The Effects of Auditors' Pre-Client and Client-Specific Experience on Earnings Quality and Perceptions of Earnings Quality: Evidence from Private and Public Companies in Taiwan

Wuchun Chi
Department of Accounting
National Chengchi University
Taipei, Taiwan
Email: wchi@nccu.edu.tw

Linda A. Myers
Department of Accounting
University of Arkansas
Fayetteville, Arkansas 72701
Email: lmyers@walton.uark.edu

Thomas C. Omer
Department of Accounting
Texas A&M University
College Station, Texas 77843
Email: tomer@mays.tamu.edu

Hong Xie
Von Allmen School of Accountancy
University of Kentucky
Lexington, Kentucky 40506
Email: hongxie98@uky.edu

May 2010

We thank Brian Bratten, Monika Causholli, Guojin Gong, David Hulse, Yue Li, Linda McDaniel, James Myers, Jeff Payne, Robert Ramsay, Marjorie Shelley, Shui-Liang Tung, Cynthia Vines, Chung-Fern Wu, David Ziebart, participants of the 2nd Symposium of China Journal of Accounting Research, and workshop participants at University of Kentucky and National Taiwan University for helpful comments and suggestions. Wuchun Chi gratefully acknowledges the financial support from National Science Council (Project No. NSC 94-2416-H-004-036). Linda Myers gratefully acknowledges the financial support from the Garrison/Wilson Chair at the University of Arkansas. Thomas Omer gratefully acknowledges the financial support of Ernst & Young. Hong Xie gratefully acknowledges the financial support from the Von Allmen Research Support endowment and the PWC fellowship endowment.

The Effects of Auditors' Pre-Client and Client-Specific Experience on Earnings Quality and Perceptions of Earnings Quality: Evidence from Private and Public Companies in Taiwan

Abstract

We examine the effects of auditors' pre-client and client-specific experience on earnings quality and perceptions of earnings quality for both private and public companies using audit data from Taiwan, where the names of signing audit partners are disclosed and large private companies as well as public companies are required to publish audited financial statements. Our pre-client experience measures consist of audit partner pre-client general experience and pre-client industry experience for both private and public companies. Our client-specific experience measures consist of audit partner tenure and audit firm tenure for private companies and consist of pre-listing audit partner tenure, pre-listing audit firm tenure, post-listing audit partner tenure, and post-listing audit firm tenure for public companies. Following prior literature, we use discretionary accruals to proxy for earnings quality and bank loan interest rates to proxy for creditor perceptions of earnings quality. We find that our various measures of pre-client and client-specific experience enhance earnings quality and perceptions of earnings quality for both private and public companies with the impact of pre-client experience generally being smaller than that of client-specific experience. Our findings are important because they demonstrate the importance of considering prior auditor experience when rotating audit partners for both private and public companies.

The Effects of Auditors' Pre-Client and Client-Specific Experience on Earnings Quality and Perceptions of Earnings Quality: Evidence from Private and Public Companies in Taiwan

1. Introduction

Ball and Shivakumar (2005) examine timely loss recognition, an important attribute of financial reporting quality, for private and public companies in the United Kingdom (U.K.). Although U.K. private companies are subject to essentially the same regulatory provisions as U.K. public companies, Ball and Shivakumar (2005) argue that the market for financial reporting differs substantially between private and public companies because private companies are less likely to use public financial statements in contracting with lenders and other stakeholders. In addition, their financial reporting is more likely to be influenced by taxation, dividend policy, and other company policies. These differences imply a lower demand for financial statement quality (and hence, lower earnings quality) for private companies relative to public companies. Consistent with this, Ball and Shivakumar (2005) find that U.K. public companies practice more timely loss recognition than do U.K. private companies (see also Burgstahler, Hail, and Leuz 2006).

We extend this line of research by examining the effects of various measures of auditor experience on earnings quality and perceptions of earnings quality for both private and public companies in Taiwan. Like in the U.K., large private companies in Taiwan face the same financial reporting and auditing standards as public companies. In addition, before 2002, large private companies were required, like public companies, to file and publish their audited financial statements (more detailed discussion later). In Taiwan, audit reports for both private and public companies contain not only the audit opinion but also the names of the audit firm and two signing partners. These unique features of the Taiwanese audit market allow us to develop

two measures of auditors' pre-client experience for both private and public companies: (1) the audit partner's pre-client general experience (i.e., the number of cumulative years since the first year when the auditor became a signing partner till the first year when he was a signing partner in the current client's industry); and (2) the audit partner's pre-client industry experience (i.e., the number of cumulative years since the first year when the auditor was a signing partner in the current client's industry till the first year in the current client-partner relationship). For private companies, we use audit partner tenure (i.e., the number of cumulative years that the auditor has been a signing partner in the current client-partner relationship) and audit firm tenure (i.e., the number of consecutive years that the current client-firm relationship has existed) as our measures of the auditor's client-specific experience. For public companies, we separate audit partner tenure and audit firm tenure into two periods: (1) the period before the company's initial public offering (IPO); and (2) the period after the IPO. Specifically, we measure the number of cumulative years in which the audit partner audited the company while it was still private, as well as the number of cumulative years in which the audit partner audited the company once it had gone public. We label the former pre-listing audit partner tenure and the latter post-listing audit partner tenure. We define pre-listing audit firm tenure and post-listing audit firm tenure similarly.

The effect of auditor experience (or tenure) on earnings quality and perceptions of earnings quality has been the focus of intense debate and research in the United States (U.S.) but research is limited to the audit firm level because of data availability. Prior research using U.S. data generally concludes that both earnings quality and perceptions of earnings quality increase with audit firm tenure (Johnson, Khurana, and Reynolds 2002; Myers, Myers, and Omer 2003; Mansi, Maxwell, and Miller 2004; Ghosh and Moon 2005). However, several studies using non-

U.S. data examine the effect of audit partner tenure on earnings quality and find mixed results. For example, using Australian data, Carey and Simnett (2006) find evidence suggesting that earnings quality declines with audit partner tenure. In contrast, using Taiwanese data, Chen, Lin, and Lin (2008) find evidence suggesting that earnings quality increases with audit partner tenure.

We address several research questions in this paper. First, findings in Ball and Shivakumar (2005) and Burgstahler et al. (2006) suggest that financial reporting quality is lower for private companies than for public companies. We examine whether auditor experience (both pre-client and client-specific) enhances earnings quality for private companies and thus mitigates the low financial reporting quality problem inherent in private companies due to the lack of capital market discipline and other institutional factors. This question is unexplored in the literature due to prior data limitations. Because private companies make up a large portion of the economy and audit firms do much of their work for private clients (especially those seeking debt financing), it is, therefore, important to understand how auditor experience affects the earnings quality of private companies.

