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# Audit Firm Switch and Engagement Partner Continuance

Hironori Fukukawa Graduate School of Commerce and Management, Hitotsubashi University, Japan h.fukukawa@r.hit-u.ac.jp

> Masaru Karube Institute of Innovation Research, Hitotsubashi University, Japan karube@iir.hit-u.ac.jp

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## Audit Firm Switch and Engagement Partner Continuance

**SUMMARY:** This study examines how audit fees change when companies switch audit firms. In particular, we are interested in the effect of engagement partners' familiarity with clients on the changes in audit fees. On the basis of the unique data on individual engagement partners obtained from auditors' reports in Japan, this study uses a more direct measure of partner–client familiarity than previous studies. By identifying engagement partners on both final and initial audits, we find that when audit fees increase after an audit firm switch, the ratio of engagement partners on initial audits who had been involved with the client before the switch has a negative impact on the increase in audit fees. On the other hand, when audit fees do not increase, no significant relationship is found between them. Furthermore, this study provides some evidence on the effect of the demise of *ChuoAoyama*, which was one of the Big 4 firms in Japan.

Keywords: Audit firm switch, Engagement partner continuance, Audit feesData Availability: Data used in this study are obtainable from public sources.

## Audit Firm Switch and Engagement Partner Continuance

#### **INTRODUCTION**

This study aims to investigate how audit fees change when companies switch audit firms, and whether the changes in audit fees are influenced by the engagement partners of a predecessor audit firm moving to a successor audit firm and continuing to be involved with the audit. If an audit continues to be conducted by the same engagement partners after an audit firm switch, knowledge and experience that the partners acquired before the audit firm switch are carried over to the successor audit firm. By focusing on engagement partner continuance, we examine the effect of knowledge and experience carried over from previous engagements on initial audit fees paid to a successor audit firm.

Some previous studies found evidence of "lowballing," that is, audit fees being lower on initial audit engagements (Craswell and Francis 1999; Ghosh and Lustgarten 2006; Sankaraguruswamy and Whisenant 2009). However, these studies did not consider whether initial audits after an audit firm switch were conducted by the same engagement partners as before the audit firm switch. Vermeer et al. (2008) examined the impact of partner–client familiarity on audit fees by focusing on former Andersen clients and found that Andersen clients that followed the former partner to a new firm paid lower audit fees than other clients. However, they did not directly investigate whether the former partner continued to be involved with the client after the audit firm switch, but instead used an indirect indicator of partner continuance (i.e., whether the successor audit firm had acquired an Andersen office that had provided an audit service to the client). In this study, we refine the measure of partner–client familiarity and examine the effect of engagement partner continuance on audit fees at an individual level, not at an office level, by

using data on individual engagement partners. In the Japanese practice, each engagement partner signs her/his name on an auditor's report. These unique data enable us to identify engagement partners of the successor audit firm who were the engagement partners before an audit firm switch.

In addition, this study investigates the effect of engagement partner continuance on the change in, not the level of, audit fees on initial audits. Most previous studies of audit firm switches examined the level of audit fees because they are primarily interested in comparing audit fees paid by clients with audit firm switches and those by others. In contrast, we are interested in whether the changes in audit fees are influenced by the former engagement partners who continue to conduct the audit after an audit firm switch.

Audit firm switches can be categorized into three types: audit firm's resignation, client's dismissal, and forced audit firm switches. In the resignation type of switches, audit firms take the initiative. In contrast, clients take the lead in dismissing their incumbent audit firm. Engagement partner continuance is expected to impact audit fee changes differently depending on the type of audit firm switch and the relative power relationships between an audit firm and a client. That is, we hypothesize that the ratio of engagement partners of a successor audit firm who had been involved with the client before an audit firm switch has a negative impact on the changes in audit fees for the resignation type of switch, but not for the type of audit firm switches in which clients take the lead.

As a result of the OLS regression analysis, we find that for a sample comprising companies whose audit fees increased after an audit firm switch, the increase in audit fees is smaller for an audit with more engagement partners being the former engagement partners before the audit firm switch. On the other hand, for a sample comprising companies whose audit fees did not increase, such an effect of engagement partner continuance is not found.

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The rest of this paper is organized as follows. In the next section, we review relevant literature, provide some background information on the audit market and practice in Japan, and present hypotheses. Then, we describe the research method including the sample and data, followed by results. Finally, we summarize our findings and discuss possible future research.

#### LITERATURE REVIEW AND HYPOTHESES

#### Audit Firm Switch

Some previous studies of audit fees on initial audits provided empirical evidence of "lowballing" in various contexts.<sup>1</sup> Craswell and Francis (1999) documented that audit fee discounting was found only for audit firm switches from non-Big 8 firms to Big 8 firms in the Australian market. Sankaraguruswamy and Whisenant (2009) also found evidence of lowballing in the U.S. market but determined that audit quality did not deteriorate because of lowballing. Ghosh and Lustgarten (2006) hypothesized that audit fee discounting was more intense in the market segment comprising many small audit firms than in that dominated by a few large audit firms and found confirming evidence. However, Machida (2009) and Kasai (2009) found no evidence of lowballing in the context of the Japanese audit market. These studies of audit fees on initial audits did not examine how audit fees changed after audit firm switches.

In addition, various factors are found to affect audit firm switches. By analyzing data on audit firm switches from 1973 to 1982, Johnson and Lys (1990) obtained results supporting their argument that audit firm switches were generally attributed to cross-temporal changes in client characteristics as well as differences in audit firm cost structures. Schwartz and Menon (1985) reported that financially distressed companies had a greater tendency to switch audit firms than

<sup>&</sup>lt;sup>1</sup> Lowballing is defined as "setting audit fees below total current costs on initial audit engagements" (DeAngelo 1981, 113).

healthier companies. Similarly, Johnstone and Bedard (2004) investigated client acceptance and continuance decisions of a large audit firm and found that the firm resigned audit engagements with riskier clients and accepted those with less risky clients. They also found that audit fees did not affect client acceptance and continuance decisions.

Krishnan and Krishnan (1997) compared companies whose audit firms resigned with companies that dismissed their audit firms and reported that there were differences between them in some dimensions relating to audit firms' litigation risk. Shu (2000) presented similar results, indicating that audit firm resignation was positively associated with litigation risk to audit firms. She also found that audit firm resignation was caused by clientele mismatch due to changes in audit firm characteristics. Landsman et al. (2009) documented that Big N audit firms have become more sensitive to client misalignment, but less sensitive to client risk in the post-Enron era.

#### Audit Fee Changes

Only a few of the many audit fee studies have examined changes in, rather than the level of, audit fees. Most of them concentrated on examining audit market changes in the United States after the demise of Arthur Andersen. For example, Feldman (2006) investigated the effect of the change in audit market concentration after the demise of Arthur Andersen on changes in audit fees and found a positive relationship between them. Similarly, Ghosh and Pawlewicz (2009) found that audit fees and total fees increased after the enactment of the Sarbanes-Oxley Act, and that the fee increase was larger for the Big 4 firms than for the non-Big 4 firms. Kohlbeck et al. (2008) reported that while clients that switched their audit firm in an open market experienced lowballing, those that moved to a new firm along with their former Andersen office did not experience lowballing; that is, audit fee changes were influenced by the nature of client

acquisition by a successor audit firm.

