quality does not affect the relationship between audit firms tenure and audit quality. This finding is consistent with Sari [33], who found that audit committee activity is not significantly correlated with earnings quality. This is also consistent with Siregar [53], Siregar and Bachtiar [54], and Peivy [32].

G. Impact of Audit Committee on the Rotation–Audit Quality Relationship

Table 6 shows that being a public accounting firm and public accountant rotation generally do not affect audit quality. Audit committee quality also does not moderately affect the relationship between rotation and audit rotation. Only in table 6, ROTASI AP is found to be positively related to the discretionary accrual, or in other words, negatively correlated to audit quality. This means that if a public accountant firm is engaged in the audit rotation, audit quality will decrease. This might be because public accountants are relatively new so that they have not had enough time to gain high levels of competence.

H. Impact of Audit Committee on the Specialization–Audit Quality Relationship

From table 6, we can see that SPEC has a direct negative impact on discretionary accruals or a positive impact on audit quality. However, the CMTE_SPEC variable is not significant so that we can conclude that this research has not proven that a high-quality audit committee will enhance the positive relationship between specialization and audit quality.

I. Impact of Audit Committee on the Workload–Audit Quality Relationship

Table 6 column 2 until 4 shows that WL has positive impact on discretionary accruals. This shows that the higher the workload, the higher discretionary accruals will be; in other words, the higher the workload, the lower the audit quality. This finding is consistent with Lopez [4], who found that the workload pressure will produce lower audit quality.

TABLE VI. REGRESSION RESULT MODEL 2

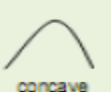|		AUDIT PARTNER (WITHOUT MODERATING)			AUDIT PARTNER (WITH MODERATING)			AUDIT FIRM (WITHOUT MODERATING)			AUDIT FIRM (WITH MODERATING)		
		Column 1			Column 2			Column 3			Column 4		
Variable	Pred.	Coefficient	Prob.	VIF	Coefficient	Prob.	VIF	Coefficient	Prob.	VIF	Coefficient	Prob.	VIF
C		-0.08	0.426		-0.077	0.051		0.023	0.294		0.017	0.338	
TENURE?	+/-	0.025	0.104	11.2	0.009	0.307	17.1	0.000	0.813	4	-0,000	0.872	4.1
TENURESQ?	+/-	-0.029	0.012 ***	3.7	-0.011	0.198	7.6	1,34E	0.994	2.4	1,23E	0.958	2.8
ROTATION	+/-	0.038	0.073 *	8.3	0.016	0.225	12.4	-0.012	0.364	2	-0,008	0.556	2.4
SPEC?	-	-0.17	0.001 ***	1.7	-0.023	0.000 ***	1.8	-0.020	0.048 **	1.8	-0,020	0.055 **	1.8
WL?	+	-2,08E	0.409	1.1	0.000	0.036 *	1.1	0.000	0.045 **	1.1	0.000	0.024 *	1.1
CPE?	-	0.000	0.000 ***	1.1	0.001	0.000 ***	1.1	2,53E	0.001 *	1.1	0.000	0.001 ***	1.1
CMTE?	-	0.000	0.298	1.1	0.000	0.114	11.8	0.000	0.491	1.2	0.002	0.256	9.4
CMTE_TENURE?	+/-				0.003	0.066 *	16.4				0.000	0.377	3.5
CMTE_TENURESQ?	+/-				-0.002	0.093 *	11.4				-1,09E	0.433	6.2
CMTE_ROTATION?	+/-				-0.001	0.178	19.7				-0,001	0.297	3.9
CMTE_SPEC?	+				-0.003	0.397	2.5				-0,001	0.315	3.1
SMTE_WL?	-				0.000	0.000 ***	4.9				-8,37E	0.019 **	1.2
SMTE_CPE?	+				2,20E	0.204	5.9				-2,63E	0.272	5.6
BIG4?	-	-0.007	0.248	1.6	0.004	0.277	1.7	0.019	0.123	2.2	0.019	0.245	2.3
LEV?	+/-	0.044	0.103	1.2	0.093	0.001 ***	1.3	0.018	0.178	1.2	0.017	0.188	1.3
GROWTH?	-	0.000	0.399	2.1	0.001	0.291	1.1	0.000	0.294	1.1	-0,000	0.341	1.1
SIZE?	+/-	0.001	0.322	1.2	0.003	0.131	1.2	-8,75E	0.960	1.2	2,89E	0.986	1.2
D_LOSS?	-	-0.021	0.000 ***	1.1	-0.029	0.000 ***	1.2	-0.016	0.042 **	1.2	-0,017	0.042 **	1.2
CFO?	-	-0.002	0.108	1	-2.00E-03	0.134	1	-0.003	0.035 **	1.1	-0,003	0.034 **	1.1
Adjusted R-squared		0.623			0.640			0.030			0.040		
Durbin-Watson stat		2.80			2.7			1.85			1.8		
Prob(F-statistic)		0.000			0.000			0.065			0.040		
Dep Var : ABS_DAC													

