# Effect of an Audit Partner' Industry Auditing Tenure on Audit Quality Under the Mandatory Audit Partner Rotation System in Taiwan

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# Abstract

This study explores the effect of audit partner specialist tenure on audit quality and the complementary effect of audit partner industry tenure and audit tenure. This study first examines audit partners' effect on audit quality in the early period of their tenure, and we expect to see inferior audit quality during this period. Next, we investigate the moderating effect of audit partner specialist tenure on audit quality; that is, we inspect whether audit partner specialist tenure can compensate for audit partners' insufficient professional knowledge in the early period of their tenure. This study discovers that since the second modification of the Taiwanese audit partner rotation system in 2009, audit partners' first audit still generates negative effects on audit quality; however, after audit partners accumulate experience in the industry, they can effectively ameliorate the negative effect generated during their first audit.

*Keywords*: **audit partner specialist tenure, complementary effect, audit partner tenure, audit quality**

# Introduction

Audit quality is one of the key factors that determines whether a financial statement can gain investors' trust. Factors affecting audit quality include auditors' professional ability and independence (DeAngelo, 1981). In the second half of 2020, a series of frauds involving foreign listed companies in Taiwan made the public wonder about the roles of auditors in the relationship between stakeholders and company management. Consider Pharmally International Holding Co. Ltd. (hereinafter Pharmally) as an example. The audit partner of KY once served as the audit division head of Deloitte Taiwan and simultaneously served as an audit partner for various KY stocks, which refer to overseas Taiwanese businesses with a primary listing on the nation's main board, in China. After this fraud, many investors questioned whether audit partners' deep understanding of an industry helps clarify the financial situation of an enterprise or serves as the basis for committing fraud.

In April 2003, the Taiwan Stock Exchange and Taipei Exchange established the *Procedures for the Review of Financial Reports of TPEx Listed Companies*. In accordance with these procedures, since 2003, listed and over-the-counter (OTC) companies in Taiwan that the same auditors to sign financial statements for 5 consecutive years are included in the scope of a substantive review. In December 2008, the *Taiwan Statement of Auditing Standards No. 46 "Quality Control for Firms"* was released, and audit partner rotation was made mandatory.[1] However, whether audit partner rotation increases or reduces audit quality is still under debate. Johnson et al. (2002b) state that audit partners must go through a learning curve to acquire client-specific knowledge. Many studies have explored audit partners' learning of client-specific knowledge. Specifically, since the implementation of the audit partner rotation system in Taiwan, studies have investigated the effect of audit partners' company audit tenure on audit quality. However, these studies have obtained inconsistent conclusions. Some studies have discovered that audit partners with long tenures tend to have a profound understanding of clients' operational characteristics and risks and thus

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[1] According to Article 20 of the *Taiwan Statement of Auditing Standards No. 46 "Quality Control for Firms,"* for audits of the financial statements of listed (OTC) companies, if the lead auditor's undertaking period has reached the time limit stipulated by the auditor's professional ethics code or relevant laws and regulations, then the auditor should be rotated. According to Article 68, "The impact of familiarity is particularly relevant for audit cases of listed (OTC) companies' financial statements. For such audit cases, the auditor in charge shall be rotated after a certain period (usually not more than 7 years), and be rotated for at least a certain period of time (usually not less than 2 years) before they can resume their original post."

exhibit strong professional ability (Petty & Cuganesan, 1996; Bell et al., 1997; Myers et al., 2003). Ghosh and Doocheol (2005) use earnings response coefficients to examine the effect of reported earnings on stock rankings and adopt analysts' forecast earnings to evaluate investors' perception of earnings quality. They discover that investors and analysts believe that increasing auditor tenure leads to superior financial statement quality. Some studies maintain that audit partners with a long tenure might establish private relationships with their clients and become lax in their auditing work because of this familiarity, which can hinder their independence and objectivity and thus reduce audit quality (Mautz & Sharaf, 1961). Several studies have stated that auditors' industry experiences help increase their audit quality (Tubbs, 1992; Hammersley, 2006; Trotman et al., 2005).

However, studies have rarely explored auditors' tenure in industries. Consider the Pharmally incident as an example. The audit partner of Pharmally was highly familiar with the auditing practice of foreign listed enterprises in Taiwan, and his experience should have helped improve audit quality. However, after the Pharmally incident was made public, media reported that the audit partner who licensed Pharmally and other foreign enterprises also had unfavorable audit quality, such as in his auditing of TOPBI International Holdings Limited (another KY company). Therefore, the effect of audit partner tenure on audit quality is worthy of investigation. This study examines the effects of audit partner tenure and audit partner experience on audit quality.

In 2009, the audit partner rotation system in Taiwan was modified. This study uses observations of the Taiwanese capital market from 2009 to 2019 to examine whether audit partners' industry tenure affects their audit quality. This study discovers that after the audit partner rotation system was modified, audit partner's first audit tenure has a significantly negative effect on audit quality. However, this negative effect becomes nonsignificant when audit partner specialist tenure is considered. Thus, audit partner specialist tenure can effectively diminish the negative effect of first audit tenure on audit quality. This result is consistently obtained in many additionality tests. Finally, this study performs a financial statement conservatism test and discovers that the first audit results in low financial statement conservatism and that audit partner specialist tenure effectively diminishes the negative effect of first audit on financial statement conservatism.

# Literature Review and Research Hypotheses

## Factors Affecting Audit Quality

Whether auditors can provide favorable audit quality depends on their professional ability, independence, and ability to avoid giving in to the pressure from the client. DeAngelo (1981) states that audit quality depends on audit ability and auditor independence. Audit ability broadly refers to whether auditors can identify untruthful information or omissions in financial statements, and auditor independence refers to whether auditors have the moral courage to report audit results truthfully.

Audit ability was considered related to auditors' specific industry knowledge about the client—specifically, whether auditors have the ability to detect major errors in clients' financial statements (Khurana & Raman, 2004; Ghosh & Moon, 2005). Krishnan (2003) states that audit partner specialists have more knowledge about specific industries and more industry auditing experiences; thus, they can more effectively inhibit corporate earnings management. Moreover, audit partner specialists can better prevent auditees from manipulating earnings to reach specific predictions of analysts (Reichelt & Wang, 2010). Jayaraman and Milbourn (2014) state that audit partner specialists can effectively inhibit chief executive officers from manipulating earnings in financial statements because of equity compensation incentives.

Auditor independence is evaluated on the basis of the mutual reliance and familiarity between audit partners and companies. After the Enron scandal, many countries implemented audit partner rotation systems to resolve the problem of infringed independence between audit partners and auditees caused by long-term service (Manry et al., 2008). The purpose of implementing audit partner rotation is to protect audit partners' independence (Su & Peng, 2005). Regular rotation brings substantial and formal results (Liao & Hong, 2010). Audit partner rotation can prevent audit partners from becoming too familiar with a single long-term auditee and losing their independence, thereby maintaining audit quality. Rotation allows new audit partners to have different views toward and observations of the auditee, thereby yielding high audit quality. Lee and Chen (2012) use 7 years as the median of an auditor's term. Auditors with an auditing

term of longer than 7 years exhibit lower audit quality than do those with an audit term of shorter than 7 years. If audit partners are not rotated regularly, auditees and audit partners become close, which might reduce auditor independence and audit quality.