Bedard et al. (2008) examined audit fee changes from 2003 to 2004. They determined that companies that disclosed internal control problems in 2003 continued to pay higher fees in 2004 even if the problems were remedied, and that the first-time disclosure of an internal control problem in 2004 resulted in higher audit fees. Finally, Feldmann et al. (2006) examined the effects of the restatement of financial statements on audit fees increase when a client turns out to be riskier.

The findings of these studies indicate that changes in audit fees are affected by institutional changes, changes in client riskiness, other client characteristics such as client size and complexity, and audit firm characteristics. However, it is notable that the explanatory power of the regression models adopted is generally not high.<sup>2</sup>

### **Engagement Partner Continuance**

Audit firm switches do not necessarily mean a change of engagement partners. In some cases, engagement partners move to another audit firm and their clients follow them by switching audit firms. If the same engagement partners continue to be involved with a client after moving to another audit firm, knowledge and experience about the client that they have obtained during past engagements are carried over to the successor audit firm. Such knowledge and experience should affect audit fees charged by a successor audit firm on initial audits. That is, it is generally expected that audit fees will be lower if initial audits are conducted by the engagement partners previously involved with the audits before switching audit firms.

 $<sup>^2</sup>$  The adjusted R<sup>2</sup>s of the regression models adopted to analyze audit fee changes by these studies range from 0.06 to 0.21.

To the best of our knowledge, Vermeer et al. (2008) is the only study that addressed the effect of partner–client familiarity on audit fees on initial audits. They examined whether audit fees on initial audits differed depending on whether the clients were former Andersen clients that followed their engagement partners to a new audit firm. They found that initial audit fees are lower for follower clients.<sup>3</sup> Although they measured partner–client familiarity at an office level, that is, by whether an Andersen office that had audited the client was acquired by a successor audit firm, it may not necessarily be the case that former Andersen partners continued to be involved with the audit after the Andersen office acquisition.

In this study, we use a more direct measure of partner–client familiarity by identifying engagement partners before and after audit firm switches. In Japan, auditors' reports are signed by each engagement partner.<sup>4</sup> By using these unique data, we examine the effect of partner–client familiarity on initial audit fees.

## Demise of ChuoAoyama

Recently, the Japanese audit market has experienced substantial changes, which, at least in some respects, are similar to those in the United States. In 2006, one of the then-Big 4 firms (PwC alliance), *ChuoAoyama*, was forced to dissolve because of a big accounting scandal at a textile company, *Kanebo*.<sup>5</sup> Former clients of the audit firm switched to another audit firm in 2007 after its demise, or even earlier when the accounting fraud came to light in 2005. Currently, the market is dominated by the remaining Big 3 firms. The market share of the Big 3 firms in

<sup>&</sup>lt;sup>3</sup> Blouin et al. (2007) revealed that the decision whether to follow the former Andersen audit team was influenced by switching costs and agency conflicts.

<sup>&</sup>lt;sup>4</sup> In Japan, it is common practice that more than one engagement partner is involved with an audit engagement and thus signs an auditor's report.

<sup>&</sup>lt;sup>5</sup> For more information on the *Kanebo* and *ChuoAoyama* case, see Fukukawa (2011).

terms of audit fees was 82% in 2009.

After the *Kanebo* scandal, regulators undertook some institutional reforms to improve audit quality as well as financial reporting quality. For example, internal control audits and quarterly financial reporting were introduced in 2008. These institutional reforms resulted in higher audit fees; as a result, an increasing number of companies switched their auditor from a Big 3 firm to a smaller firm to save on audit fees (Nihon Keizai Shimbun 2010).

Numerous voluntary and forced audit firm switches have occurred recently in the Japanese audit market. In addition, data on individual engagement partners are available. These facts provide a research opportunity to examine whether audit fee changes at the time of an audit firm switch are affected by engagement partners' familiarity with a client, as measured by the ratio of engagement partners who continued to be involved with the client after an audit firm switch. In addition, by including the audit firm switches from *ChuoAoyama* in our sample, we examine the effect of its demise on audit fee changes.

## Hypotheses

In general, the ratio of engagement partners who have been involved with a client since before an audit firm switch is expected to have a negative impact on audit fees on initial audits. On the other hand, as suggested by previous studies (Schwartz and Menon 1985; Johnson and Lys 1990; Krishnan and Krishnan 1997; Shu 2000; Johnstone and Bedard 2004; Landsman et al. 2009), audit firm switches can occur for various reasons; the nature of an audit firm switch affects audit fees on initial audits. Audit firm switches can be categorized into three types: (1) those in which audit firms take the initiative (e.g., an audit firm's resignation), (2) those in which clients take the lead (e.g., dismissing their audit firms), and (3) forced audit firm switches.

The nature of the different types of audit firm switches can affect the power relationship

between a successor audit firm and a prospective client and thus audit fees on initial audits.<sup>6</sup> For example, when an audit firm resigns from an engagement, the client is likely to have problems such as financially distressed condition or disagreement on accounting issues. An audit firm that accepts such a company as a client charges higher fees to compensate for possible future loss. In these cases, the company is in urgent need of appointing a new auditor; a potential successor audit firm is considered to have stronger bargaining power relative to the prospective client.

There are several possible reasons why a company might dismiss its incumbent audit firm and select another one. One typical reason is the desire to save audit fees. In such a situation, a company can search for the audit firm that offers the lowest fee before deciding to dismiss the incumbent firm; thus, audit fees should be lower after the switch. Another possible reason is that the audit quality of the incumbent audit firm is not satisfactory. In this case, the company would select an audit firm that can offer a better audit service, which might well result in higher audit fees.<sup>7</sup>

In summary, audit fees are expected to increase when audit firms have relatively strong power and decrease when prospective clients have relatively strong power. In the former case, audit firms can take the initiative in determining audit fees on the basis of audit costs necessary to conduct the audits. However, the audit costs should be smaller when engagement partners have been conducting the audit since before the audit firm switch because of the knowledge and experience about the client that they possess. In the latter case, on the other hand, audit fees may be determined in negotiations that are advantageous to prospective clients. If so, the knowledge

<sup>&</sup>lt;sup>6</sup> Some audit fee studies found that audit fees are affected by client bargaining power (Mayhew and Wilkins 2003; Casterella et al. 2004; Fukukawa 2011).

<sup>&</sup>lt;sup>7</sup> However, given that among 941 audit firm switches in our sample, only 3.5% were from a non-Big 3 firm to a Big 3 firm, while 21.9% were from a Big 3 firm to a non-Big 3 firm; this type of audit firm switch seems uncommon in the Japanese market.

and experience possessed by engagement partners will not matter so much in the fee determination.