TABLE VII. SUMMARY OF MODELS 1 AND 2 FOR VARIABLE *TENURE*
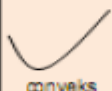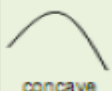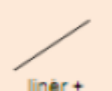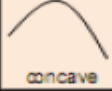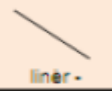
	Kolom	PRED	ABSDAC 1	2	3	4
			PARTNER		FIRM	
			BEFORE	AFTER	BEFORE	AFTER
	VAR UTAMA					
H1a	PTENURE?	+/-	-	+		
H1a	PTENURESQ?	+/-	+	-		
H1b	FTENURE?	+/-			+	+
H1b	FTENURESQ?	+/-				-
Relation to ABSDAC			konveks	concave	liner +	concave
Relation to AUDIT QUALITY			concave	konveks	liner -	konveks
max/min point			3	2		10

Table 6 column 2 and 4 shows that CMTE_WL is negative and significant. This proves that an audit committee weakens the positive correlation between workload and discretionary accruals. A high-quality audit committee can reduce the positive relationship between workload and discretionary accruals. This finding is as expected. An expert and independent audit committee will be able to recognize and report on low audit quality from an external auditor. A diligent audit committee will actively monitor an external auditor's work and prevent the low quality caused by auditor workloads.

J. Impact of Audit Committee on the CPE–Audit Quality Relationship

From table 6 column 1 to 4, we can see that CPE is positively related with discretionary accruals, or negatively related with audit quality. This is not consistent with results reported by Adityasih [23], who found that CPE is positively correlated with audit quality. This difference might be caused by the different methods used to measure audit quality. Adityasih [23] measured audit quality from the result of peer review. The negative relationship in this research is probably due to the greater knowledge of the external auditors who took CPE. Our research uses data from 2006 to 2008, the period in which the new accounting standard was enacted in Indonesia, so that companies should make more accruals, for instance, accounting standard about post-retirement benefits, etc. As more CPE credits are earned by the audit partner, the accrual discretionary in financial statements also becomes higher. Variable CMTE_CPE is not statistically significant, so that we can conclude that the audit committee is not proven to moderate the relationship between CPE and audit quality.

V. CONCLUSION

This paper contributes to the ongoing debate about the impact of rotation and tenure on audit quality. This research finds a quadratic relationship between tenure and audit quality (rather than the linear relationship noted in previous research).

This study found that in the period before audit rotation became mandatory in Indonesia, the relationship between audit partner tenure and audit quality was concave with maximum point of 3. This result indicates that audit quality will increase for the first 3 years, then decrease. In the period after auditor rotation became mandatory, the relationship between audit partner tenure and audit quality became convex, with minimum point of 2. This result indicates that audit quality will decrease for the first 2 years, then increase. The rotation of audit partners shows that audit partner rotation positively affected audit quality both before and after the mandatory audit rotation. The implication of these findings is that the rules requiring audit partner rotation are needed.

This study found that in before the regulation, audit quality decreased with increasing tenure. After the regulation, tenure became convexly related with audit quality with a minimum point of 10 years. This shows that with a longer the tenure, audit quality will decline for10 years, then rise. Because this period is very long, it can be concluded that for practical purposes, audit quality will decrease with increasing tenure, the same as in the period before regulation. In the pre-regulatory period, firm audit rotation resulted in lower audit quality, but after regulation, audit firm rotation had no effect on audit quality. This finding indicates that the effectiveness of mandatory audit firm rotation needs to be reviewed again, especially given the loophole of only carrying out a quasi-rotation by changing the accounting firm's name.