In short, audit ability and auditor independence are the foundation for audit quality. Audit partners' tenure is a critical factor that affects their audit ability and independence. According to the learning curve effect, audit partners with a long audit tenure can learn unique and special knowledge about their client and increase their audit ability. However, an excessively long audit tenure might make the audit partner and client too familiar with one another, thereby hindering the audit partner's independence. Although a short audit tenure leads to high auditor independence, it might also result in the audit partner being unable to accumulate sufficient professional ability, which might lead to audit failure. Thus, determining a suitable audit tenure to achieve a balance between audit partners' audit ability and independence is critical.

**Audit Partner Tenure**

After the Enron scandal, the United States wished to reinforce the transparency of corporate financial information and to reestablish auditor independence; therefore, in 2002, the United States passed the Sarbanes–Oxley Act. When audit partners have a long tenure, their independence is affected, which leads to reduced audit quality. Thus, competent authorities of securities worldwide implement audit partner rotation systems to improve audit quality. According to the *Taiwan Statement of Auditing Standards No. 46 "Quality Control for Firms,"* "the auditor in charge shall be rotated after a certain period (usually not more than 7 years), and be rotated for at least a certain period of time (usually no shorter than 2 years) before they can resume their original post." The Taiwanese public has wondered whether auditors' tenure affects audit quality.

For long audit tenures, studies have focused on the learning curve effect, maintaining that a long tenure for audit partners facilitates the accumulation of professional knowledge related to the client, which increases the ability of audit partners to detect earnings management by auditees (Liu & Wang, 2008). In addition, a long audit partner tenure leads to a low cost in issuing bonds, which

indicates that creditors are more confident in audit partners with a long tenure (Mansi et al., 2004). The aforementioned studies reflect the positive effects of long audit partner tenures. However, an excessively long audit partner tenure might cause audit partner independence to be compromised. When an audit partner has a long tenure with a company, they might establish private relations with company members. Moreover, their familiarity with the company might lead to them being lax at auditing tasks, which compromises their independence and objectivity and thus negatively affects their audit quality (Mautz & Sharaf, 1961). Audit partners with a long tenure are more likely than those with a short tenure to have work papers that fail to meet audit standards (Copley & Doucet, 1993).

Regarding short tenures, supporters maintain that hiring new audit partners can result in superior audit independence and an opportunity to inspect financial statements with a new eye, thereby reducing the possibility of corporate earnings being manipulated (Laurion et al., 2017). Chi and Huang (2005) discover that the relationship between tenure and audit quality is not linear. In the first 5 years, auditing quality increases as tenure increases. However, after 5 years, an increase in tenure is inconducive for enhancing audit quality. Lennox et al. (2014) study the capital market of China and discover that the audit partner rotation system can effectively increase the information quality in financial statements. However, certain studies argue that a short tenure does not allow audit partners to accumulate sufficient professional knowledge about their clients and might lead to audit failure. For example, Daugherty et al. (2012) use a questionnaire interview to survey audit partners' opinions on rotation, and the participating audit partners reveal that although they believe that rotation can improve their independence, it might result in them lacking relevant professional knowledge related to their clients and cause a negative effect on audit quality. Johnson et al. (2002a) employ a tenure of 4–8 years as the basis for comparison and discover that when audit partners have a tenure shorter than 4 years, they generate financial statements with low quality. Carcello and Nagy (2004) discover that financial statement frauds occur more easily in the first 3 years of audit partners' tenure than in later years.

This study maintains that the major reason why inconsistent results have been obtained in the literature regarding the effect of the length of audit partners' tenure on audit quality is that past studies have only focused on audit partners' accumulation of professional knowledge related to auditees; however, they have

failed to consider the accumulation of audit partner industry specialization knowledge. Therefore, this study inspects the effect of audit partner specialist tenure on audit quality.

**Hypotheses**

*Effect of Industry Audit Tenure on Audit Partner Rotation*

Increasing the tenure of audit partners is conducive for increasing their professional ability and enabling them to gain a deeper understanding regarding the operation characteristics and latent risks of specific clients (Bell et al., 1997; Myers et al., 2003). However, increasing tenure might lead to reduced audit partner independence and subsequently reduced audit quality (Liu & Wang, 2008). However, Daugherty et al. (2012) argue that a short audit partner tenure can effectively increase audit partners' independence but prevents them from obtaining full understanding of professional knowledge related to the client, which can result in audit failure. Therefore, this study proposes the following hypothesis:

**Hypothesis 1: In the early period of audit partners' audit tenure, their audit period and audit quality are negatively correlated.**

Solomon et al. (1999) state that when audit partners have superior industry knowledge and audit experience, they can detect errors in financial statements to increase their audit quality and the quality of financial statements. Moreover, Hogan and Jeter (1999) maintain that industry specialization can effectively increase the professional ability of audit partners. Compared with the auditees of audit partners who are not industry specialists, the auditees of audit partner specialists have higher earnings quality (Balsam et al., 2003). Thus, the following hypothesis is proposed:

**Hypothesis 2: Audit partner specialist tenure positively moderates the negative effect of an audit partner's early audit period on their audit quality.**

# Data and Research Method

## Empirical Models

To verify the hypotheses of this study, an empirical model consisting of two parts is established. The first part explores the relationship between audit partners' early-period inspection and audit quality. The second part inspects the moderating effect of an audit partner's industry specialist tenure on this relationship. This study also examines the effect of audit partner specialist tenure on audit quality. Regarding audit quality variables, this study employs the performance-matched discretionary accrual measures from the study of Kothari et al. (2005). The first part of the established empirical model is a modified version of the empirical model of Lennox et al. (2014). The first part of the established empirical model is expressed as follows:

$$AQ_{it} = \alpha_0 + \alpha_1 CPA\_INT_{it} + \alpha_2 INST_{it} + \alpha_3 BHOLD_{it} + \alpha_4 BSIZE_{it} + \alpha_5 INDR_{it}$$
$$+ \alpha_6 BIG4_{it} + \alpha_7 SIZE_{it} + \alpha_8 LEV_{it} + \alpha_9 OCF_{it} + \alpha_{10} SGR_{it} + \alpha_{11} LOSS_{it} \qquad (1)$$
$$+ Year + Ind + e_{it}$$

where

$AQ_{it}$：Audit quality of the $i$th company in the $t$th year.

$CPA\_INT_{it}$：Dummy variable. During the first year of the audit tenure of the audit partner at the $i$th company in the $t$th year, $CPA\_INT_{it} = 1$; during other years, $CPA\_INT_{it} = 0$.

$INST_{it}$: Institute shareholding ratio of the $i$th company in the $t$th year.

$BHOLD_{it}$: Board shareholding ratio of the $i$th company in the $t$th year.