Second, we investigate the effect of auditors' pre-client experience (taking into account the effect of client-specific experience) on earnings quality and perceived earnings quality for public companies.[1] An important *assumption* underlying the mandatory audit partner rotation policy is that the lack of client-specific experience of the incoming audit partner can be alleviated by his prior non-client-specific experience (i.e., pre-client experience) so that, coupled with presumably enhanced auditor independence, mandatory partner rotation enhances audit quality. However, whether pre-client experience enhances audit quality and whether pre-client

[1] Earnings and audit quality are inextricably linked in this context. Because higher audit quality should improve earnings quality, we discuss 'earnings quality' or 'perceptions of earning quality' rather than 'audit/earnings quality' or 'perceptions of audit/earnings quality' throughout the paper.

experience is as effective as client-specific experience in enhancing audit quality are unexplored in the extant literature.[2] Our paper can shed light on these two important questions.

Finally, we examine the effects of pre-listing audit partner tenure and pre-listing audit firm tenure on earnings quality and perceptions of earnings quality for public companies. Here, we examine whether client-specific experience accumulated over the years during which a public company was still private can benefit the auditor's work on that company in the current year. Again, the issue of pre-listing experience is unexplored in the literature.

To summarize, we exploit the unique features of the Taiwanese audit market and develop a more complete set of auditor experience measures than in prior studies in order to shed new light on the relation between earnings quality/perceived earnings quality and auditor experience for both private and public companies.

Following Chen et al. (2008), we measure earnings quality using performance-matched, modified Jones model-estimated discretionary accruals. For private companies, we find that, consistent with prior studies using samples of public companies, discretionary accruals are less extreme the longer the audit partner tenure and audit firm tenure. We also find that for private companies, greater pre-client general experience reduces the magnitude of discretionary accruals, and more specifically, reduces extreme positive discretionary accruals. However, we find no relation between pre-client general experience and negative discretionary accruals and we find no association between pre-client industry experience and absolute, positive, or negative discretionary accruals.

For public companies, we find that while pre-client general experience also reduces the magnitude of discretionary accruals, it constrains extreme negative, rather than extreme positive,

[2] The extant literature only provides evidence that client-specific experience as captured by audit firm tenure (Myers et al. 2003) or as captured by audit partner tenure (Chen et al. 2008) is important for audit quality. However, it does not consider the effect of pre-client experience.

discretionary accruals. However, similar to our private company results, pre-client industry experience does not constrain absolute, positive, or negative discretionary accruals for public companies. Regarding client-specific experience, we find that pre-listing partner tenure constrains the magnitude of discretionary accruals overall, as well as extreme negative discretionary accruals. Pre-listing audit firm tenure also constrains extreme negative discretionary accruals.[3] Finally, our post-listing partner tenure and post-listing firm tenure results are entirely consistent with Chen et al. (2008) in that earnings quality tends to increase in both post-listing partner tenure and post-listing firm tenure. These results suggest that although pre-client general experience enhances audit quality, it does so to a lesser extent than client-specific experience. This implies that the loss of the outgoing partner's client-specific experience cannot be fully compensated for by the incoming partner's non-client-specific experience in a mandatory audit partner rotation regime.

Following Mansi et al. (2004), we use bank loan pricing to proxy for creditor perceptions of earnings quality, but we use this proxy for both private and public companies.[4] For private companies, we find that pre-client general experience, pre-client industry experience, and client-specific partner tenure all lower bank loan pricing. However, client-specific audit firm tenure has no incremental effect on bank loan pricing.

For public companies, we find that lower bank loan pricing is associated with both pre-client general experience and pre-client industry experience. In addition, lower bank loan pricing is associated with all of our measures of client-specific experience – pre-listing audit

[3] Note that previous studies using samples of public companies find that audit firm tenure constrains both positive and negative accruals but these studies generally do not consider pre-listing experience (i.e., they consider only post-listing experience).

[4] Mansi et al. (2004) study the relation between audit firm tenure and creditor perceptions of earnings quality for public companies in the U.S.

partner tenure, pre-listing audit firm tenure, post-listing audit partner tenure, and post-listing audit firm tenure.

We conjecture that our measures of pre-client experience and client-specific experience affect creditor perceptions of earnings quality for both private and public companies because creditors in our study (who are primarily Taiwanese banks) likely have greater confidence in financial statements audited by signing partners who have more auditing experience, regardless of whether that experience is accumulated with the current client (i.e., pre-listing audit partner tenure and post-listing audit partner tenure) or with other clients (i.e., pre-client general experience and pre-client industry experience).

Our study contributes to the audit literature by examining the influence of a richer set of auditor experience measures (both pre-client and client-specific) on earnings quality and perceptions of earnings quality for both private and public companies. We document that pre-client experience has an incremental positive impact on earnings quality and perceptions of earnings quality for both private and public companies but its effect is smaller than the effect of client-specific experience. This implies a net transition cost associated with mandatory audit partner rotation although the transition cost is decreasing in auditor pre-client experience. Moreover, we document that client-specific experience accumulated at the audit partner or audit firm level during the years in which a public company was still private (i.e., the pre-listing partner tenure and pre-listing firm tenure) has an incremental positive impact on earnings quality and perceived earnings quality, even after controlling for client-specific audit partner tenure and audit firm tenure following the client's IPO.

These findings have a number of implications. First, prior studies suggest that mandatory partner rotation does not enhance earnings quality (Chi et al. 2009) or is unlikely to enhance

earnings quality (Chen et al. 2008). Our findings imply that using an incoming audit partner with greater pre-client experience to replace the outgoing audit partner (who has greater client-specific experience) can *partially*, albeit not fully, mitigate the detrimental effects of removing the outgoing audit partner. Second, on July 28, 2009, the Public Company Accounting Oversight Board (PCAOB) issued a concept release to seek public comments on its proposal to require that the engagement audit partner sign the audit report. The Board believes that requiring audit partner signatures "would increase transparency about who is responsible for performing the audit, which could provide useful information to investors" (PCAOB 2009, 5). Our finding that creditors perceive higher earnings quality for financial statements signed by audit partners with more experience supports the Board's belief.

Our findings also supplement those in Ball and Shivakumar (2005) and Burgstahler et al. (2006). While they find that financial reporting of private companies is of lower quality than that of public companies, our results suggests that the earnings quality of private companies, as well as that of public companies, is increasing in auditor experience. Thus, auditor experience can mitigate the low financial reporting quality problem inherent in private companies.

In the next section, we review the prior literature and develop our hypotheses. Section 3 describes our sample selection. Our empirical models and results appear in section 4, and section 5 concludes.