In addition, as explained above, one of the then-Big 4 firms in Japan was dissolved in 2006. As with the case of Arthur Andersen in the United States, the firm's clients were forced to switch their auditor. Some clients decided to follow their engagement partners to a new firm, while others did not. Switching costs and agency conflicts are found to affect such decisions (Blouin et al. 2007).

On the basis of the above discussion, our hypotheses are formally stated as follows.

- H1: When audit fees increase after an audit firm switch, the ratio of engagement partners who are common to the audits before and after the audit firm switch has a negative impact on the increase in audit fees.
- H2: When audit fees do not increase after an audit firm switch, the ratio of engagement partners who are common to the audits before and after the audit firm switch does not have a significant impact on the changes in audit fees.

### **RESEARCH METHODS**

#### Sample and Data

To test the above-stated hypotheses, we use a sample comprising audits conducted for fiscal years 2006–2009 in Japan. The sample selection procedure starts with all listed companies except those in financial industries. We select sample companies whose financial statements were audited by an audit firm different from the one(s) in the previous year (i.e., the first year audit). In the Japanese context, when an audit firm switch occurs, audits in the transition year are often conducted jointly by both predecessor and successor audit firms. In most of these cases, only the total audit fees are disclosed in the annual report; the proportion of fees paid to each firm is not

clear. Thus, in this study, we examine changes in audit fees and other client characteristics between year t and year t - 2, where both year t audit and year t - 2 audit were conducted by a single but different audit firm. As a result of deleting observations with missing values in the necessary data, our sample comprises 941 observations.

Data on audit fees and the number of audit team staff were collected from *the Report on Auditor and Audit Fees of Publicly Listed Companies* (Study Group on Auditor and Audit Fee Issues 2008, 2009, 2010, 2011) as well as each company's annual reports. We manually collected information on engagement partners from auditors' reports included in annual reports. Other financial data were obtained from the *Corporate Financial Data Bank* developed by the Japan Economic Research Institute, Inc.

#### Variables and Model Specification

On the basis of previous studies that examined audit fee changes (Feldmann et al. 2006; Bedard et al. 2008; Kohlbeck et al. 2008; Ghosh and Pwlewicz 2009), we adopt the following regression model.

$$\Delta\_lnFEE = \alpha_0 + \alpha_1 ComAuditorRatio + \alpha_2 \Delta\_lnAssets + \alpha_3 \Delta\_Forsale + \alpha_4 \Delta\_Subs + \alpha_5 \Delta\_INVREC + \alpha_6 \Delta\_Current + \alpha_7 \Delta\_Quick + \alpha_8 \Delta\_ROA + \alpha_9 \Delta\_Leverage + \alpha_{10} \Delta\_Loss + \alpha_{11} \Delta\_lnNAFEE + \alpha_{12} \Delta\_Opinion + \alpha_{13} \Delta\_lnAuditTeam + \alpha_{14} From\_CA + \alpha_{15} From\_Big3 + \alpha_{16} To\_Big3 + \alpha_{17} Year2006 + \alpha_{18} Year2008 + \alpha_{19} Year2009 + \varepsilon$$

The dependent variable  $\Delta_{lnFEE}$  represents the change in the natural log of audit fees from year t - 2 to year t. Our test variable is *ComAuditorRatio*, which is defined as the ratio of the engagement partners who are common to year t and t - 2 audits, that is, the number of the common engagement partners divided by the number of the engagement partners in year t. It is hypothesized that when audit fees increase after an audit firm switch, this variable negatively affects the increase in audit fees; thus, the coefficient of this variable is expected to be negative (H1). In addition, when audit fees do not increase after an audit firm switch, the effect of the variable is expected be insignificant (H2).

On the basis of previous studies, we include 11 variables to control changes in client size, complexity, risk, and other client characteristics. *A lnAssets* is the client size change, defined as the difference in the natural log of total assets, between years t - 2 and t. To control changes in client complexity, we include three variables: difference in the percentage of foreign sales ( $\Delta$  Forsale), difference in the square root of the number of consolidated subsidiaries ( $\Delta$  Subs), and difference in the ratio of inventory and accounts receivable to total assets ( $\Delta$  INVREC). The differences in current ratio (the ratio of current assets to total assets), (*A Current*); quick ratio (the ratio of current assets minus inventory to current liabilities), ( $\Delta Quick$ ); leverage (the ratio of long-term liabilities to total assets) ( $\Delta$  Leverage); and ROA ( $\Delta$  ROA) are included to control changes in client risk. Another variable included to control changes in client risk is  $\Delta$  Loss, which equals 1 if a net loss is reported in year t but not in year t - 2, 0 if a net loss is (or is not) reported in both years t and t - 2, and -1 if a net loss is reported in year t - 2 but not in year t. When a client becomes larger, more complex, or riskier, audit fees are expected to be higher. Thus, the coefficients of  $\Delta$  lnAssets,  $\Delta$  Forsale,  $\Delta$  Subs,  $\Delta$  INVREC, and  $\Delta$  Leverage are expected to be positive and the coefficients of  $\Delta$  Current,  $\Delta$  Quick,  $\Delta$  ROA, and  $\Delta$  Loss are expected to be negative.

Some additional variables are included to control the change in other aspects of client and audit characteristics. We include the change in the natural log of non-audit fees from year *t* to year t - 2 ( $\Delta$ \_lnNAFEE). Previous studies generally found that non-audit fees have a positive effect on audit fees; thus, the coefficient of this variable is expected to be positive.  $\Delta$ \_Opinion is a variable regarding an audit report. It equals 1 if a modified report is issued in year *t* but not in

year t - 2, 0 if a clean (or modified) report is issued in both years t and t - 2, and -1 if a modified report is issued in year t - 2 but not year t. It is expected to be positively associated with changes in audit fees. To control the difference in audit effort, the difference in the natural log of the number of audit team staff ( $\Delta$  *lnAuditTeam*) is also included.<sup>8</sup>

Finally, to control the nature of the audit firm switch, three dummy variables are included. *From\_CA* and *From\_Big3* are equal to one if the predecessor audit firm is *ChuoAoyama* and if the predecessor audit firm is one of the remaining Big 3 firms, respectively. *To\_Big3* is a dummy variable, which equals to one if the successor audit firm is one of the Big 3 firms. We also conduct regression analysis using alternative dummy variables: *CA\_to\_Big3*, *CA\_to\_Others*, *Big3\_to\_Big3\_to\_Others*, *Others\_to\_Big3*, and *Others\_to\_Others*, which equals to one if the predecessor audit firm is *ChuoAoyama* and the successor audit firm is one of the Big 3 firms, if the predecessor audit firm is *ChuoAoyama* and the successor audit firm is a non-Big 3 firm, if the predecessor audit firm is one of the Big 3 firms and the successor audit firm is a non-Big 3 firm, if the predecessor audit firm is one of the Big 3 firms and the successor audit firm is a non-Big 3 firm, if the predecessor audit firm is a non-Big 3 firm, if the predecessor audit firm is a non-Big 3 firm, and if the predecessor audit firm is a non-Big 3 firm and the successor audit firm is one of the Big 3 firms, and if the predecessor audit firm is a non-Big 3 firm and the successor audit firm is another non-Big 3 firm, respectively. In addition, to control the year effects, three dummy year variables are included (*Year2006, Year2008*, and *Year2009*).