$BSIZE_{it}$: Board size of the $i$th company in the $t$th year.

$INDR_{it}$: Independent director ratio of the $i$th company in the $t$th year.

$BIG4_{it}$: A dummy variable. When the $i$th company is audited by a Big Four accounting firm in the $t$th year, $BIG4_{it} = 1$; otherwise, $BIG4_{it} = 0$.

$SIZE_{it}$: Natural logarithm of total assets of the $i$th company in the $t$th year.

$LEV_{it}$: Debt ratio of the $i$th company in the $t$th year.

$OCF_{it}$: Ratio of cash flow from operations to total assets of the $i$th company in the $t$th year.

$SGR_{it}$: Revenue growth rate of the $i$th company in the $t$th year.

$LOSS_{it}$: A dummy variable. When the $i$th company experiences loss in the $t$th year, $LOSS_{it} = 1$; otherwise, $LOSS_{it} = 0$.

Year: Annual control effect.

Ind: Industry control effect.

$e_{it}$：Residual term of the $i$th company in the $t$th year.

This study incorporates audit partner specialist years into Eq. (1) and examines its moderating effect on the relationship between an audit partner's early audit period and their audit quality. Thus, the second part of the established empirical model is expressed as follows:

$$
\begin{aligned}
AQ_{it} = {} & \alpha_0 + \alpha_1 CPA\_INT_{it} + \alpha_2 INDTEN_{it} + \alpha_3 INT\_INDTEN_{it} \\
& + \alpha_4 INST_{it} + \alpha_5 BHOLD_{it} + \alpha_6 BSIZE_{it} + \alpha_7 INDR_{it} \\
& + \alpha_8 BIG4_{it} + \alpha_9 SIZE_{it} + \alpha_{10} LEV_{it} + \alpha_{11} OCF_{it} + \alpha_{12} SGR_{it} + \alpha_{13} LOSS_{it} \\
& + YearFIX + INDFIX + e_{it} + Year + Ind + e_{it}
\end{aligned}
\tag{2}
$$

where

$INDTEN_{it}$：Audit partner specialist tenure at the $i$th company in the $t$th year.

$INT\_INDTEN_{it}$：Cross-multiplying term of the tenure of an audit partner first conducting audit and audit partner specialist tenure.

**Definitions of Variables**

*Audit Quality*

In this study, audit quality evaluation is conducted using variables related to financial statement quality (Gaver & Utke, 2019), namely the performance-matched discretionary accrual measures from the study of Kothari et al. (2005). The expression for audit quality evaluation is as follows:

$$
TA_{it} = a_0 + \alpha_1 \left( \frac{1}{Assets_{it-1}} \right) + \beta_2 \Delta SALES_{it} + \beta_3 PPE_{it} + \beta_4 ROA_{it-1} + \varepsilon_{it}
\tag{3}
$$

where

$TA_{it}$：Total accruals of the $i$th company in the $t$th year.

$Assets_{it}$：Total assets of the ith company in the tth year.

$\Delta SALES_{it}$： Sales revenue change rates of the ith company in the tth year. Sales revenue change is divided by the total assets in the $(t-1)$th year.

$PPE_{it}$：Net property, plant, and equipment value of the ith company in the tth year. This value is divided by the total assets in the $(t-1)$th year.

$ROA_{it-1}$：Return on assets of the ith company in the $(t-1)$th year.

εit：Residual term of the ith company in the tth year (i.e., the abnormal discretionary accruals).

This study uses the absolute value of the residual in Eq. (3) to assess the quality of financial statements. A high absolute value of the residual indicates that the company engages in a high degree of earnings management and has unfavorable audit quality.

### *Audit Partner Specialist Tenure and the Early Audit Period*

This study assesses two variables: the early audit period and audit partner specialist tenure. For evaluating the early audit period, this study references the study of Lennox et al. (2014) and adopts a dummy variable. When the audit partner is auditing a company in the first year of their tenure, the dummy variable is 1; otherwise, this variable is 0. Moreover, the year 1990 is used as the starting point for the assessment of audit partner specialist tenure. We calculate the number of years for which audit partners have audited in each industry since 1990.

### *Control Variables*

To improve the fitness of the regression model, this study references the empirical model of Lennox et al. (2014) and considers the following control variables: institute shareholding ratio (*INSTH*), board shareholding ratio (*BHOLD*), board size (*BSIZE*), independent director ratio (*INDR*), whether a company is licensed by large-scale accounting firms (*BIG4*), company size (*SIZE*), debt ratio (*LEV*), ratio of cash flow from operations to total assets (*OCF*), revenue growth rate (*SGR*), and whether a company experiences (*LOSS*). In addition, because this study uses tracking data, annual effect (*Year*) and industry effect (*Ind*) are fixed in the regression model.

### Research Data and Duration

### *Research Duration*

The mandatory audit partner rotation system in Taiwan began to be implemented in 2004. According to Lin and Lin (2007), in the 2 years

immediately preceding the implementation of the mandatory auditor rotation system by Taiwan, 55.29% of auditors rotated back to their original posts. To avoid situations in which audit partners resume their original post within a short duration and thus render the mandatory auditor rotation system ineffective, this study adopts an analysis period different from that adopted in the study of Liao and Chih (2014); we select an 11-year research period from 2009 to 2019 (involving 16,258 pieces of annual data of companies) for analysis.

### *Data Source*

This study inspects the effect of audit partners' industry tenure on audit quality. Therefore, we adopt Taiwan's capital market as the research object. The databases employed in this study are those of the Taiwan Economic Journal and Market Observation Post System.

# Empirical Results

## Descriptive Statistics

All the companies in the research sample of this study are listed and OTC companies on the Taiwan Stock Exchange. The sample excludes companies with unique characteristics, such as banks and broker-dealers, and companies with incomplete data. The research period is 2009–2019 (i.e., 11 years). Table 1 presents the descriptive statistics for the research sample. Specifically, it presents the sample distribution in terms of the mean, standard deviation (SD), first quartile (P25), median (P50), and third quartile (P75) so that companies that deviate from reality can be identified. The mean of *CPA_INT* is .183, which indicates that 3,226 companies are audited by audit partners who are auditing the company for the first time. The mean *BSIZE* value is 7.209, which indicates that the boards of the analyzed companies comprise approximately seven people on average. The average *BSIZE* value meets the requirement of Article 26-3 of the Securities and Exchange Act of Taiwan. The mean *BIG4* value is .871, which indicates that the vast majority of the research sample is audited by one of the Big Four accounting firms. The mean *LEV* value is 0.408, which is in agreement with the phenomenon that owners of companies in Taiwan's capital market prefer to have 60% of free cash and 40% of debt. The mean *LOSS* value is .216, which reflects that approximately 21% of the research sample experiences loss.