2. Literature Review and Hypothesis Development

Numerous studies investigate the relation between audit firm tenure and earnings quality in the U.S. setting. These studies use discretionary accruals (Johnson et al. 2002; Myers et al. 2003), restatements (Stanley and DeZoort 2007), and fraudulent financial reporting (Carcello and

Nagy 2004) to proxy for earnings quality.[5] Studies investigating the relation between audit firm tenure and perceptions of earnings quality include Mansi et al. (2004), which uses the cost of debt financing to proxy for creditor perceptions, and Ghosh and Moon (2005), which uses earnings response coefficients (ERCs) to proxy for investor perceptions.[6]

The basic argument in these studies revolves around claims made by supporters of mandatory audit firm rotation—that long auditor tenure leads to complacency over time and, thus, to a reduction in audit quality and earnings quality, and around counter-arguments made by opponents of mandatory audit firm rotation—that mandatory rotation imposes costs on the audit process that result in reduced audit quality and earnings quality in the early years of the audit engagement. Overall, results of archival studies in the U.S. setting provide no evidence of a deterioration of earnings quality with longer audit firm tenure. However, a limitation of these studies is that they cannot take into account the contemporaneous effect of audit partner tenure because audit partner identity is not publicly available in the U.S.

Several studies in international settings consider the joint effects of audit firm tenure and audit partner tenure, or consider the effects of audit partner tenure in isolation. For example, Carey and Simnett (2006) investigate whether audit partner tenure is associated with the auditor's propensity to issue a going-concern audit opinion to distressed companies, the direction and amount of abnormal working capital accruals, and the propensity to just beat earnings benchmarks using Australian data. They do not find an association between long partner tenure and abnormal working capital accruals, but they find a lower propensity to issue going-concern opinions and some evidence that clients are more likely to just beat earnings benchmarks when

[5] We focus on discretionary accruals because this proxy for earnings quality is available for both private and public companies in our sample.
[6] Similarly, we focus on the cost of debt financing (i.e., creditor perceptions) because this proxy for perceptions of earnings quality is available for both private and public companies in our sample.

partner tenure is long. Overall, their results suggest that, at least in the Australian audit market, long partner tenure tend to reduce earnings quality. They do, however, acknowledge that the diminution in earnings quality is generally confined to clients of non-Big 5 audit firms.

Prior research using samples of public companies in the Taiwanese setting provides conflicting results regarding the effects of audit partner tenure and audit firm tenure on discretionary accruals. In early work, Chi and Huang (2005) find that the association between both audit partner tenure and audit firm tenure and signed discretionary accruals is negative when tenure is five years or less, but that it becomes positive when tenure exceeds five years. However, they do not consider the absolute value of discretionary accruals nor do they examine positive and negative discretionary accruals separately, which Myers et al. (2003) reveal to be important for determining the effect of long tenure. In later work, Chen et al. (2008) use the absolute value of discretionary accruals and signed discretionary accruals to proxy for earnings quality. They find that absolute and positive discretionary accruals decrease with partner tenure, and that absolute discretionary accruals decrease with audit firm tenure (after controlling for audit partner tenure).

As noted previously, an important assumption underlying the mandatory audit partner rotation policy is that the incoming partner's lack of client-specific experience can be alleviated by his pre-client experience. However, this implicit assumption has not been tested empirically in the extant literature because prior studies only investigate the effects of audit partner tenure and audit firm tenure (i.e., client-specific experience) but do not address the effects of audit partners' pre-client experience. Given prior findings that the incoming partner's lack of client-specific experience adversely affects earnings quality (e.g., Chen et al. 2008; Chi et al. 2009), it

is important to investigate the extent to which the incoming partner's pre-client experience impacts earnings quality and perceptions of earnings quality.

We suggest that signing partner pre-client general and industry experience likely impacts (real and perceived) earnings quality because auditor experience can improve error or misstatement detection (Tubbs 1992; Hammersley 2006) and can reduce auditor reliance on management's favorable assessments (Kaplan et al. 2008).[7] Specifically, Tubbs (1992) investigates how experience changes auditors' knowledge of errors and irregularities. He finds that more experienced auditors recognize more atypical errors and recall more errors, and suggests that this should improve audit quality; we suggest that it should also improve earnings quality.[8] Similarly, Hammersley (2006) finds that industry experience allows auditors to develop better knowledge structures which allow them to identify misstatements for companies in their industry and to specify the appropriate audit response even when they receive only partial information about a misstatement. Kaplan et al. (2008) test whether experience limits auditor reliance on management-provided information when that information is more favorable than an objective benchmark. They find that as auditors gain experience, they are more able to deflect management's persuasion attempts.

Shelton (1999) and Trotman, Wright, and Wright (2008) are also relevant to our hypotheses. Shelton (1999) finds that experience reduces the impact that irrelevant information can have on audit judgments, suggesting that signing partners with greater pre-client experience may be better able to focus on relevant information. Moreover, Trotman et al. (2008) find that

[7] Note that one argument advanced as supporting audit partner rotation is that the new auditor is less likely to concede to management pressure for reporting specific financial outcomes and because (s)he brings 'a fresh set of eyes' to the table, and thus is more likely to detect errors than are audit partners who may have become complacent because of their long tenure.

[8] Similarly, a number of empirical studies find that financial analyst performance improves with experience. See, for example, Mikhail, Walther, and Willis (1997; 2003) and Drake and Myers (2010), and Keskek, Myers, Omer, and Shelley (2010).

engaging in mock negotiations about financial reporting issues prior to client negotiations improves auditor negotiation performance, suggesting that signing partner pre-client experience should improve auditor performance in negotiations with clients, and we suggest that this should improve audit and earnings quality.[9]

Mansi et al. (2004) study the effect of audit firm tenure on creditor perceptions of public companies' earnings quality using the cost of debt to proxy for perceived earnings quality. They find that audit firm tenure is negatively associated with the cost of debt financing**,** suggesting that creditors view extended audit firm tenure favorably. However, they are unable to consider the effect of signing partner experience (either pre-client general or industry experience or client-specific experience) on perceptions because of data limitations in the U.S. setting. We posit that a signing partner with substantial pre-client experience is more likely to be known to creditors in the Taiwanese market, and that, all else equal, creditors are likely to value this experience favorably.

To summarize, we investigate the effects of auditors' pre-client and client-specific experience on earnings quality and perceptions of earnings quality for both private and public companies in Taiwan. Our hypotheses, stated in the null, are as follows:

H1: There is no association between earnings quality and auditors' pre-client and client-specific experience for private or public companies.