This research finds that specialization and workload do affect audit quality. However, the audit committee does not necessarily act as a moderating variable among various examined factors. We conclude that audit committees in Indonesia have not been able to perform their role in improving the audit quality. Perhaps because the audit committee's appointment rules are still newly implemented, audit committee appointments are made only to comply with government regulations. The implication of these findings is that the government and various parties should make an effort to ensure that the role of the audit committee should be further enhanced.

This study has several limitations. First, this study only used listed companies, then generalization of research results to companies that are not listed must be done carefully. Second, audit quality is very difficult to measure. This study uses the common proxy of earnings quality as a proxy for audit quality. Future research can use another audit quality proxy that better represents audit quality, for example, the extent to which an accounting firm complies with auditing standards.

REFERENCES

[1] S. Siregar, V. N. P. Fitriany, Wibowo, and A. Arie, Laporan Hibah Fakultas Ekonomi UI, 2009.

[2] L. R. Davis, B. S. Soo, G. M. Trompeter, "Auditor Tenure And The Ability To Meet or Beat Earnings Forecsts," Contemp. Account. Res., vol. 26, no. 2, pp. 517-548, 2009.

[3] F. Fitriany, S. Utama, D. Martani, and H. Rosietta, "Pengaruh Tenure, Rotasi dan Spesialisasi Kantor Akuntan Publik (KAP) Terhadap Kualitas Audit: Perbandingan Sebelum dan Sesudah Regulasi Rotasi KAP di Indonesia," Jurnal Akuntansi dan Keuangan, 2016.

[4] R. López, "La regulación como medio para la mejora de la calidad de la auditoría financiera: el caso de la prestación de servicios adicionales," Doctoral Thesis, Universidad de Sevilla, 2005.

[5] S. C. Hansen, K. R. Kumar, and M. W. "Sullivan, Auditor Capacity Stress and Audit Quality: Market-Based Evidence from Andersen's Indictment," SSRN Electronic Journal, 2008.

[6] L. E. DeAngelo, "Auditor Size and Audit Quality," J. Account. Econ. vol. 3, no. 1, pp. 183-199, 1981.

[7] N. Dopuch, R. R. King, and R. Schwartz, "An Experimental Investigation of Retention and Rotation Requirements," J. Account. Res., vol. 39, no. 1, pp. 93-117, 2001.

[8] I. Gavious, "Alternative Perspectives to Deal with Auditors' Agency Problem," Crit. Perspect. Account., vol. 18, no. 4, pp. 451-467, 2007.

[9] W. Chi, H. Huang, Y. Liao, and H. Xie, "Mandatory Audit-Partner Rotation, Audit Quality and Market Perception: Evidence From Taiwan," Contemp. Account. Res., vol. 26, pp. 359-391, 2009.

[10] K. St. Pierre, and J. A. Anderson, "An analysis of the factors associated with lawsuits against public accountants," Account. Rev., vol. 59, no. 2, pp. 242–263, 1984.

[11] L. R. Davis, B. Soo, and G. Trompeter, "Auditor tenure, auditor independence and earnings management," Boston, MA: Boston College, 2002 [Working Paper].

[12] M. B. Gietzmann, and P. K. Sen, "Improving Auditor Independence Through Selective Mandatory Rotation," International Journal of Auditing. Vol. 6, 2002. DOI: 10.1111/j.1099-1123.2002.tb00012.x.

[13] I. Solomon, M. D. Shields, and O. R. Whittington, "What do Industry Auditors Know?" J. Account. Res., vol. 37, no. 1, pp. 191-208, 1999.

[14] J. V. Carcello, and A. L. Nagy, "Audit firm Tenure and Fraudulent Financial Reporting," Auditing-J Pract Th., vol. 23, no.2, pp. 55-69, 2004.

[15] S. Balsam, J. Khrisnan and J. S. Yang, "Auditor Industry Specialization and Earnings Quality," vol. 22, pp. 71-97, 2003.

[16] C. W. Alderman, and J. W. Deitrick, "Auditor's perceptions of Time Budget Pressures and Premature Sign Offs : A Replication and Extension," Auditing-J Pract Th., pp. 54-68, 1982.