## Correlation Coefficient

Table 2 presents the correlation coefficients between the variables considered in this study. As presented in Table 2, almost all the considered variables are significantly correlated with each other. *CPA_INT* and *AQ* are significantly and positively correlated (correlation coefficient = .019, $p$ = .014). *AQ* is measured using the absolute value of discretionary accruals. A higher degree of earnings management results in lower *AQ*. Consequently, in the early period of auditing, the audit partner's *AQ* is low. *INDTEN* and *AQ* are significantly and negatively correlated (correlation coefficient = −.038, $p$ = .000), which indicates that under the audit partner rotation system in Taiwan, when audit partners serve in the same industry but at different companies for a longer duration, their *AQ* is higher. This study subsequently employs regression analysis to reexamine the effect of *INDTEN* on *AQ*.

**Table 1**

*Descriptive Statistics of the Research Sample*

|         | Mean   | SD    | P25    | P50    | P75    |
|---------|--------|-------|--------|--------|--------|
| AQ      | 0.061  | 0.060 | 0.020  | 0.044  | 0.082  |
| CPA_INT | 0.183  | 0.386 | 0.000  | 0.000  | 0.000  |
| INDTEN  | 9.221  | 5.579 | 5.000  | 8.000  | 13.000 |
| INST    | 0.396  | 0.232 | 0.209  | 0.373  | 0.570  |
| BHOLD   | 0.220  | 0.152 | 0.109  | 0.175  | 0.290  |
| BSIZE   | 7.209  | 2.069 | 6.000  | 7.000  | 8.000  |
| INDR    | 0.264  | 0.169 | 0.167  | 0.286  | 0.400  |
| BIG4    | 0.871  | 0.335 | 1.000  | 1.000  | 1.000  |
| SIZE    | 15.241 | 1.431 | 14.244 | 15.037 | 16.035 |
| LEV     | 0.408  | 0.179 | 0.271  | 0.408  | 0.535  |
| OCF     | 0.061  | 0.099 | 0.008  | 0.063  | 0.120  |
| SGR     | 0.068  | 0.389 | -0.098 | 0.019  | 0.144  |
| LOSS    | 0.216  | 0.412 | 0.000  | 0.000  | 0.000  |
| Obs.    | 16258  |       |        |        |        |

$AQ_{it}$: audit quality of the $i$th company in the $t$th year, $CPA\_INT_{it}$: dummy variable (during the first year of the audit tenure of the audit partner at the $i$th company in the $t$th year, $CPA\_INTit$ = 1; during other years, $CPA\_INTit$ = 0), $INDTEN_{it}$: audit partner specialist tenure at the $i$th company in the $t$th year, $INST_{it}$: institute shareholding ratio of the $i$th company in the $t$th year, $BHOLD_{it}$: board shareholding ratio of the $i$th company in the $t$th year, $BSIZE_{it}$: board size of the $i$th company in the $t$th year, $INDR_{it}$: independent director ratio of the $i$th company in the $t$th year, $BIG4_{it}$: dummy variable (when the $i$th company is audited by a Big Four accounting firm in the $t$th year, $BIG4_{it}$ = 1; otherwise, $BIG4_{it}$ = 0), $SIZE_{it}$: natural logarithm of total assets of the $i$th company in the $t$th year, $LEV_{it}$: debt ratio of the $i$th company in the $t$th year, $OCF_{it}$: ratio of cash flow from operations to total assets of the $i$th company in the $t$th year, $SGR_{it}$: revenue growth rate of the $i$th company in the $t$th year, $LOSS_{it}$: dummy variable (when the $i$th company experiences loss in the $t$th year, $LOSS_{it}$ = 1; otherwise, $LOSS_{it}$ = 0).

**Table 2**  *Correlation Coefficients Between the Variables Considered in This Study*

| | AQ | CPA_INT | INDTEN | INST | BHOLD | BSIZE | INDR | BIG4 | SIZE | LEV | OCF | SGR | LOSS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AQ | 1.000 | | | | | | | | | | | | |
| CPA_INT | 0.019** | 1.000 | | | | | | | | | | | |
| | (0.014) | | | | | | | | | | | | |
| INDTEN | -0.038*** | -0.131*** | 1.000 | | | | | | | | | | |
| | (0.000) | (0.000) | | | | | | | | | | | |
| INST | -0.024*** | -0.010 | 0.015* | 1.000 | | | | | | | | | |
| | (0.002) | (0.210) | (0.056) | | | | | | | | | | |
| BHOLD | 0.031*** | -0.007 | -0.016** | 0.413*** | 1.000 | | | | | | | | |
| | (0.000) | (0.370) | (0.045) | (0.000) | | | | | | | | | |
| BSIZE | -0.103*** | -0.010 | 0.029*** | 0.231*** | 0.099*** | 1.000 | | | | | | | |
| | (0.000) | (0.201) | (0.000) | (0.000) | (0.000) | | | | | | | | |
| INDR | 0.014* | -0.003 | -0.017** | 0.045*** | 0.037*** | -0.018** | 1.000 | | | | | | |
| | (0.070) | (0.738) | (0.030) | (0.000) | (0.000) | (0.023) | | | | | | | |
| BIG4 | -0.067*** | -0.024*** | -0.068*** | 0.132*** | 0.044*** | 0.059*** | 0.128*** | 1.000 | | | | | |
| | (0.000) | (0.002) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | | | | | |
| SIZE | -0.165*** | -0.014* | 0.088*** | 0.373*** | -0.143*** | 0.344*** | -0.117*** | 0.109*** | 1.000 | | | | |
| | (0.000) | (0.074) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | | | | |
| LEV | 0.041*** | 0.003 | 0.014* | 0.074*** | -0.011 | 0.017** | -0.057*** | -0.028*** | 0.335*** | 1.000 | | | |
| | (0.000) | (0.733) | (0.068) | (0.000) | (0.159) | (0.029) | (0.000) | (0.000) | (0.000) | | | | |
| OCF | -0.027*** | -0.023*** | 0.030*** | 0.133*** | 0.049*** | 0.066*** | 0.046*** | 0.113*** | 0.113*** | -0.180*** | 1.000 | | |
| | (0.001) | (0.004) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | | |
| SGR | 0.043*** | -0.002 | -0.011 | 0.077*** | 0.048*** | -0.012 | 0.010 | 0.001 | 0.002 | 0.047*** | 0.043*** | 1.000 | |
| | (0.000) | (0.822) | (0.159) | (0.000) | (0.000) | (0.116) | (0.222) | (0.930) | (0.771) | (0.000) | (0.000) | | |
| LOSS | 0.171*** | 0.025*** | -0.041*** | -0.175*** | -0.054*** | -0.091*** | 0.003 | -0.077*** | -0.209*** | 0.087*** | -0.383*** | -0.158*** | 1.000 |
| | (0.000) | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) | (0.740) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | |

a. Definitions of the variables. $AQ_{it}$: audit quality of the $i$th company in the $t$th year, $CPA\_INT_{it}$: dummy variable (during the first year of the audit tenure of the audit partner at the $i$th company in the $t$th year, $CPA\_INT_{it}$ = 1; during other years, $CPA\_INT_{it}$ = 0), $INDTEN_{it}$: audit partner specialist tenure at the $i$th company in the $t$th year, $INST_{it}$: institute shareholding ratio of the $i$th company in the $t$th year, $BHOLD_{it}$: board shareholding ratio of the $i$th company in the $t$th year, $BSIZE_{it}$: board size of the $i$th company in the $t$th year, $INDR_{it}$: independent director ratio of the $i$th company in the $t$th year, $BIG4_{it}$: dummy variable (when the $i$th company is audited by a Big Four accounting firm in the $t$th year, $BIG4_{it}$ = 1; otherwise, $BIG4_{it}$ = 0), $SIZE_{it}$: natural logarithm of total assets of the $i$th company in the $t$th year, $LEV_{it}$: debt ratio of the $i$th company in the $t$th year, $OCF_{it}$: ratio of cash flow from operations to total assets of the $i$th company in the $t$th year, $SGR_{it}$: revenue growth rate of the $i$th company in the $t$th year, $LOSS_{it}$: dummy variable (when the $i$th company experiences loss in the $t$th year, $LOSS_{it}$ = 1; otherwise, $LOSS_{it}$ = 0).
b. The values within parentheses are $p$ values. * $p < .10$, ** $p < .05$, *** $p < .01$.

## Regression Results

Table 3 presents the major regression results. $CPA\_INT_{it}$ and $INDTEN_{it}$ are used to explore the effect of audit partner specialist tenure on audit quality. Model 1 describes the effect of $CPA\_INT_{it}$ on $AQ_{it}$ and indicates that $CPA\_INT_{it}$ significantly and positively affects $AQ_{it}$ (correlation coefficient = .003, $p$ = .030); thus, Hypothesis 1 is supported. Model 2 describes the effect of $INDTEN_{it}$ on $AQ_{it}$ and indicates that $INDTEN_{it}$ significantly and negatively affects $AQ_{it}$ (correlation coefficient = −.000, $p$ = .013). Model 3 indicates that $INT\_INDTEN$ has a negative but nonsignificant effect on $AQ_{it}$ (correlation coefficient = −.000, $p$ = .766). This model suggests that the aforementioned negative effect is moderated as audit partner specialist tenure increases. Thus, audit partner specialist tenure can effectively ameliorate the negative effect of the early auditing stage on auditing quality. The aforementioned results support Hypothesis 2.

**Table 3**

*Major Regression Results*

|  | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| CPA_INT | 0.003** |  | 0.003 |
|  | (0.030) |  | (0.224) |
| INDTEN |  | -0.000** | -0.000* |
|  |  | (0.013) | (0.053) |
| INT_ INDTEN |  |  | -0.000 |
|  |  |  | (0.766) |
| INST | 0.014*** | 0.013*** | 0.013*** |
|  | (0.000) | (0.000) | (0.000) |
| BHOLD | 0.002 | 0.002 | 0.002 |
|  | (0.774) | (0.751) | (0.750) |
| BSIZE | -0.000 | -0.000 | -0.000 |
|  | (0.400) | (0.372) | (0.379) |
| INDR | -0.001 | -0.002 | -0.002 |
|  | (0.741) | (0.660) | (0.675) |
| BIG4 | -0.007*** | -0.007*** | -0.007*** |
|  | (0.001) | (0.001) | (0.001) |
| SIZE | -0.008*** | -0.008*** | -0.008*** |
|  | (0.000) | (0.000) | (0.000) |
| LEV | 0.029*** | 0.029*** | 0.029*** |
|  | (0.000) | (0.000) | (0.000) |
| OCF | 0.043*** | 0.043*** | 0.043*** |
|  | (0.000) | (0.000) | (0.000) |
| SGR | 0.007*** | 0.007*** | 0.007*** |
|  | (0.000) | (0.000) | (0.000) |
| LOSS | 0.022*** | 0.022*** | 0.022*** |
|  | (0.000) | (0.000) | (0.000) |
| Constant | 0.177*** | 0.178*** | 0.177*** |
|  | (0.000) | (0.000) | (0.000) |
| Year | included | included | included |
| Ind | included | included | included |
| Obs. | 16258 | 16258 | 16258 |
| $R^2$ | 0.117 | 0.117 | 0.117 |
| Adj. $R^2$ | 0.114 | 0.115 | 0.115 |
| F | 24.581 | 24.817 | 22.671 |

a.  Definitions of the variables: $AQ_{it}$: audit quality of the $i$th company in the $t$th year, $CPA\_INT_{it}$: dummy variable (during the first year of the audit tenure of the audit partner at the $i$th company in the $t$th year, $CPA\_INT_{it}$ = 1; during other years, $CPA\_INT_{it}$ = 0), $INDTEN_{it}$: audit partner specialist tenure at the $i$th company in the $t$th year, $INST_{it}$: institute shareholding ratio of the $i$th company in the $t$th year, $BHOLD_{it}$: board shareholding ratio of the $i$th company in the $t$th year, $BSIZE_{it}$: board size of the $i$th company in the $t$th year, $INDR_{it}$: independent director ratio of the $i$th company in the $t$th year, $BIG4_{it}$: dummy variable (when the $i$th company is audited by a Big Four accounting firm in the $t$th year, $BIG4_{it}$ = 1; otherwise, $BIG4_{it}$ = 0), $SIZE_{it}$: natural logarithm of total assets of the $i$th company in the $t$th year, $LEV_{it}$: debt ratio of the $i$th company in the $t$th year, $OCF_{it}$: ratio of cash flow from operations to total assets of the $i$th company in the $t$th year, $SGR_{it}$: revenue growth rate of the $i$th company in the $t$th year, $LOSS_{it}$: dummy variable (when the $i$th company experiences loss in the $t$th year, $LOSS_{it}$ = 1; otherwise, $LOSS_{it}$ = 0).

b.  The values within parentheses are $p$ values. * $p < .10$, ** $p < .05$, *** $p < .01$.

## Test on Discretionary Accrual Groups

Positive and negative discretionary accruals have different implications. Table 4 presents the positive and negative discretionary accruals for the research sample. This study reexamines whether the two proposed hypotheses are still supported under different earnings management directions. The left side of Table 4 presents the analysis results for positive discretionary accruals. Model 1 reveals that $CPA\_INT_{it}$ has a positive but nonsignificant effect on $AQ_{it}$ (correlation coefficient = .002, $p$ = .211). Moreover, Model 2 reveals that $INDTEN_{it}$ has a negative and significant effect on $AQ_{it}$ (correlation coefficient = −.000, $p$ = .005). Thus, for positive discretionary accruals, $INDTEN_{it}$ can effectively improve $AQ_{it}$. Model 3 reveals that $INT\_INDTEN$ has a negative but nonsignificant effect on $AQ_{it}$ (correlation coefficient = .000, $p$ = .316).