H2: There is no association between creditor perceptions of earnings quality and auditors' pre-client and client-specific experience for private or public companies.

[9] The Public Company Accounting Oversight Board also acknowledges the importance of auditor experience and was described in a recent article as listing 'ineffective reviews because the concurring partner lacked expertise and experience' as one of the most serious and common problems it found during its first three years of inspections (see "The 11 Things Auditors Need to Fix" in *CFO.com*, October 23, 2007).

3. Sample Selection

Taiwanese Company Law and Securities and Exchange Act divide limited liability companies into two categories: (1) those that are required to file audited financial statements with the regulatory authority and make these statements available to the general public; and (2) those that are not required to file or publish audited financial statements. Beginning in 1980, the laws in Taiwan require all publicly listed companies and large privately-held companies whose capital level exceeds a certain threshold to file and publish audited financial statements.[10] The threshold was 200,000,000 New Taiwan Dollars (TWD) until 2000 but it was increased to 500,000,000 TWD in 2000 in response to critics' concerns that the benefit of requiring large private companies to file and publish audited financial statements may not exceed the cost of compliance. However, concerns remained, and on November 12, 2001, the requirement for large private companies to file and publish audited financial statements was rescinded. Although many large private companies continued to publish audited financial statements after 2001, an increasing number chose to cease publication. Note, however, that publicly listed companies are always required to file and publish audited financial statements.

In Taiwan, large private companies and public companies face identical financial reporting requirements and are subject to the same auditing standards. The *Taiwan Economic Journal* (TEJ) collects financial statement data for both large private and public companies, and also collects stock market data for public companies. A company is included in TEJ's public company database for the years in which it is listed on a Taiwanese stock exchange and is

[10] Public companies are those whose stocks are traded on the Taiwan Stock Exchange Corporation or on the GreTai Securities Market, which are analogous to the New York Stock Exchange and National Association of Securities Dealers Automated Quotation System, respectively, in the U.S. Private companies are those whose stocks are not listed (publicly traded) on any stock exchange.

included in the TEJ's private company database for the years in which it is not traded on a Taiwanese stock exchange. If a company changes its type in a year (e.g., from private to public), the TEJ includes that company's public (private) years in the public (private) company database and does *not* retroactively reclassify the company's prior years according to its latest type.

We collect data for 1990 through 2001 from the 2008 TEJ annual database. Our sample period starts in 1990, following Chen et al. (2008), because companies were initially required to prepare statements of cash flow in that year and we use the statement of cash flow approach to calculate total accruals (Hribar and Collins 2002). Our sample period ends in 2001 because large private companies were no longer required to file and publish audited financial statements after 2001.

We initially obtain 22,225 (5,797) company-year observations from 2008 TEJ's private (public) company database. Consistent with prior studies, we delete 636 (419) observations in the financial services industry. In addition, we eliminate 9,492 (174) observations because of missing beginning-of-the-year total assets, cash from operations, growth, and tenure measures for our private (public) companies. Finally, we delete 1,606 (67) observations in industries with less than 8 observations available for calculating discretionary accruals. This provides us with 10,491 (5,137) company-year observations in our discretionary accruals sample. We use this sample to examine the effects of pre-client experience and client-specific experience on earnings quality. In the next section, we describe how we derive our bank loan pricing sample from this discretionary accruals sample, and we use the bank loan pricing sample to examine the effects of pre-client experience and client-specific experience on creditor perceptions of earnings quality.

4. Empirical Models and Results

In this section, we examine the effects of auditors' pre-client and client-specific experience on earnings quality and perceptions of earnings quality for private and public companies, respectively. We first present our empirical models and results using abnormal accruals to proxy for earnings quality. We then present our empirical models and results using bank loan pricing to proxy for creditor perceptions of earnings quality.

4.1 Accrual-based Proxies for Earnings Quality

4.1.1 Variable measurement and empirical model

Prior literature uses various measures of accruals to proxy for earnings quality. We follow Kothari, Leone, and Wasley (2005) and Chen et al. (2008), and calculate performance-matched discretionary accruals using the following modified Jones (1991) model:[11]

$$TAC_t = \alpha_t(1/TA_{t-1}) + \beta_t(\Delta SALES_t - \Delta AR_t) + \gamma_t PPE_t + \theta_t ROA_{t-1} + \varepsilon_t \quad (1)$$

where:

TAC_t = total accruals in year t, calculated using the statement of cash flow approach recommended by Hribar and Collins (2002) = income before discontinued operations and extraordinary items – (cash from operations – discontinued operations and extraordinary items from the statement of cash flows);
$\Delta SALES_t$ = the change in sales revenue between year t and year t-1;
ΔAR_t = the change in accounts receivable between year t and year t-1;
PPE_t = the gross amount of property, plant and equipment at the end of year t;
ROA_{t-1} = return on assets in year t-1, calculated as the ratio of income before discontinued operations and extraordinary items to total assets; and
TA_{t-1} = total assets at the end of year t-1.

TAC_t, $\Delta SALES_t$, ΔAR_t, and PPE_t are scaled by lagged total assets (TA_{t-1}). We estimate equation (1) in the cross section in each year (i.e., from 1990 through 2001) for each TEJ industry

[11] We omit company subscript i except where doing so causes confusion.

classification with at least eight available observations. The residuals from equation (1) are our performance-matched discretionary accruals ($PMMJDA_t$).

Beginning in 1983, audit reports for both public and large private companies in Taiwan were required to be signed by two audit partners. The names of the audit firm and of the two signing partners are disclosed in the audit reports. However, the audit report does not indicate which partner is the lead (or review) partner. Following Chen et al. (2008), we assume that the audit partner whose client-specific tenure is longer has more influence on the audit work, and thus measure partner-related experience variables based on this audit partner.