The definitions of all the variables are provided in the Appendix. We estimate coefficients in the above regression model using ordinary least squares.

<sup>&</sup>lt;sup>8</sup> In Japan, the number of audit team staff is disclosed in an annual report. Some previous studies use it as a proxy for audit effort (Fukukawa 2011; Kim and Fukukawa 2011).

#### RESULTS

#### **Descriptive Statistics**

Panels A, B, and C of Table 1 show descriptive statistics (mean, standard deviation, minimum, quartiles, and maximum) of the variables included in our analyses for the full sample, the sample of companies whose audit fees in year t are higher than those in year t - 2 (the fee-increasing sample), and the sample of companies whose audit fees in year t are equal to or less than those in year t - 2 (the fee-decreasing sample), respectively. As can be seen from Panel A, the mean increase in the natural log of audit fees is 0.271, indicating that audit fees increased after audit firm switches.

#### [Insert Table 1 around here]

In addition, while the ratio of companies with ChuoAoyama as a predecessor audit firm

was higher for the fee-decreasing sample, the ratio of companies that changed their auditor from the remaining Big 3 firms to a non-Big 3 firm is higher for the fee-increasing sample. This result can be interpreted as reflecting differences in the nature of audit firm change, that is, the fact that most of the audit firm switches from *ChuoAoyama* were "forced" because of the firm's demise in 2006.

Table 2 presents Pearson correlations among all except for the dummy variables. First, the positive correlation between  $\Delta_{lnFEE}$  and *ComAuditorRatio* (-0.1497) is significant at the 5% level, which means that the higher the ratio of the engagement partners who have been involved with the client since before the audit firm switch is, the smaller the change in audit fees is. This is consistent with our general expectation.  $\Delta_{lnFEE}$  is positively correlated with  $\Delta_{Subs}$  and  $\Delta_{Loss}$  and negatively correlated with  $\Delta_{Quick}$  and  $\Delta_{ROA}$ . This suggests that when a client becomes more complex or riskier, audit fees become higher. Moreover, the significant positive correlation between  $\Delta_{lnFEE}$  and  $\Delta_{lnAuditTeam}$  indicates that more audit effort leads to higher audit fees.

## [Insert Table 2 around here]

Furthermore, many significant correlations are found among variables that represent client size, complexity, and risk. For example,  $\Delta$ \_*lnAssets* is positively correlated with  $\Delta$ \_*Forsale*,  $\Delta$ \_*Subs*,  $\Delta$ \_*INVREC*,  $\Delta$ \_*Quick*, and  $\Delta$ \_*ROA*, and negatively correlated with  $\Delta$ \_*Loss*. These results suggest that when a client becomes larger, it becomes more complex and less risky.

#### **Regression Results**

OLS regression results to test our hypotheses are presented in Table 3. Results for the full

sample, the fee-increasing sample, and the fee-decreasing sample are shown in the second and third columns, fourth and fifth columns, and sixth and seventh columns, respectively. Models 1, 3, and 5 include three dummy variables to control the nature of the audit firm switch (i.e., *From\_CA*, *From\_Big3*, and *To\_Big3*). In addition, models 2, 4, and 6 include six dummy variables (i.e., *CA\_to\_Big3*, *CA\_to\_Others*, *Big3\_to\_Big3*, *Big3\_to\_Others*, *Others\_to\_Big3*, and *Others\_to\_Others*).

#### [Insert Table 3 around here]

The adjusted  $\mathbb{R}^2$ s of these models range from 0.2086 to 0.2398, which are higher than those reported in previous studies of audit fee changes. The coefficients of the variable of interest, *ComAuditorRatio*, are negative for the full sample and the fee-increasing sample. For the full sample, the coefficient is significant at the 5% level (model 1) or at the 10% level (model 2). For the fee-increasing sample, the coefficient is significant at the 1% level (models 3 and 4). In particular, the latter results indicate that when audit fees increase after an audit firm switch, the higher ratio of engagement partners who are common to the audits before and after the audit firm switch results in a smaller increase in audit fees. This supports our first hypothesis (H1). On the other hand, for the fee-decreasing sample, the coefficient of *ComAuditorRatio* is positive but not significant. That is, when audit fees decrease or do not change after an audit firm switch, the ratio of engagement partners who are common to the audits before and after firm switch, the ratio of engagement partners who are common to the audit firm switch, the ratio of engagement partners who are common to the audits before and after an audit firm switch does not impact audit fee changes. These results support our second hypothesis (H2).

When comparing the fee-increasing sample results with the fee-decreasing sample results, we find some notable differences in the variables that have a significant effect on audit fee changes. For the fee-increasing sample,  $\Delta$ \_Subs,  $\Delta$ \_Opinion, and  $\Delta$ \_lnAuditTeam have a

significant positive effect on  $\Delta_{lnFEE}$ . This indicates that audit fees increase more after an audit firm switch when the number of consolidated subsidiaries increases more, an audit report is modified, and more audit effort is allocated, after the audit firm switch. However, the effects of these variables are not significant for the fee-decreasing sample. Moreover, the positive effect of  $\Delta_{lnAssets}$  on  $\Delta_{lnFEE}$  is significant only for the fee-decreasing sample.  $\Delta_{ROA}$  negatively impacts  $\Delta_{lnFEE}$  for both samples, but the significance of the effect is marginal for the fee-increasing sample. These differences imply that in determining audit fees on initial audits, different factors are considered depending on whether the audit fees increase, and are considered to reflect differences in the nature of audit firm switch and power relationships between an audit firm and a client.

Furthermore, the types of predecessor and successor audit firms affect audit fee changes. For the fee-increasing sample, the increase in audit fees is smaller when the switch is from *ChuoAoyama* to a Big 3 firm than when the switch is from *ChuoAoyama* to a non-Big 3 firm, from a Big 3 firm to another Big 3 firm, and from a non-Big 3 firm to a Big 3 firm. These results indicate that the Big 3 firms probably had to bail out ex-*ChuoAoyama* clients after its demise in 2006. For the fee-decreasing sample, audit fees decrease more when the audit firm switch is from a Big 3 firm to a non-Big 3 firm. In addition, the regression results show that audit fee changes have become larger year by year. That is, audit fee changes in 2006 were smaller (for the fee-decreasing sample) and audit fee changes in 2008 and 2009 were larger (for the fee-increasing sample) than those in 2007.