The right side of Table 4 presents the analysis results for negative discretionary accruals. Model 4 reveals that under negative earnings management, $CPA\_INT_{it}$ has a positive and significant effect on $AQ_{it}$ (correlation coefficient = .003, $p$ = .014). Moreover, Model 5 reveals that $INDTEN_{it}$ has a negative but nonsignificant effect on $AQ_{it}$ (correlation coefficient = −.000, $p$ = .259). Finally, Model 6 reveals that $INT\_INDTEN$ has a negative but nonsignificant effect on $AQ_{it}$ (correlation coefficient = −.000, $p$ = .438).

Overall, the analysis results obtained for negative and positive discretionary accruals are consistent with the empirical regression results. Thus, the major results of this study are unaffected by the direction of discretionary accruals.

**Table 4**

*Analysis Results Obtained for Positive and Negative Discretionary Accruals*

| | DA>0 | | | DA<0 | | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| CPA_INT | 0.002 | | -0.001 | 0.003** | | 0.004* |
| | (0.211) | | (0.722) | (0.014) | | (0.058) |
| INDTEN | | -0.000*** | -0.000*** | | -0.000 | -0.000 |
| | | (0.005) | (0.004) | | (0.259) | (0.640) |
| INT_INDTEN | | | 0.000 | | | -0.000 |
| | | | (0.316) | | | (0.438) |
| INST | 0.018*** | 0.018*** | 0.018*** | 0.007** | 0.007** | 0.007** |
| | (0.000) | (0.000) | (0.000) | (0.045) | (0.046) | (0.047) |
| BHOLD | 0.007 | 0.008 | 0.008 | -0.012** | -0.012** | -0.012** |
| | (0.278) | (0.267) | (0.263) | (0.010) | (0.011) | (0.011) |
| BSIZE | -0.001** | -0.001** | -0.001** | 0.001** | 0.001** | 0.001** |
| | (0.019) | (0.018) | (0.019) | (0.036) | (0.040) | (0.039) |
| INDR | 0.012** | 0.012** | 0.012** | -0.009** | -0.009** | -0.009** |
| | (0.028) | (0.042) | (0.043) | (0.031) | (0.029) | (0.030) |
| BIG4 | -0.002 | -0.003 | -0.002 | -0.007*** | -0.007*** | -0.007*** |
| | (0.421) | (0.305) | (0.321) | (0.002) | (0.001) | (0.002) |
| SIZE | 0.002** | 0.002** | 0.002** | -0.011*** | -0.010*** | -0.010*** |
| | (0.027) | (0.020) | (0.020) | (0.000) | (0.000) | (0.000) |
| LEV | -0.031*** | -0.030*** | -0.030*** | 0.052*** | 0.052*** | 0.052*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| OCF | -0.483*** | -0.482*** | -0.482*** | 0.393*** | 0.393*** | 0.393*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| SGR | 0.004* | 0.004* | 0.004* | 0.002 | 0.002 | 0.002 |
| | (0.068) | (0.072) | (0.072) | (0.413) | (0.413) | (0.413) |
| LOSS | -0.044*** | -0.044*** | -0.044*** | 0.064*** | 0.064*** | 0.064*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Constant | 0.062*** | 0.064*** | 0.064*** | 0.155*** | 0.156*** | 0.155*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Year | included | included | included | included | included | included |
| Ind | included | included | included | included | included | included |
| Obs. | 5935 | 5935 | 5935 | 10323 | 10323 | 10323 |
| $R^2$ | 0.457 | 0.458 | 0.458 | 0.358 | 0.357 | 0.358 |
| Adj. $R^2$ | 0.453 | 0.454 | 0.453 | 0.355 | 0.354 | 0.355 |
| F | 58.220 | 58.829 | 53.765 | 98.514 | 98.152 | 90.023 |

a. Definition of the variables: *AQit*: audit quality of the *i*th company in the *t*th year, *CPA_INTit*: dummy variable (during the first year of the audit tenure of the audit partner at the *i*th company in the *t*th year, *CPA_INTit* = 1; during other years, *CPA_INTit* = 0), *INDTENit*: audit partner specialist tenure at the *i*th company in the *t*th year, *INSTit*: institute shareholding ratio of the *i*th company in the *t*th year, *BHOLDit*: board shareholding ratio of the *i*th company in the *t*th year, *BSIZEit*: board size of the *i*th company in the *t*th year, *INDRit*: independent director ratio of the *i*th company in the *t*th year, *BIG4it*: dummy variable (when the *i*th company is audited by a Big Four accounting firm in the *t*th year, *BIG4it* = 1; otherwise, *BIG4it* = 0), *SIZEit*: natural logarithm of total assets of the *i*th company in the *t*th year, *LEVit*: debt ratio of the *i*th company in the *t*th year, *OCFit*: ratio of cash flow from operations to total assets of the *i*th company in the *t*th year, *SGRit*: revenue growth rate of the *i*th company in the *t*th year, *LOSSit*: dummy variable (when the *i*th company experiences loss in the *t*th year, *LOSSit* = 1; otherwise, *LOSSit* = 0).

b. Values within parentheses are *p* values; * $p < .10$, ** $p < .05$, *** $p < .01$.

**Ameliorating the Problem of Optimism Bias in Discretionary Accruals by Using Their Natural Logarithm**

Chi et al. (2009) state that optimism bias might occur when using the absolute value of discretionary accruals for measuring earnings management. Thus, this study references the approach of Chi et al. (2009) and conducts regression analysis again by using the natural logarithm of the absolute value of discretionary accruals. The regression results obtained with the natural logarithm of the discretionary accruals are presented in Table 5. Table 5 reveals that $CPA\_INT_{it}$ has a weak, positive, and significant effect on $AQ_{it}$ (correlation coefficient = .035, $p$ = .116) (Model 1); that $INDTEN_{it}$ has a negative and significant effect on $AQ_{it}$ (correlation coefficient = −.004, $p$ = .024) (Model 2); and that $INT\_INDTEN$ has a positive but insignificant effect on $AQ_{it}$ (correlation coefficient = .003, $p$ = .495). The aforementioned correlation results are the same as those presented in the previous sections, which indicates that the results of this study are unaffected by optimism bias in discretionary accruals.

Table 5 *Analysis Results Obtained When Using the Natural Logarithm of the Absolute Value of Discretionary Accruals*