For each observation in our private company sample, we trace the audit partner back to 1983 to identify the first year in which this partner became a signing partner for *any* company (private or public). We define partner total experience (*TotExp*) as the number of cumulative years from this partner's first signing year to the current year. We also identify the first year in which this partner was a signing partner for any company in the same industry as the current company, and define partner industry experience (*IndExp*) as the number of cumulative years from this partner's first signing year in that industry to the current year. Finally, we measure the number of cumulative years during which this partner has been a signing partner for the current company (since 1983 or the year of the company's establishment, whichever is later), and define this as audit partner tenure (*PT*). Somewhat differently, we measure the number of consecutive years that the audit firm has been auditing the current company and define this as audit firm tenure (*FT*).[12]

For each observation in our public companies sample, we define partner total experience (*TotExp*) and partner industry experience (*IndExp*) in the same way as for private companies. However, we separate audit partner tenure and audit firm tenure into two parts: the portion

[12] TEJ calculates and provides *TotExp, IndtExp, PT, and FT* in its database.

during which the company was still private and the portion during which the company was public. Specifically, we measure the number of cumulative years during which the partner audited the current public company from 1983 or the year of its establishment, whichever is later, to the IPO year and label this pre-listing audit partner tenure (*PreListPT*). We then measure the number of cumulative years during which the partner audited the current public company from the IPO year to the current year, and label this post-listing audit partner tenure (*PostListPT*). Thus, the total number of years during which the partner audited the current public company is the sum of *PreListPT* and *PostListPT*. We define pre-listing audit firm tenure (*PreListFT*) and post-listing audit firm tenure (*PostListFT*) similarly. Thus, the total number of years during which the audit firm audited the current public company is the sum of *PreListFT* and *PostListFT*. Note that Chen et al. (2008) and Myers et al. (2003) measure audit partner tenure and audit firm tenure for public companies using only the years during which their sample companies were public and so their measures correspond to our *PostListPT* and *PostListFT*. Prior research has not examined the effects of *PreListPT* and *PreListFT* on earnings quality or on perceptions of earnings quality.

We measure the audit partner's incremental general experience (*IncGenExp*) as the difference between the partner's total experience (*TotExp*) and the partner's industry experience (*IndExp*). In addition, we define the audit partner's incremental industry experience (*IncIndExp*) as the difference between the partner's industry experience (*IndExp*) and the partner's tenure. For private companies, $IncIndExp = IndExp - PT$; for public companies, $IncIndExp = IndExp - (PreListPT + PostListPT)$. For both private and public companies, incremental general experience (*IncGenExp*) and incremental industry experience (*IncIndExp*) are measures of pre-client experience since they capture the partner's experience gained from auditing companies

prior to the current company. On the other hand, we use audit partner tenure (*PT*) and audit firm tenure (*FT*) to measure client-specific experience for private companies because the former (latter) captures the audit partner's (audit firm's) auditing experience with the current company. Similarly, we use pre-listing audit partner tenure (*PreListPT*), post-listing audit partner tenure (*PostListPT*), pre-listing audit firm tenure (*PreListFT*), and post-listing audit firm tenure (*PostListFT*) to measure client-specific experience for public companies gained prior to and post the IPO year.

In order to examine the effects of pre-client and client-specific experience on earnings quality for private and public companies, respectively, we adapt the model in Chen et al. (2008) and use the following models for our analyses.

For private companies:

$$\begin{aligned} PMMJDA = {} & \alpha_0 + \alpha_1 IncGenExp + \alpha_2 IncIndExp + \alpha_3 PT + \alpha_4 FT + \alpha_5 Size \\ & + \alpha_6 Growth + \alpha_7 CFO + \alpha_8 BigN + \alpha_9 Age + \eta Year + \theta Industry + \rho \end{aligned} \quad (2)$$

For public companies:

$$\begin{aligned} PMMJDA = {} & \beta_0 + \beta_1 IncGenExp + \beta_2 IncIndExp + \beta_3 PreListPT + \beta_4 PreListFT \\ & + \beta_5 PostListPT + \beta_6 PostListFT + \beta_7 Size + \beta_8 Growth \\ & + \beta_9 CFO + \beta_{10} BigN + \beta_{11} Age + \kappa Year + \mu Industry + \zeta \end{aligned} \quad (3)$$

where:

PMMJDA = performance-matched, modified Jones model-estimated discretionary accruals, measured in absolute, positive, and negative values;

IncGenExp = audit partner's incremental general experience for both private and public companies = the partner's total experience (*TotExp*) – the partner's industry experience (*IndExp*);

TotExp = audit partner's total experience for both private and public companies = the number of cumulative years from the first year when the partner became a signing partner for *any* company to year t;

IndExp = audit partner's industry experience for both private and public companies = the number of cumulative years from the first year in which the partner became a signing partner for any company in the same industry as the current company to year t;

IncIndExp = audit partner's incremental industry experience for both private and public

companies; for private companies, *IncIndExp* = the partner's industry experience (*IndExp*) – the partner's tenure (*PT*); for public companies, *IncIndExp* = the partner's industry experience (*IndExp*) – (the partner's pre-listing audit partner tenure (*PreListPT*) + the partner's post-listing audit partner tenure (*PostListPT*));

PT = audit partner tenure for private companies = the number of cumulative years during which the audit partner has audited the current private company (since 1983 or the year of the company's establishment, whichever is later, to year t);

PreListPT = pre-listing audit partner tenure for public companies = the number of cumulative years during which the partner audited the current company while it was private (since 1983 or the year of the company's establishment, whichever is later, to the IPO year);

PostListPT = post-listing audit partner tenure for public companies = the number of cumulative years during which the partner has audited the current company since the IPO year to year t;

FT = audit firm tenure for private companies = the number of consecutive years during which the audit firm has audited the current private company (since 1983 or the year of the company's establishment, whichever is later, to year t);

PreListFT = pre-listing audit firm tenure for public companies = the number of consecutive years during which the audit firm audited the company while it was private (since 1983 or the year of the company's establishment, whichever is later, to the IPO year);

PostListFT = post-listing audit firm tenure for public companies = the number of consecutive years during which the audit firm has audited the current company since the IPO year to year t;

Size = the natural logarithm of total assets in year t;

Growth = growth rate of net sales over the previous year;

CFO = cash from operations from the statement of cash flows in year t, scaled by total assets at the beginning of year t;

BigN = a dummy variable equal to 1 if the auditor is from a Big 4 (or 5 or 6) audit firm, and 0 otherwise;

Age = the number of years since the company was established;

Year = year dummies; and

Industry = industry dummies.

We follow Chen et al. (2008) and include several control variables in equations (2) and (3). Because prior research finds that the accruals of larger companies tend to be less extreme (Dechow and Dichev 2002), we include *Size*.[13] We also include *Growth* to control for the effect

[13] Because large companies face higher political costs (Watts and Zimmerman 1986), they may be less likely to manage earnings. Consistent with this, Dechow and Dichev (2002) find that large companies tend to report larger but more stable accruals.

of growth in net sales on a company's accruals, *CFO* to control for the negative relation between accruals and cash from operations (Dechow 1994), *BigN* to control for the potential effect of audit firm size on earnings quality (Becker et al. 1998), and *Age* to control for changes in accruals over a company's life cycle (Anthony and Ramesh 1992). Finally, we control for potential year and industry effects.