#### CONCLUSION

By using unique data on individual engagement partners, this study examined how audit fee changes at the time of an audit firm switch are affected by knowledge and experience of engagement partners carried over to a successor audit firm. Our results indicate that when audit fees increase after an audit firm switch, the fee increase is smaller if more former engagement partners continue to be involved with the clients. On the other hand, when audit fees do not increase after an audit firm switch, partner–client familiarity does not affect the fee changes. In addition, depending on whether audit fees increase or decrease, determinants of the audit fee changes differ. These results suggest that fee determination processes are different in both cases. Furthermore, we found that audit fee changes are influenced by the type of predecessor and successor audit firms.

The fact that our results, obtained in the context of the Japanese audit market, are largely consistent with those of previous studies conducted in other contexts, such as in the United States, enhances the generalizability of results of previous studies. In addition, our findings are useful in understanding the underlying motivations and economic consequences of audit firm switching behaviors.

This study can be extended in several important ways for future research. For example, data on engagement partners used in this study enable researchers to examine auditors' expertise at an individual level. Prior research on auditors' expertise adopts a measure at an audit firm level and at an office level. By using data on engagement partners, it is possible to investigate how an individual partner accumulates knowledge and experience of a particular client and a particular industry. In addition, it is important to examine how auditors' expertise at an individual level affects audit pricing and audit quality. Furthermore, given that mandated partner rotation has been introduced, it is interesting to compare audit firms' policy on partner deployment between the Big 3 firms and smaller firms and among the Big 3 firms.

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## **Appendix: Variable Definitions**

# <u>Dependent Variable</u>

| $\Delta_{lnFEE}$       | =    | (natural log of audit fees) <sub>t</sub> – (natural log of audit fees) <sub>t-2</sub>   |
|------------------------|------|---|
| Independent Vari       | able | <u>s</u>  |
| ComAuditorRatio        | =    | number of engagement partners who are common to years <i>t</i> and $t - 2$ audits divided by the number of the engagement partners in year <i>t</i> ;   |
| $\Delta$ _lnAssets     | =    | $(natural log of total assets)_t - (natural log of total assets)_{t-2};$  |
| $\Delta$ _Forsale      | =    | (foreign sales/total sales) <sub>t</sub> - (foreign sales/total sales) <sub>t-2</sub> ;   |
| $\Delta\_Subs$         | =    | (square root of the number of consolidated subsidiaries) <sub>t</sub> – (square root of the number of consolidated subsidiaries) <sub>t-2</sub> ;   |
| ∆_INVREC               | =    | $((inventory + accounts receivable)/total assets)_t - ((inventory + accounts receivable)/total assets)_{t-2};$  |
| $\Delta$ _Current      | =    | $(current assets/total assets)_t - (current assets/total assets)_{t-2};$  |
| $\Delta_Quick$         | =    | ((current assets – inventory)/current liabilities) <sub>t</sub> – ((current assets – inventory)/current liabilities) <sub>t-2</sub> ;   |
| $\Delta_ROA$           | =    | (net income/total assets) <sub>t</sub> - (net income/total assets) <sub>t-2</sub> ;   |
| $\Delta$ _Leverage     | =    | $(long-term liabilities/total assets)_t - (long-term liabilities/total assets)_{t-2};$  |
| $\Delta\_Loss$         | =    | 1 if loss is reported in year t but not in year $t - 2$ , 0 if loss is (not)<br>reported in both years t and $t - 2$ , -1 if loss is reported in year $t - 2$<br>but not in year t;                   |
| $\Delta_{lnNAFEE}$     | =    | (natural log of non-audit fees) <sub>t</sub> – (natural log of non-audit fees) <sub>t-2</sub> ;   |
| $\Delta_Opinion$       | =    | 1 if audit report is modified in year t but not in year $t - 2$ , 0 if audit report is (not) modified in both years t and $t - 2$ , -1 if audit report is modified in year $t - 2$ but not in year t; |
| $\Delta_{ln}AuditTeam$ | =    | (natural log of the number of audit team staff) <sub>t</sub> – (natural log of the number of audit team staff) <sub>t-2</sub> ;   |
| From_CA                | =    | indicator variable, 1 if the predecessor audit firm is ChuoAoyama;  |
| From_Big3              | =    | indicator variable, 1 if the predecessor audit firm is one of the Big 3 firms;  |
| To_Big3                | =    | indicator variable, 1 if the successor audit firm is one of the Big 3 firms;  |
| CA_to_Big3             | =    | indicator variable, 1 if the predecessor audit firm is ChuoAoyama and   |

the successor audit firm is one of the Big 3 firms;

| CA_to_Others     | = | indicator variable, 1 if the predecessor audit firm is ChuoAoyama and   |
|------------------|---|---|
|                  |   | the successor audit firm is a non-Big 3 firm;                           |
| Big3_to_Big3     | = | indicator variable, 1 if the predecessor audit firm is one of the Big 3 |
|                  |   | firms and the successor audit firm is another Big 3 firm;               |
| Big3_to_Others   | = | indicator variable, 1 if the predecessor audit firm is one of the Big 3 |
|                  |   | firms and the successor audit firm is a non-Big 3 firm;                 |
| Others_to_Big3   | = | indicator variable, 1 if the predecessor audit firm is a non-Big 3 firm |
|                  |   | and the successor audit firm is one of the Big 3 firms;                 |
| Others_to_Others | = | indicator variable, 1 if the predecessor audit firm is a non-Big 3 firm |
|                  |   | and the successor audit firm is another non-Big 3 firm;                 |
| Year2006         | = | indicator variable, 1 if year t is the fiscal year 2006;                |
| Year2007         | = | indicator variable, 1 if year t is the fiscal year 2008;                |
| Year2008         | = | indicator variable, 1 if year t is the fiscal year 2009.                |