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| CPA_INT | 0.035 | | 0.006 |
| | (0.116) | | (0.879) |
| INDTEN | | -0.004** | -0.005** |
| | | (0.024) | (0.033) |
| INT_ INDTEN | | | 0.003 |
| | | | (0.495) |
| INST | 0.168*** | 0.165** | 0.165** |
| | (0.009) | (0.010) | (0.010) |
| BHOLD | 0.120 | 0.123 | 0.123 |
| | (0.258) | (0.246) | (0.243) |
| BSIZE | -0.013* | -0.014* | -0.014* |
| | (0.094) | (0.087) | (0.090) |
| INDR | -0.027 | -0.035 | -0.034 |
| | (0.719) | (0.644) | (0.653) |
| BIG4 | -0.067* | -0.074* | -0.073* |
| | (0.078) | (0.054) | (0.056) |
| SIZE | -0.110*** | -0.108*** | -0.108*** |
| | (0.000) | (0.000) | (0.000) |
| LEV | 0.530*** | 0.529*** | 0.529*** |
| | (0.000) | (0.000) | (0.000) |
| OCF | 1.367*** | 1.373*** | 1.373*** |
| | (0.000) | (0.000) | (0.000) |
| SGR | 0.126*** | 0.125*** | 0.125*** |
| | (0.000) | (0.000) | (0.000) |
| LOSS | 0.364*** | 0.364*** | 0.363*** |
| | (0.000) | (0.000) | (0.000) |
| Constant | -1.731*** | -1.708*** | -1.711*** |
| | (0.000) | (0.000) | (0.000) |
| Year | included | included | included |
| Ind | included | included | included |
| Obs. | 16258 | 16258 | 16258 |
| $R^2$ | 0.081 | 0.082 | 0.082 |
| Adj. $R^2$ | 0.079 | 0.079 | 0.079 |
| F | 23.593 | 23.831 | 21.836 |

a.  Definition of the variables: *AQit*: audit quality of the *i*th company in the *t*th year, *CPA_INTit*: dummy variable (during the first year of the audit tenure of the audit partner at the *i*th company in the *t*th year, *CPA_INTit* = 1; during other years, *CPA_INTit* = 0), *INDTENit*: audit partner specialist tenure at the *i*th company in the *t*th year, *INSTit*: institute shareholding ratio of the *i*th company in the *t*th year, *BHOLDit*: board shareholding ratio of the *i*th company in the *t*th year, *BSIZEit*: board size of the *i*th company in the *t*th year, *INDRit*: independent director ratio of the *i*th company in the *t*th year, *BIG4it*: dummy variable (when the *i*th company is audited by a Big Four accounting firm in the *t*th year, *BIG4it* = 1; otherwise, *BIG4it* = 0), *SIZEit*: natural logarithm of total assets of the *i*th company in the *t*th year, *LEVit*: debt ratio of the *i*th company in the *t*th year, *OCFit*: ratio of cash flow from operations to total assets of the *i*th company in the *t*th year, *SGRit*: revenue growth rate of the *i*th company in the *t*th year, *LOSSit*: dummy variable (when the *i*th company experiences loss in the *t*th year, *LOSSit* = 1; otherwise, *LOSSit* = 0).

b.  Values within parentheses are *p* values; * *p* < .10, ** *p* < .05, *** *p* < .01.

**Ameliorating the Problem of Optimism Bias in Discretionary Accruals by Using Control Variables**


Hribar and Nichols (2007) propose the use of control variables for ameliorating the problem of optimism bias in discretionary accruals. Thus, this study incorporates the degree of earnings fluctuation ($REVS\_SD$) and the degree of fluctuation of operational activity cash flow ($OCFS\_SD$) in the correlation analysis to ameliorate the problem of optimism bias in discretionary accruals (Hribar & Nichols, 2007; Choi et al., 2010). Table 6 presents the relevant analysis results. As presented in Table 6, after incorporating the aforementioned two operation fluctuation variables in the correlation analysis, the relationships between $CPA\_INT_{it}$, $INDTEN_{it}$, and $INT\_ INDTEN$ are identical to those presented in previous sections. The aforementioned finding again proves that the major empirical results of this study are unaffected by optimism bias in discretionary accruals.

**Table 6**

*Analysis Results Obtained When Considering Earnings and Cash Flow*

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| CPA_INT | 0.002** | | 0.003 |
| | (0.031) | | (0.221) |
| INDTEN | | -0.000** | -0.000* |
| | | (0.012) | (0.051) |
| INT_ INDTEN | | | -0.000 |
| | | | (0.748) |
| INST | 0.014*** | 0.014*** | 0.014*** |
| | (0.000) | (0.000) | (0.000) |
| BHOLD | 0.002 | 0.002 | 0.002 |
| | (0.773) | (0.750) | (0.749) |
| BSIZE | -0.000 | -0.000 | -0.000 |
| | (0.408) | (0.380) | (0.386) |
| INDR | -0.002 | -0.002 | -0.002 |
| | (0.710) | (0.631) | (0.644) |
| BIG4 | -0.007*** | -0.007*** | -0.007*** |
| | (0.001) | (0.001) | (0.001) |
| SIZE | -0.008*** | -0.008*** | -0.008*** |
| | (0.000) | (0.000) | (0.000) |
| LEV | 0.029*** | 0.029*** | 0.029*** |
| | (0.000) | (0.000) | (0.000) |
| OCF | 0.042*** | 0.043*** | 0.043*** |
| | (0.000) | (0.000) | (0.000) |
| SGR | 0.007*** | 0.007*** | 0.007*** |
| | (0.000) | (0.001) | (0.001) |
| LOSS | 0.022*** | 0.022*** | 0.022*** |
| | (0.000) | (0.000) | (0.000) |
| REVS_SD | 0.000 | 0.000 | 0.000 |
| | (0.664) | (0.712) | (0.701) |
| OCFS_SD | -0.000 | -0.000 | -0.000 |
| | (0.288) | (0.322) | (0.316) |
| Constant | 0.177*** | 0.178*** | 0.177*** |
| | (0.000) | (0.000) | (0.000) |
| Year | included | included | included |
| Ind | included | included | included |
| Obs. | 16245 | 16245 | 16245 |
| $R^2$ | 0.117 | 0.117 | 0.117 |
| Adj. $R^2$ | 0.114 | 0.114 | 0.115 |
| F | 22.609 | 22.828 | 21.011 |

a. Definition of the variables: *AQit*: audit quality of the *i*th company in the *t*th year, *CPA_INTit*: dummy variable (during the first year of the audit tenure of the audit partner at the *i*th company in the *t*th year, *CPA_INTit* = 1; during other years, *CPA_INTit* = 0), *INDTENit*: audit partner specialist tenure at the *i*th company in the *t*th year, *INSTit*: institute shareholding ratio of the *i*th company in the *t*th year, *BHOLDit*: board shareholding ratio of the *i*th company in the *t*th year, *BSIZEit*: board size of the *i*th company in the *t*th year, *INDRit*: independent director ratio of the *i*th company in the *t*th year, *BIG4it*: dummy variable (when the *i*th company is audited by a Big Four accounting firm in the *t*th year, *BIG4it* = 1; otherwise, *BIG4it* = 0), *SIZEit*: natural logarithm of total assets of the *i*th company in the *t*th year, *LEVit*: debt ratio of the *i*th company in the *t*th year, *OCFit*: ratio of cash flow from operations to total

assets of the *i*th company in the *t*th year, *SGRit*: revenue growth rate of the *i*th company in the *t*th year, *LOSSit*: dummy variable (when the *i*th company experiences loss in the *t*th year, *LOSSit* = 1; otherwise, *LOSSit* = 0), *REVS_SD*: degree of earnings fluctuation of the *i*th company in the *t*th year, *OCFS _SD*: degree of cash flow fluctuation of the *i*th company in the *t*th year.

b. Values within parentheses are *p* values; $* p < .10$, $** p < .05$, $*** p < .01$.