4.1.2 Empirical results

Table 1 reports descriptive statistics for the private and public discretionary accruals samples. The mean and median performance-matched discretionary accruals (*PMMJDA*) for private companies are 0.0044 and -0.0060, respectively, whereas those for public companies are 0.0046 and -0.0034. The mean and median |*PMMJDA*| are 0.1059 and 0.0699 for private companies, and 0.0787 and 0.0513 for public companies. The mean and median |*PMMJDA*| for private companies are both significantly larger than their counterparts for public companies (untabulated). This suggests that earnings quality of private companies, on average, is lower than that of public companies, consistent with Ball and Shivakumar (2005) and Burgstahler et al. (2006). The mean partner total experience (*TotExp*) and industry experience (*IndExp*) for private companies (10.5286 years and 6.4800 years) are both shorter than their counterparts for public companies (11.7281 years and 8.8532 years). However, the mean audit partner incremental general experience (*IncGenExp*) and incremental industry experience (*IncIndExp*) are both larger for private companies. The mean audit partner tenure for private companies (*PT*) is 4.0132 years, which is smaller than the combined pre- and post-listing partner tenure (*PreListPT* + *PostListPT*) for public companies (7.4780 years). The mean audit firm tenure for private companies (*FT*) is 3.9534 years, which is also smaller than the combined pre- and post-listing audit firm tenure (*PreListFT* + *PostListFT*) for public companies (7.6222 years). Finally, the mean *Size*, *CFO*,

BigN, and *Age* for private companies are all smaller than their respective public company counterparts, but the mean *Growth* is larger for private companies than for public companies.

[Insert Table 1 here]

We examine the effects of pre-client and client-specific experience on earnings quality for private companies using equation (2). We first estimate equation (2) for the full private companies sample; here, the dependent variable is the absolute value of accruals (|*PMMJDA*|) and we use ordinary least squares regression. We then estimate equation (2) for positive and negative accruals subsamples; here, the dependent variable is positive accruals ($PMMJDA \geq 0$) or negative accruals ($PMMJDA < 0$) and we use truncated regression.

Table 2 presents our findings. Joint tests on the effect of incremental general experience and incremental industry experience (*IncGenExp* + *IncIndExp*) are insignificant when the dependent variable is absolute, positive, or negative discretionary accruals. This suggests that joint effect of pre-client experience is not associated with earnings quality for private companies. However, when the dependent variable is |*PMMJDA*|, the coefficient on incremental general experience (*IncGenExp*) is marginally significantly negative (-0.0006, *p*-value = 0.10), suggesting that audit partners with more incremental general experience constrain the magnitude of discretionary accruals. Moreover, the coefficient on *IncGenExp* is significantly negative (-0.0010, *p*-value = 0.01) when the dependent variable is positive discretionary accruals ($PMMJDA \geq 0$) but is insignificant when the dependent variable is negative discretionary accruals ($PMMJDA < 0$). Thus, audit partners with more incremental general experience constrain the reporting of extreme positive discretionary accruals but not extreme negative accruals. Together, we find some evidence that greater incremental general experience enhances earnings quality for private companies. In contrast, the coefficient on incremental industry

experience (*IncIndExp*) is insignificant in all three regressions. Thus, there is no evidence that more pre-client industry experience enhances earnings quality for our private companies.

[Insert Table 2 here]

Turning to auditors' client-specific experience, the coefficients on audit partner tenure (*PT*) and on audit firm tenure (*FT*) are both significantly negative when the dependent variable is absolute discretionary accruals or positive discretionary accruals. Following Chen et al. (2008, Table 5), we also test whether the sum of the coefficients on *PT* and *FT* is significantly different from zero, and find that the sum is also significantly negative when the dependent variable is absolute or positive discretionary accruals. However, the coefficient on partner tenure (*PT*) is only marginally positive (0.0013, *p*-value = 0.10) when the dependent variable is negative discretionary accruals, and the coefficient on *FT* is insignificant. In addition, the sum of the coefficients on *PT* and *FT* is insignificant when the dependent variable is negative discretionary accruals. Taken together, these findings suggest that for private firms, longer audit partner tenure enhances earnings quality by constraining the reporting of extreme positive and extreme negative discretionary accruals, and that longer audit firm tenure enhances earnings quality by constraining the reporting of extreme positive discretionary accruals.

To summarize, we find some weak evidence that longer audit partner incremental general experience enhances earnings quality for private companies in Table 2. In contrast, we find strong evidence that earnings quality increases with audit partner and audit firm tenure. Thus, the beneficial impacts of long audit partner tenure and audit firm tenure documented in Chen et al. (2008) and Myers et al. (2003) for public companies extend to private companies, at least in Taiwan.

Next, we use equation (3) to examine the effects of pre-client and client-specific experience on earnings quality for public companies. Our findings are reported in Table 3. We first discuss findings on pre-client experience. The coefficient on *IncGenExp* is significantly negative (-0.0012, *p*-value = 0.03) when the dependent variable is absolute discretionary accruals, insignificantly different from zero (-0.0002, *p*-value = 0.65) when the dependent variable is positive discretionary accruals, and significantly positive (0.0013, *p*-value = 0.01) when the dependent variable is negative discretionary accruals. These findings suggest that audit partners with more incremental general experience constrain the reporting of extreme negative accruals, and thus, longer incremental general experience enhances earnings quality. In addition, joint tests on the effect of incremental general experience and incremental industry experience (*IncGenExp* + *IncIndExp*) are significant when the dependent variable is absolute or negative discretionary accruals. As is the case with private companies, we find no relation between incremental industry experience (*IncIndExp*) and discretionary accruals in any of our regression models. Thus, we find some weak evidence that incremental general experience (*IncGenExp*) enhances earnings quality.

[Insert Table 3 here]

We now discuss findings on client-specific experience in Table 3. First, we find that the coefficient on pre-listing audit partner tenure (*PreListPT*) is significantly negative (-0.0019, *p*-value = 0.04) and the coefficient on pre-listing audit firm tenure (*PreListFT*) is insignificant (-0.0011, *p*-value = 0.19) when the dependent variable is absolute discretionary accruals. The sum of these coefficients is also significantly negative (-0.0030, *p*-value = 0.00). Thus, our findings suggest that an audit partner's client-specific pre-listing experience enhances earnings quality by constraining extreme accruals. However, when the dependent variable is positive discretionary

accruals, the coefficients on *PreListPT*, *PreListFT*, and the sum of these coefficients are all insignificant, so pre-listing experience does not appear to affect upward earnings management attempts. Moreover, when the dependent variable is negative discretionary accruals, the coefficients on *PreListPT*, *PreListFT*, and the sum of these coefficients are all significantly positive, suggesting that greater pre-listing audit partner and audit firm experience enhance earnings quality by constraining extreme negative discretionary accruals (i.e., big baths). Finally, our findings on post-listing partner tenure and post-listing audit firm tenure are entirely consistent with Chen et al. (2008) and Myers et al. (2003). Specifically, joint tests of *PostListPT* and *PostListFT* reveal that longer post-listing partner and audit firm tenure constrain the reporting of extreme absolute, extreme positive, and extreme negative accruals.