| Table 1 Descriptive Statistics |           |           |         |            |        |            |        |  |  |  |
|--------------------------------|-----------|-----------|---------|------------|--------|------------|--------|--|--|--|
| Panel A: Full sample           | (n = 941) |           |         |            |        |            |        |  |  |  |
| Variables                      | Mean      | <u>SD</u> | Min     | <u>25Q</u> | Median | <u>75Q</u> | Max    |  |  |  |
| $\Delta_{lnFEE}$               | 0.271     | 0.386     | -1.117  | 0.000      | 0.188  | 0.452      | 3.708  |  |  |  |
|                                |           |           |         |            |        | 0.5        |        |  |  |  |
| ComAuditorRatio                | 0.183     | 0.298     | 0.000   | 0.000      | 0.000  | 00         | 1.000  |  |  |  |
| $\Delta$ _lnAssets             | -0.032    | 0.430     | -3.974  | -0.149     | 0.005  | 0.128      | 2.307  |  |  |  |
| $\Delta$ _Foresale             | 1.124     | 6.360     | -46.590 | 0.000      | 0.000  | 0.295      | 47.569 |  |  |  |
| $\Delta$ _Subs                 | 0.145     | 0.811     | -7.542  | 0.000      | 0.000  | 0.318      | 9.279  |  |  |  |
| $\Delta$ _INVREC               | 0.003     | 0.100     | -0.715  | -0.026     | 0.004  | 0.038      | 0.573  |  |  |  |
| $\Delta$ _Current              | -0.002    | 0.112     | -0.767  | -0.030     | 0.009  | 0.043      | 0.654  |  |  |  |
| $\Delta_Quick$                 | -0.069    | 1.720     | -25.058 | -0.203     | -0.010 | 0.156      | 27.605 |  |  |  |
| $\Delta _ROA$                  | -0.043    | 0.301     | -2.951  | -0.039     | -0.005 | 0.013      | 1.950  |  |  |  |
| $\Delta$ _Leverage             | -0.009    | 0.094     | -0.785  | -0.044     | -0.008 | 0.019      | 0.687  |  |  |  |
| $\Delta\_Loss$                 | 0.090     | 0.515     | -1.000  | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| $\Delta$ _lnNAFEE              | 0.252     | 1.188     | -5.283  | 0.000      | 0.000  | 1.099      | 4.007  |  |  |  |
| $\Delta_Opinion$               | 0.003     | 0.056     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| $\Delta$ _lnAuditTeam          | 0.089     | 0.489     | -1.504  | -0.201     | 0.095  | 0.375      | 2.104  |  |  |  |
| From_CA                        | 0.552     | 0.498     | 0.000   | 0.000      | 1.000  | 1.000      | 1.000  |  |  |  |
| From_Big3                      | 0.289     | 0.454     | 0.000   | 0.000      | 0.000  | 1.000      | 1.000  |  |  |  |
| From_Others                    | 0.159     | 0.366     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| To_Big3                        | 0.491     | 0.500     | 0.000   | 0.000      | 0.000  | 1.000      | 1.000  |  |  |  |
| CA_to_Big3                     | 0.386     | 0.487     | 0.000   | 0.000      | 0.000  | 1.000      | 1.000  |  |  |  |
| CA_to_Others                   | 0.166     | 0.372     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Big3_to_Big3                   | 0.070     | 0.256     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Big3_to_Others                 | 0.219     | 0.414     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Others_to_Big3                 | 0.035     | 0.184     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Others_to_Others               | 0.124     | 0.330     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Year2006                       | 0.173     | 0.379     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Year2007                       | 0.538     | 0.499     | 0.000   | 0.000      | 1.000  | 1.000      | 1.000  |  |  |  |
| Year2008                       | 0.158     | 0.365     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |
| Year2009                       | 0.131     | 0.337     | 0.000   | 0.000      | 0.000  | 0.000      | 1.000  |  |  |  |

|                                    | Т           | able 1 Des | criptive Statis | tics (continu | ed)    |            |        |
|------------------------------------|-------------|------------|-----------------|---------------|--------|------------|--------|
| Panel B: $\Delta$ <i>lnFEE</i> > 0 | 0 (n = 702) |            |                 |               |        |            |        |
| Variables                          | Mean        | <u>SD</u>  | Min             | <u>25Q</u>    | Median | <u>75Q</u> | Max    |
| $\Delta_{lnFEE}$                   | 0.396***    | 0.357      | 0.019           | 0.147         | 0.297  | 0.549      | 3.708  |
| ComAuditorRatio                    | 0.174       | 0.292      | 0.000           | 0.000         | 0.000  | 0.333      | 1.000  |
| $\Delta$ _lnAssets                 | -0.028      | 0.425      | -2.288          | -0.165        | -0.001 | 0.130      | 2.307  |
| $\Delta$ _Foresale                 | 1.308       | 6.516      | -46.590         | 0.000         | 0.000  | 0.725      | 47.569 |
| $\Delta$ _Subs                     | 0.202***    | 0.835      | -3.162          | 0.000         | 0.000  | 0.410      | 9.279  |
| $\Delta$ _INVREC                   | 0.004       | 0.106      | -0.715          | -0.025        | 0.004  | 0.041      | 0.573  |
| $\Delta$ _Current                  | -0.003      | 0.113      | -0.717          | -0.032        | 0.009  | 0.043      | 0.552  |
| $\Delta_Quick$                     | -0.102      | 1.896      | -25.058         | -0.228        | -0.016 | 0.156      | 27.605 |
| $\Delta _ROA$                      | -0.050      | 0.290      | -2.507          | -0.046        | -0.007 | 0.013      | 1.950  |
| $\Delta$ _Leverage                 | -0.006      | 0.091      | -0.404          | -0.044        | -0.006 | 0.023      | 0.687  |
| $\Delta\_Loss$                     | 0.115***    | 0.531      | -1.000          | 0.000         | 0.000  | 0.000      | 1.000  |
| $\Delta$ _lnNAFEE                  | 0.256       | 1.208      | -5.283          | 0.000         | 0.000  | 1.099      | 4.007  |
| $\Delta_Opinion$                   | 0.003       | 0.053      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| $\Delta$ _lnAuditTeam              | 0.106*      | 0.498      | -1.504          | -0.201        | 0.087  | 0.405      | 2.104  |
| From_CA                            | 0.520***    | 0.500      | 0.000           | 0.000         | 1.000  | 1.000      | 1.000  |
| From_Big3                          | 0.318***    | 0.466      | 0.000           | 0.000         | 0.000  | 1.000      | 1.000  |
| From_Others                        | 0.162       | 0.369      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| To_Big3                            | 0.497       | 0.500      | 0.000           | 0.000         | 0.000  | 1.000      | 1.000  |
| CA_to_Big3                         | 0.376       | 0.485      | 0.000           | 0.000         | 0.000  | 1.000      | 1.000  |
| CA_to_Others                       | 0.144***    | 0.351      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Big3_to_Big3                       | 0.080**     | 0.271      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Big3_to_Others                     | 0.238**     | 0.426      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Others_to_Big3                     | 0.041*      | 0.199      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Others_to_Others                   | 0.121       | 0.326      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Year2006                           | 0.137***    | 0.344      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Year2007                           | 0.526       | 0.500      | 0.000           | 0.000         | 1.000  | 1.000      | 1.000  |
| Year2008                           | 0.189***    | 0.392      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Year2009                           | 0.148***    | 0.356      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |

|                                | Т         | able 1 Des | criptive Statis | tics (continu | ed)    |            |        |
|--------------------------------|-----------|------------|-----------------|---------------|--------|------------|--------|
| Panel C: $\Delta lnFEE \leq 0$ |           |            |                 |               | )      |            |        |
| Variables                      | Mean      | <u>SD</u>  | Min             | <u>25Q</u>    | Median | <u>75Q</u> | Max    |
| $\Delta$ lnFEE                 | -0.096*** | 0.184      | -1.117          | -0.115        | 0.000  | 0.000      | 0.000  |
| <br>ComAuditorRatio            | 0.207     | 0.312      | 0.000           | 0.000         | 0.000  | 0.500      | 1.000  |
| $\Delta$ _lnAssets             | -0.045    | 0.446      | -3.974          | -0.076        | 0.017  | 0.128      | 1.349  |
| $\Delta$ _Foresale             | 0.583     | 5.856      | -43.268         | 0.000         | 0.000  | 0.000      | 26.156 |
| $\Delta$ _Subs                 | -0.021*** | 0.710      | -7.542          | -0.099        | 0.000  | 0.213      | 2.071  |
| $\Delta$ _INVREC               | -0.001    | 0.082      | -0.567          | -0.027        | 0.004  | 0.031      | 0.236  |
| $\Delta$ _Current              | -0.001    | 0.108      | -0.767          | -0.029        | 0.007  | 0.043      | 0.654  |
| $\Delta_Quick$                 | 0.027     | 1.042      | -7.468          | -0.118        | -0.001 | 0.161      | 10.653 |
| $\Delta$ _ROA                  | -0.023    | 0.331      | -2.951          | -0.021        | -0.001 | 0.014      | 1.758  |
| $\Delta$ _Leverage             | -0.016    | 0.101      | -0.785          | -0.043        | -0.012 | 0.013      | 0.351  |
| $\Delta\_Loss$                 | 0.017***  | 0.458      | -1.000          | 0.000         | 0.000  | 0.000      | 1.000  |
| $\Delta$ _lnNAFEE              | 0.239     | 1.133      | -4.927          | 0.000         | 0.000  | 0.847      | 3.045  |
| $\Delta_Opinion$               | 0.004     | 0.065      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| $\Delta$ _lnAuditTeam          | 0.039*    | 0.460      | -1.335          | -0.208        | 0.095  | 0.310      | 1.099  |
| From_CA                        | 0.644***  | 0.480      | 0.000           | 0.000         | 1.000  | 1.000      | 1.000  |
| From_Big3                      | 0.205***  | 0.405      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| From_Others                    | 0.151     | 0.358      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| To_Big3                        | 0.473     | 0.500      | 0.000           | 0.000         | 0.000  | 1.000      | 1.000  |
| CA_to_Big3                     | 0.414     | 0.494      | 0.000           | 0.000         | 0.000  | 1.000      | 1.000  |
| CA_to_Others                   | 0.230***  | 0.422      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Big3_to_Big3                   | 0.042**   | 0.201      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Big3_to_Others                 | 0.163**   | 0.370      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Others_to_Big3                 | 0.017*    | 0.129      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Others_to_Others               | 0.134     | 0.341      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Year2006                       | 0.280***  | 0.450      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Year2007                       | 0.573     | 0.496      | 0.000           | 0.000         | 1.000  | 1.000      | 1.000  |
| Year2008                       | 0.067***  | 0.250      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |
| Year2009                       | 0.079***  | 0.271      | 0.000           | 0.000         | 0.000  | 0.000      | 1.000  |

For variable definitions, see the Appendix. \*\*\*, \*\*, and \* indicate there is a significant difference between the samples of  $\Delta$ \_lnFEE > 0 and  $\Delta$ \_lnFEE  $\leq$  0 at the 1%, 5%, and 10% level, respectively (*t* tests for continuous variables and chi-squared tests for dummy variables).

|                                |          |         |          |          |         | ole 2 Correl |          |          |          |         |         |         |         |        |
|--------------------------------|----------|---------|----------|----------|---------|--------------|----------|----------|----------|---------|---------|---------|---------|--------|
| (Pearson Correlation, n = 941) |          |         |          |          |         |              |          |          |          |         |         |         |         |        |
|                                | 1        | 2       | 3        | 4        | 5       | 6            | 7        | 8        | 9        | 10      | 11      | 12      | 13      | 14     |
| 1. <u>Д_lnFEE</u>              | 1.0000   |         |          |          |         |              |          |          |          |         |         |         |         |        |
| 2. ComAuditorRatio             | -0.1497* | 1.0000  |          |          |         |              |          |          |          |         |         |         |         |        |
| 3. $\Delta$ _lnAssets          | 0.0576   | 0.1570* | 1.0000   |          |         |              |          |          |          |         |         |         |         |        |
| 4. $\Delta$ _ <i>Foresale</i>  | 0.0563   | -0.0143 | 0.1517*  | 1.0000   |         |              |          |          |          |         |         |         |         |        |
| 5. $\Delta$ _Subs              | 0.2728*  | 0.0276  | 0.4295*  | 0.1170*  | 1.0000  |              |          |          |          |         |         |         |         |        |
| 6. $\Delta$ _INVREC            | 0.0637   | 0.0364  | 0.0954*  | -0.0144  | 0.1475* | 1.0000       |          |          |          |         |         |         |         |        |
| 7. $\Delta$ <i>Current</i>     | -0.0417  | 0.0480  | 0.0573   | -0.0869* | 0.0585  | 0.4943*      | 1.0000   |          |          |         |         |         |         |        |
| 8. ⊿_Quick                     | -0.0937* | 0.0535  | 0.1120*  | -0.1470* | -0.0630 | -0.1406*     | 0.1731*  | 1.0000   |          |         |         |         |         |        |
| 9. ⊿_ <i>ROA</i>               | -0.1131* | 0.0582  | 0.4161*  | 0.0219   | 0.0249  | -0.1063*     | 0.1199*  | 0.2092*  | 1.0000   |         |         |         |         |        |
| 10. ⊿_Leverage                 | 0.0447   | -0.0638 | 0.0251   | 0.0514   | 0.0976* | -0.1533*     | -0.1850* | 0.0317   | -0.0701* | 1.0000  |         |         |         |        |
| 11. <i>A_Loss</i>              | 0.0974*  | -0.0533 | -0.1205* | 0.0269   | 0.0198  | -0.0662*     | -0.1530* | -0.0862* | -0.2855* | 0.0981* | 1.0000  |         |         |        |
| 12. <i>A_lnNAFEE</i>           | -0.0408  | 0.1128* | 0.0774*  | 0.0415   | 0.0130  | 0.0680*      | 0.0473   | -0.0102  | 0.0266   | -0.0299 | -0.0074 | 1.0000  |         |        |
| 13. $\Delta$ _Opinion          | 0.0508   | -0.0347 | -0.2666* | 0.0121   | -0.0286 | -0.0075      | 0.0674*  | 0.0004   | -0.2732* | 0.0255  | 0.0267  | -0.0134 | 1.0000  |        |
| 14. ⊿_lnAuditTeam              | 0.1691*  | 0.0801* | 0.1732*  | 0.0460   | 0.1325* | 0.1094*      | 0.0645*  | -0.0392  | 0.0137   | 0.0224  | 0.0024  | 0.0942* | -0.0239 | 1.0000 |

\* indicates the correlation is significant at the 5% level.