### *Using Conservatism to Assess the Quality of a Financial Statement*

To increase the robustness of this study, the C-Score of Khan and Watts (2009) is used to assess conservatism. This method is based on the concept of earning asymmetric timeliness proposed by Basu (1997).

$$E_i = \beta_1 + \beta_2 D_i + \beta_3 R_i + \beta_4 DR_i + e_i \tag{4}$$

where $E_i$ represents the earnings of company $i$ and $D_i$ is a dummy variable. When the company has negative rewards, $D_i = 1$; otherwise, $D_i = 0$. The term $R_i$ denotes the stock return rate of company $i$. Moreover, $\beta_3$ and $\beta_4$ represent earning timeliness and earning conservatism, respectively. Khan and Watts (2009) convert three company characteristics, namely company size (*SIZE*), the book-to-market ratio (*MB*), and *LEV*, into conservatism assessment variables for a company. They expect $\beta_3$ and $\beta_4$ to be linear functions of *SIZE*, *MB*, and *LEV*; therefore, they express $\beta_3$ and $\beta_4$ as follows:

$$GScore = \beta_3 = \mu_1 + \mu_2 SIZE_i + \mu_3 MB_i + \mu_4 LEV_i \tag{5}$$

$$CScore = \beta_4 = \lambda_1 + \lambda_2 SIZE_i + \lambda_3 MB_i + \lambda_4 LEV_i \tag{6}$$

where $SIZE_i$ is the size of company $i$, $MB_i$ is the book-to-market ratio of company $i$, and $LEV_i$ is the debt ratio of company $i$. Eqs. (5) and (6) are integrated as follows:

$$E_i = \beta_1 + \beta_2 D_i + R_i\left(\mu_1 + \mu_2 SIZE_i + \mu_3 MB_i + \mu_4 LEV_i\right) + DR_i\left(\lambda_1 + \lambda_2 SIZE_i + \lambda_3 MB_i + \lambda_4 LEV_i\right)$$
$$+ \left(\delta_1 SIZE_i + \delta_2 MB_i + \delta_3 LEV + \delta_4 D_i SIZE_i + \delta_5 D_i MB_i + \delta_6 D_i LEV_i\right) + e_i$$

$$\tag{8}$$

Table 7 presents the correlation analysis results obtained when considering conservatism. According to Table 7, $CPA\_INT_{it}$ has a negative and significant relationship with conservatism (correlation coefficient $= -.029$, p $= .048$), which indicates that when audit partners first conduct auditing, they have relatively low conservatism, and their financial report quality is relatively low. However, after $CPA\_INT_{it}$ is multiplied with industry tenure experience, $INT\_INDTEN$ exhibits a positive and significant effect (correlation coefficient $= .003$. $p = .023$), which indicates that industry experience and tenure can ameliorate low conservatism caused by audit partners auditing a company for the first time. This result is consistent with the previous results of the present study.

**Table 7**

*Analysis Results Obtained When Considering Conservatism*

| | Model 1 |
|---|---|
| CPA_INT | -0.029** |
| | (0.048) |
| INDTEN | -0.002*** |
| | (0.001) |
| INT_ INDTEN | 0.003** |
| | (0.023) |
| INST | -0.064*** |
| | (0.000) |
| BHOLD | 0.043** |
| | (0.027) |
| BSIZE | -0.002 |
| | (0.146) |
| INDR | 0.004 |
| | (0.830) |
| BIG4 | -0.012 |
| | (0.276) |
| SIZE | 0.023*** |
| | (0.000) |
| LEV | 0.234*** |
| | (0.000) |
| OCF | -0.065 |
| | (0.107) |
| SGR | -0.036** |
| | (0.014) |
| LOSS | 0.019*** |
| | (0.009) |
| Constant | -0.341*** |
| | (0.000) |
| Year | included |
| Ind | included |
| Obs. | 14655 |
| $R^2$ | 0.133 |
| Adj. $R^2$ | 0.130 |
| F | 136.089 |

a.  Definition of the variables: $AQit$: audit quality of the $i$th company in the $t$th year, $CPA\_INTit$: dummy variable (during the first year of the audit tenure of the audit partner at the $i$th company in the $t$th year, $CPA\_INTit$ = 1; during other years, $CPA\_INTit$ = 0), $INDTENit$: audit partner specialist tenure at the $i$th company in the $t$th year, $INSTit$: institute shareholding ratio of the $i$th company in the $t$th year, $BHOLDit$: board shareholding ratio of the $i$th company in the $t$th year, $BSIZEit$: board size of the $i$th company in the $t$th year, $INDRit$: independent director ratio of the $i$th company in the $t$th year, $BIG4it$: dummy variable (when the $i$th company is audited by a Big Four accounting firm in the $t$th year, $BIG4it$ = 1; otherwise, $BIG4it$ = 0), $SIZEit$: natural logarithm of total assets of the $i$th company in the $t$th year, $LEVit$: debt ratio of the $i$th company in the $t$th year, $OCFit$: ratio of cash flow from operations to total assets of the $i$th company in the $t$th year, $SGRit$: revenue growth rate of the $i$th company in the $t$th year, $LOSSit$: dummy variable (when the $i$th company experiences loss in the $t$th year, $LOSSit$ = 1; otherwise, $LOSSit$ = 0).

b.  Values within parentheses are $p$ values; * $p < .10$, ** $p < .05$, *** $p < .01$.

# Conclusion and Suggestions

Studies on the effect of audit partner tenure on audit quality have yielded inconsistent results. Liao and Chi (2014) maintain that under the mandatory audit partner rotation system in Taiwan, when a company is first being audited, if it hires audit partners with a long audit partner specialist tenure, it can achieve favorable audit quality. However, whether audit partner specialist tenure and company audit tenure have a complementary effect is worthy of examination. Therefore, this study first examines the effect of audit partners auditing a company for the first time on audit quality. It then investigates the effect of audit partner specialist tenure on audit quality.

This study adopts a research duration of 11 years (from 2009 to 2019) and 16,258 annual observations. It discovers that audit partners auditing a company for the first time leads to worse audit quality; however, audit partner specialist tenure can effectively ameliorate this effect. The aforementioned results are subjected to different robustness tests and conservatism tests, and consistent results are obtained.

This study has the following major implications. First, audit partner specialist tenure can effectively enhance familiarity toward clients among audit partners who audit a company for the first time. Second, we suggest that when policy makers assess the mandatory audit partner rotation policy, they should consider the effect of audit partner specialist tenure in improving the audit quality of audit partners who are auditing a company for the first time. Third, companies should be encouraged to hire audit partners with a long specialist tenure to increase audit quality and reduce company information asymmetry.

This study uses the Taiwanese capital market as the research object. Because different capital markets have different monitoring mechanisms and participants, the results of this study might not be directly generalizable to the Chinese or US capital market. Thus, we suggest that future researchers should integrate audit quality indicators to explore the effects of audit partner specialist tenure and audit partner tenure on audit quality in different capital markets and under different market monitoring mechanisms.

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