To summarize, we find some weak evidence that pre-client experience, specifically audit partners' incremental general experience (*IncGenExp*), enhances earnings quality for public companies in Table 3. In contrast, we find consistent and strong evidence that audit partners' client-specific experience (*PreListPT* and *PostListPT*) enhances earnings quality. These findings imply that the incoming partner's pre-client experience is unlikely adequate to compensate the loss of the outgoing partner's client-specific experience, resulting in a net transition cost in a mandatory audit partner rotation regime. Finally, we find that client-specific experience accumulated over time by audit partners and audit firms during the years before a client goes public (*PreListPT* and *PreListFT*) can also enhance earnings quality, so audit firms may wish to consider these factors when rotating audit partners and audit committees may wish to consider this when selecting auditors.

4.2 Bank Loan Pricing as a Proxy for Creditor Perceptions of Earnings Quality

Following Mansi et al. (2004), we use the cost of debt to proxy for creditor perceptions of earnings quality. We examine the effect of auditors' pre-client and client-specific experience on creditor perceptions of earnings quality in this section.

4.2.1 Variable measurement and empirical model

We use the following equations for our analyses:

For private companies:

$$\begin{aligned} LeadRATE = {} & \gamma_0 + \gamma_1 IncGenExp + \gamma_2 IncIndExp + \gamma_3 PT + \gamma_4 FT + \gamma_5 Size + \gamma_6 Growth \\ & + \gamma_7 CFO + \gamma_8 BigN + \gamma_9 Age + \gamma_{10} LEV + \gamma_{11} ROA + \gamma_{12} LOSS \\ & + \gamma_{13} DIntCOV + \gamma_{14} R_F + \omega Industry + \xi \end{aligned} \quad (4)$$

For public companies:

$$\begin{aligned} LeadRATE = {} & \delta_0 + \delta_1 IncGenExp + \delta_2 IncIndExp + \delta_3 PreListPT + \delta_4 PreListFT \\ & + \delta_5 PostListPT + \delta_6 PostListFT + \delta_7 Size + \delta_8 Growth + \delta_9 CFO \\ & + \delta_{10} BigN + \delta_{11} Age + \delta_{12} LEV + \delta_{13} ROA + \delta_{14} LOSS \\ & + \delta_{15} DIntCOV + \delta_{16} R_F + \psi Industry + \varsigma \end{aligned} \quad (5)$$

where:

$LeadRATE$ = the weighted-average interest rate of new loans initiated in year t+1 with loan amounts as weights;
LEV = financial leverage, measured as the ratio of total liabilities to total assets in year t;
ROA = return on assets in year t;
$LOSS$ = a dummy variable equal to 1 if income before extraordinary items is negative in year t, and 0 otherwise;
$DIntCOV$ = a dummy variable equal to 1 if the interest coverage ratio (income before interest expense and taxes divided by interest expense) is greater than the median interest coverage ratio in year t, and 0 otherwise;[14]
R_F = the risk-free rate = the average of the 91-day Taiwan Treasury bill interest rates in year t.[15]

All other variables are as defined previously.

[14] Because an interest coverage ratio above a certain threshold offers little incremental benefit to creditors, we measure *DIntCOV* as a dummy variable.
[15] If there are no 91-day Treasury Bills in a year, we calculate the average of the 182-day Treasury Bill interest rates (or of the 273-day Treasury Bill rates if there are also no 182-day Treasury Bills).

Following prior literature (Sengupta 1998; Jiang 2008), we use the interest rate for *new* bank loans initiated in year t+1 as our dependent variable. This ensures that the financial statement data for year t were available to creditors when they set the loan rate. We also include five additional control variables following prior literature. We control for leverage (*LEV*) because prior research shows that the loan rate is positively related to a borrower's financial leverage. We control for return on assets (*ROA*) because loan rates should be higher for less profitable companies. Following prior literature (e.g., Ederington, Yawitz, and Roberts 1987; Ziebart and Reiter 1992; Pittman and Fortin 2004; Ashbaugh-Skaife, Collins, and LaFond 2006), we include a loss dummy (*LOSS*) and the interest coverage ratio (*DIntCOV*). We expect loan rates to be higher for loss-making companies and for companies with lower interest coverage ratios. We also control for the risk free rate (R_F) and expect a positive coefficient on R_F. Finally, we control for potential industry effects but not for potential year effects because our risk-free rate (R_F) is year specific.

4.2.2 Empirical results

To construct the bank loan sample, we start with the 10,491 (5,137) company-year observations in our private (public) company discretionary accruals samples. We eliminate 7,875 (2,493) observations that are missing *LeadRATE* and omit an additional 709 (92) observations because of missing observations for several of our new variables from equations (4) and (5). Our bank loan sample consists of 1,907 (2,552) observations in the private (public) sample from 1990 through 2001.

We report descriptive statistics in Table 4. The mean and median loan rates (*LeadRATE*) are 6.7204% and 6.9902%, respectively, for private companies, and 6.1161% and 6.4188%, respectively, for public companies. The mean *LEV* is 50.8852% for private companies and

46.6222% for public companies. On average, private companies have a much higher *ROA* (5.1503% versus 1.4875%) and a smaller proportion of losses (0.1300 versus 0.3386) relative to their public counterparts.

[Insert Table 4 here]

We present the results from estimating equation (4) for private companies and equation (5) for public companies in Table 5, Panels A and B, respectively. For private companies (Panel A), the coefficients on incremental general experience (*IncGenExp*), incremental industry experience (*IncIndExp*), and audit partner tenure (*PT*) are all significantly negative. The coefficient on audit firm tenure is insignificant (-0.0035, *p*-value = 0.93), but the sum of the coefficients on *PT* and *FT* is significantly negative. These results reveal that, all else equal, companies whose audit partners have more incremental general and industry experience and companies with longer joint partner and audit firm tenure enjoy lower loan rates. This suggest that lenders perceive the financial statements of companies audited by audit partners with more pre-client general and industry experience, and with more client-specific experience, to be of higher quality, and thus reward these companies with lower loan rates.

For public companies (Panel B), we find that incremental general experience (*IncGenExp*), incremental industry experience (*IncIndExp*), pre-listing audit partner tenure (*PreListPT*), pre-listing audit firm tenure (*PreListFT*), post-listing audit partner tenure (*PostListPT*), and post-listing audit firm tenure (*PostListFT*) are all significantly negatively associated with the bank loan rate. In addition, all of the joint tests are highly significant. Thus, our results suggest that lenders perceive the financial statements of public companies audited by audit partners with more pre-client general and industry experience, and with more client-

specific experience, both before and after the company goes public, to be of higher quality, and thus reward these companies with lower loan rates.