[17] T. Kelley, and L. Margheim, "The Impact Of Time Budget Pressure, Personality, And Leadership Variables Ondysfunctional Auditor Behavior," Auditing-J Pract Th., vol. 9, no. 2, pp. 21-42, 1990.

[18] B. Raghunathan, "Premature Signing-Off of Audit Procedures: An Analysis," Account. Horiz., vol. 5, no. 2, pp. 71-79, 1991.

[19] J. T. Sweeney and S. L. Summers, "The Effect of the Busy Season Workload on Public Accountants' Job Burnout," Behavioral Research in Accounting, vol. 14, no. 1, pp. 223-245, 2002.

[20] P. Coram, J. Ng, and D. Woodliff, "A survey of time budget pressure and reduced audit quality among Australian auditors," Australian Accounting Review, vol. 13, no. 1, pp. 38-44, 2003.

[21] J. Blouin, B. M. Grein, and B. R. Rountree, "An Analysis of Forced Auditor Change: The Case of Former Arthur Andersen Clients," Account. Rev., vol. 82, no. 3, pp. 621-250, 2007. DOI: 10.2308/accr.2007.82.3.621.

[22] A. N. Stuart, "Death to Smoothing," CFO Magazine, Feb. 22, 2005.

[23] T. Adityasih, "Analisa pengaruh pendidikan profesi pengalaman auditor jumlah klien (audit capacity) dan ukuran kantor akuntan publik terhadap kualitas audit," Master Thesis, Universitas Indonesia, 2010.

[24] J. V. Carcello, and T. L. Neal, "Audit Committe composition and auditor reporting" Account. Rev., vol. 75, pp. 453-467, 2000.

[25] Cadbury Committee, Report of the Committee on the Financial Aspects of Corporate Governance. London, U.K.: Professional Publishing Ltd., 1992.

[26] Committee on Corporate Governance, Final Report [Hampel Report]. London, U.K.: Gee Publishing, 1998.

[27] J. Zhang, "The Contracting Benefits of Accounting Concervatism To Lenders and Borrowers," J. Account. Econ., vol. 45, pp. 27-54, 2007.

[28] B. Xie, W. N. Davidson III, and P. J. DaDalt, "Earnings Management and Corporate Governance: The Role of The Board and The Audit Committee," Journal of corporate Finance, vol. 9, no. 3, pp. 295-316, 2003.

[29] A. Klein, "Audit committee, board of director characteristics, and earnings management," J. Account. Econ., vol. 33, no. 3, pp. 375-400, 2002.

[30] D. S. Dhaliwal, V. Naiker, and F. Navissi, "Audit Committee financial expertise, corporate governance and accruals quality: an empirical analysis," 2007. Available at SSRN: https://ssrn.com/ abstract=906690 or http://dx.doi.org/10.2139/ssrn.906690

[31] L. A. Owens-Jackson, D. Robinson, and S. W. Shelton, "The Association Between Audit Committee Characteristics, the Contracting Process and Fraudulent Financial Reporting," Am. J. Bus., vol. 24, no. 1, pp. 57-66, 2009. DOI: 10.1108/19355181200900005.

[32] Peivy, "Pengaruh Corporate Governance terhadap manajemen laba dan Biaya Hutang Pada Perusahaan Non Keuangan Yang Terdaftar di Bursa Efek Indonesia," Thesis Bachelor Degree, Universitas Indonesia, 2009.

[33] C. Sari, and D. Adhariani, "Konservatisme Perusahaan di Indonesia dan Faktor-Faktor yang Mempengaruhinya," Pusat Data Ekonomi & Bisnis, vol. 12, 2009 [Jurnal dan Prosiding SNA - Simposium Nasional Akuntansi].

[34] A. Hermawan, "Pengaruh Efektifitas Dewan Komisaris dan Komite Audit, Kepemilikan Oleh Keluarga, dan Peran Monitoring Bank Terhadap Kandungan Informasi Laba," Dissertation, Universitas Indonesia, 2009.

[35] J. H. Choi, K. A. Jeon, and J. I. Park, "The role of audit committees in decreasing earnings management: Korean evidence," Int J Account Audit Perform Eval., vol. 1, no. 1, pp. 37-60, 2004. DOI: 10.1504/IJAAPE.2004.004142.