| Dependent Variable: <u>A_ln</u> |               |            |            |                     |            |             |
|---------------------------------|---------------|------------|------------|---------------------|------------|-------------|
|                                 | <u>Full s</u> | ample_     | Fee D      | iff > 0             | Fee D      | $iff \le 0$ |
| Independent Variables           | model1        | model2     | model3     | model4              | model5     | model6      |
| Constant                        | 0.2108        | 0.1616     | 0.3539     | 0.2694              | -0.0915    | -0.0788     |
|                                 | [5.55]***     | [6.60]***  | [8.42]***  | [9.77]***           | [-2.51]**  | [-3.65]***  |
| ComAuditorRatio                 | -0.0908       | -0.0712    | -0.144     | -0.1235             | 0.0504     | 0.056       |
|                                 | [-2.22]**     | [-1.72]*   | [-3.15]*** | [-2.67]***          | [1.34]     | [1.49]      |
| $\Delta$ _lnAssets              | 0.0966        | 0.0952     | 0.0559     | 0.0564              | 0.1144     | 0.1078      |
|                                 | [2.73]***     | [2.70]***  | [1.47]     | [1.49]              | [2.88]***  | [2.72]***   |
| ∆ Foresale                      | 0.0019        | 0.0018     | 0.0006     | 0.0006              | 0.0008     | 0.0004      |
| _                               | [1.05]        | [0.98]     | [0.32]     | [0.29]              | [0.38]     | [0.20]      |
| $\Delta$ _Subs                  | 0.1269        | 0.1253     | 0.1097     | 0.1075              | 0.0177     | 0.0205      |
| _                               | [8.09]***     | [8.02]***  | [6.77]***  | [6.66]***           | [0.80]     | [0.93]      |
| 4 INVREC                        | 0.1943        | 0.1984     | 0.1747     | 0.1849              | -0.2041    | -0.2462     |
|                                 | [1.41]        | [1.45]     | [1.26]     | [1.34]              | [-1.07]    | [-1.29]     |
| 4 Current                       | -0.1485       | -0.1598    | -0.1678    | -0.1785             | 0.2645     | 0.2806      |
|                                 | [-1.21]       | [-1.30]    | [-1.30]    | [-1.39]             | [1.55]     | [1.65]*     |
| 1_Quick                         | -0.0046       | -0.0051    | -0.0048    | -0.0051             | -0.0174    | -0.0174     |
|                                 | [-0.66]       | [-0.73]    | [-0.70]    | [-0.75]             | [-1.29]    | [-1.30]     |
| A_ROA                           | -0.1133       | -0.1161    | -0.0846    | -0.0893             | -0.2127    | -0.2163     |
|                                 | [-2.50]**     | [-2.57]**  | [-1.67]*   | -0.0895<br>[-1.77]* | [-4.43]*** | [-4.54]**   |
| $\Delta$ _Leverage              | -0.1519       | -0.1428    | -0.1485    | -0.1419             | -0.0943    | -0.1126     |
| ∐_Leverage                      |               |            |            |                     |            |             |
| 4 I                             | [-1.23]       | [-1.16]    | [-1.07]    | [-1.02]             | [-0.82]    | [-0.98]     |
| A_Loss                          | 0.02          | 0.0205     | -0.0003    | 0.0017<br>[0.07]    | 0.0022     | -0.0005     |
| A LUNAEEE                       | [0.87]        | [0.90]     | [-0.01]    |                     | [0.09]     | [-0.02]     |
| ∆_lnNAFEE                       | 0.0001        | -0.0006    | 0.0003     | 0.0004              | -0.002     | -0.0022     |
|                                 | [0.01]        | [-0.06]    | [0.03]     | [0.04]              | [-0.19]    | [-0.22]     |
| $\Delta_Opinion$                | 0.3672        | 0.387      | 0.6415     | 0.6737              | -0.3843    | -0.3977     |
|                                 | [1.74]*       | [1.84]*    | [2.76]***  | [2.91]***           | [-1.46]    | [-1.52]     |
| $\Delta_{lnAuditTeam}$          | 0.1342        | 0.1196     | 0.1267     | 0.1112              | 0.0301     | 0.0283      |
|                                 | [5.36]***     | [4.69]***  | [4.71]***  | [4.01]***           | [1.13]     | [1.07]      |
| From_CA                         | -0.0351       |            | -0.0433    |                     | 0.0073     |             |
|                                 | [-0.93]       |            | [-1.03]    |                     | [0.20]     |             |
| From_Big3                       | 0.0001        |            | -0.0082    |                     | -0.0549    |             |
|                                 | [0.00]        |            | [-0.20]    |                     | [-1.38]    |             |
| To_Big3                         | 0.0047        |            | -0.0204    |                     | 0.0145     |             |
|                                 | [0.17]        |            | [-0.68]    |                     | [0.56]     |             |
| CA_to_Others                    |               | 0.0581     |            | 0.091               |            | 0.0182      |
|                                 |               | [1.70]*    |            | [2.32]**            |            | [0.63]      |
| Big3_to_Big3                    |               | 0.1131     |            | 0.1123              |            | 0.0348      |
| 0 0                             |               | [2.25]**   |            | [2.11]**            |            | [0.62]      |
| Big3 to Others                  |               | 0.0363     |            | 0.0654              |            | -0.0964     |
| 0                               |               | [0.96]     |            | [1.59]              |            | [-2.52]**   |
| Others to Big3                  |               | 0.1811     |            | 0.1693              |            | 0.0756      |
|                                 |               | [2.65]***  |            | [2.37]**            |            | [0.90]      |
| Others to Others                |               | 0.0221     |            | 0.0602              |            | -0.0252     |
| omens_ro_omens                  |               | [0.55]     |            | [1.35]              |            | [-0.67]     |
| Year2006                        | -0.1111       | -0.1234    | -0.0481    | -0.0596             | -0.0604    | -0.0719     |
| 1000 2000                       | [-3.45]***    | [-3.80]*** | [-1.26]    | [-1.55]             | [-2.28]**  | [-2.70]***  |
| Year2008                        |               |            | 0.2128     | 0.2046              | -0.0263    |             |
| 1 cul 2000                      | 0.2718        | 0.2656     |            |                     |            | -0.0181     |
| V                               | [7.31]***     | [7.17]***  | [5.55]***  | [5.34]***           | [-0.52]    | [-0.36]     |
| Year2009                        | 0.2311        | 0.2213     | 0.1692     | 0.1581              | 0.0511     | 0.0647      |
|                                 | [5.34]***     | [5.12]***  | [3.72]***  | [3.48]***           | [0.97]     | [1.24]      |
| Adj-R-squared                   | 0.2327        | 0.2398     | 0.2086     | 0.2159              | 0.2226     | 0.2363      |
| N                               | 941           | 941        | 702        | 702                 | 239        | 239         |

\*\*\*, \*\*, and \* indicate the coefficient is significant at the 1%, 5%, and 10% level, respectively (two-tailed).