[36] Y. W. Park, and H. Y. Shin, "Board composition and earnings management in Canada," Journal of corporate Finance, vol. 10, pp. 431-457, 2004.

[37] L. J.Abbott, S. Parker and G. F. Peters, "Audit Committee Characteristics and Restatement," Auditing-J Pract Th., vol. 23, pp. 69-87, 2004.

[38] J. Zhou, and K. Y. Chen. "Audit Committee, Board Characteristics and Earnings Management by Commercial Banks," 2004 [Working Paper].

[39] J. Bedard, S. M. Chtourou, and L. Courteau, "The effect of audit committee expertise, independence, and activity on aggressive earnings management," Auditing-J Pract Th., vol. 23, no. 2, pp. 13-35, 2004.

[40] D. A. McMullen, "Audit Committee Performance: An Investigation of the Consequences Associated with Audit Committees," Auditing-J Pract Th., vol. 15, no. 1, 1996.

[41] K. Menon, and J. D. Williams, "The use of audit committee for monitoring," J. Account. Public Policy, vol. 13, pp. 121-139, 1994.

[42] M. Beasley, J. Carcello, D. R. Hermanson, P. D. Lapides, "Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms," Account Horiz., vol. 14, pp. 441-454, 2000. DOI: 10.2308/acch.2000.14.4.441.

[43] K. L. Anderson, D. N. Deli, and S. L. Gillan, "Boards of Directors, Audit Committees and The Information Content Of Earnings," Newark, USA: University of Delaware, 2003 [Working Paper No. 2003-04, Weinberg Center for Corporate Governance].

[44] A. A. Hermawan, "Pengaruh efektivitas dewan komisaris dan komite audit, kepemilikan keluarga, dan peran monitoring bank terhadap kandungan Informasi Laba," Dissertation, Universitas Indonesia, 2009.

[45] J. R. Francis, and J. Krishnan, "Accounting Accruals and Auditor Reporting Conservatism," Contemp. Account. Res., vol. 16, pp. 135-165, 1999. DOI:10.1111/j.1911-3846.1999.tb00577.x

[46] E., Bartov, F. A. Gul, and J. S. L. Tsui, "Discretionary Accruals Models and Audit Qualifications," J. Account. Econ., vol. 30, pp. 421-452, 2001.

[47] M. A. Geiger, and K. Raghunandan, "Auditor Tenure and Audit Reporting Failure," Auditing-J Pract Th., vol. 21, no. 1, pp. 67-78, 2002.

[48] J. N. Myers, L. A. Myers, and T. C. Omer, "Exploring The Term of Auditor-Client Relationship and The Quality Of Earnings: A Case for Mandatory Auditor Rotation?" Account. Rev., vol. 78, no. 3, pp.779-799, 2003.

[49] J. R. Francis, and D. Wang, "The Joint Effect of Investor Protection and Big 4 Audits on Earnings Quality around the World," Contemp. Account. Res., vol. 25, pp. 157-191, 2008. DOI:1 0.1506/car.25.1.6

[50] F. A. Gul, B. Jaggi, and G. Krishnan, "Auditor Independence: Evidence on the Joint Effects of Auditor Tenure and Non-Audit Fees," Auditing-J Pract Th., vol. 26, no. 2, pp. 117-142, 2007. DOI: 10.2308/aud.2007.26.2.117.

[51] W. R. Knechel and A. Vanstraele, "The Relationship between Auditor Tenure and Audit Quality Implied by Going Concern Opinions," Auditing-J Pract Th., vol. 26, no. 1, pp. 113-131, 2007.

[52] J. Hamilton, C. Ruddock, D. Stokes, and S. Taylor, "Audit Partner Rotation, Earnings Quality and Earnings Conservatism," 2005. Available at SSRN: https://ssrn.com/abstract=740846

[53] S. Siregar, "Pengaruh Struktur Kepemilikan, Ukuran Perusahaan dan Praktik Corporate Governance Terhadap Pengelolaan Laba (Earning Management) dan Kekeliruan Penilaian Pasar," Dissertation, Universitas Indonesia, 2005.

[54] S. Veronica, and Y. S. Bachtiar, "Good Corporate Governance Information Asymetry and Earnings Management," Jurnal Akuntansi dan Keuangan Indonesia, vol. 2, no. 1, 2005. [Simposium Nasional Akuntansi 7, Denpasar].