[Insert Table 5 here]

The coefficients on the control variables are generally consistent with our expectations. As expected, *Size*, *CFO*, *BigN,* and *DIntCOV* are negatively associated with the loan rate, and *LEV* and R_F are positively associated with the loan rate.

To summarize, the results in Table 5 suggest that companies whose audit partners have more pre-client (general and industry) and client-specific experience enjoy more favorable loan pricing, consistent with lenders perceiving these companies as having higher earnings quality.

5. Conclusion

This study investigates the effects of auditors' pre-client and client-specific experience on earnings quality and perceptions of earnings quality for both private and public companies in Taiwan.[16] Taiwanese Company Law and Securities and Exchange Act require that large private companies to file and publish their audited financial statements, just like public companies. In addition, audit reports in Taiwan reveal the names of the audit firm and two signing audit partners. These unique features of the Taiwanese audit market allow us to measure various aspects of the auditors' pre-client and client-specific experience, and thus investigate several questions previously unexplored in the literature. Specifically, we use auditors' pre-client general experience and pre-client industry experience as measures of pre-client experience for both private and public companies. In addition, we use audit partner tenure and audit firm tenure

[16] As in Chen et al. (2008) and all studies using Taiwanese data, a potential limitation of our study is a possible inability to generalize our findings to the U.S. and other countries due to different auditor liability protection. Specifically, individual audit partners do not have limited liability protection in Taiwan. In contrast, audit partners have limited liability in the U.S. and many other countries.

as measures of auditors' client-specific experience for private companies. For public companies, we use pre-listing audit partner tenure, pre-listing audit firm tenure, post-listing audit partner tenure, and post-listing audit firm tenure as measures of auditors' client-specific experience.

We investigate the effects of our various measures of pre-client and client-specific experience on earnings quality using performance matched, modified Jones model-estimated discretionary accruals as a proxy for earnings quality. For private companies, we find some evidence that an audit partner's pre-client general experience enhances earnings quality, although the audit partner's pre-client industry experience has no incremental effect on earnings quality. In addition, client-specific audit partner tenure and audit firm tenure enhance earnings quality to different degrees depending whether we consider absolute, positive, or negative discretionary accruals. Thus, the beneficial effects of longer audit partner tenure and audit firm tenure documented in Chen et al. (2008) and Myers et al. (2003) for public companies extend to private companies. Our findings are important because private companies comprise a large portion of the economy and of audit firms' client bases and prior literature has not examined the effect of auditor experience on earnings quality for private companies.

For public companies, we again find some evidence that an audit partner's pre-client general experience enhances earnings quality. In contrast, we find consistent and stronger evidence that the audit partner's client-specific experience, either accumulated in years when the public company was still private or in years after it went public, enhances earnings quality. Moreover, pre-listing audit partner tenure and pre-listing audit firm tenure also enhance earnings quality to different degrees depending whether we measure absolute, positive, or negative discretionary accruals. Finally, post-listing audit partner tenure and post-listing audit firm tenure enhance earnings quality, consistent with Chen et al. (2008) and Myers et al. (2003) where their

audit partner tenure and audit firm tenure correspond to our post-listing audit partner tenure and post-listing audit firm tenure, respectively.

We investigate the effects of our various measures of pre-client and client-specific experience on perceptions of earnings quality using bank loan interest rates as a proxy for creditor perceptions of earnings quality. For both private and public companies, we find that lenders perceive financial statements audited by auditors with more pre-client general and industry experience to be of higher quality, and thus reward these companies with lower interest rates. For private companies, longer audit partner tenure enhances perceptions of earnings quality but longer audit firm tenure has no incremental effect on perceived earnings quality. For public companies, lenders perceive financial statements audited by auditors with longer audit partner tenure, both before and after the company goes public, or with longer audit firm tenure, both before and after the company goes public, to be of higher quality, and thus reward these companies with lower loan rates.

Overall, our results suggest that auditor experience, accumulated with the current client or other clients, before or after the IPO year, enhances earnings quality and perceptions of earnings quality. This is consistent with the spirit of Myers et al. (2003) and Chen et al. (2008) and also with prior studies suggesting that auditor experience generally improves auditor performance (Tubbs 1992; Hammersley 2006; Kaplan et al. 2008; Trotman et al. 2008). We contribute to the auditing literature by examining a more complete set of auditor experience measures and by providing new insights about the relation between earnings quality/perceived earnings quality and auditors' pre-client and client-specific experience for not only public companies, but also private companies.

References

Anthony, J., and K. Ramesh. 1992. Association between accounting performance measures and stock prices: A test of the life cycle hypothesis. *Journal of Accounting and Economics* 15(2-3): 203-227.

Ashbaugh-Skaife, H. D. Collins, and R. LaFond. 2006. The effects of corporate governance on firms' credit ratings. *Journal of Accounting and Economics* 42: 203-243.

Ball, R., and L. Shivakumar. 2005. Earnings quality in UK private firms: Comparative loss recognition timeliness. *Journal of Accounting and Economics* 39 (1): 83-128.

Becker, C., M. DeFond, J. Jiambalvo, and K.R. Subramanyam. 1998. The effect of audit quality on earnings management. *Contemporary Accounting Research* 15 (1): 1-24.

Burgstahler, D., L. Hail, and C. Leuz. 2006. The importance of reporting incentives: Earnings management in European private and public firms. *The Accounting Review* 81 (5): 983-1016.

Carcello, J. V., and A. L. Nagy. 2004. Audit firm tenure and fraudulent financial reporting. *Auditing: A Journal of Practice & Theory* 23 (2): 55-69.

Carey, P., and R. Simnett. 2006. Audit partner tenure and audit quality. *The Accounting Review* 81 (3): 653-676.

Chen, C., C. Lin, and Y. Lin. 2008. Audit partner tenure, audit firm tenure, and discretionary accruals: Does long auditor tenure impair earnings quality? *Contemporary Accounting Research* 25 (2): 415-445.

Chi, W., and H. Huang. 2005. Discretionary accruals, audit-firm tenure and audit-partner tenure: Empirical evidence from Taiwan. *Journal of Contemporary Accounting and Economics* 1 (1): 65-92.

Chi, W., H. Huang, Y. Liao, and H. Xie. 2009. Mandatory audit-partner rotation, audit quality and market perception: Evidence from Taiwan. *Contemporary Accounting Research* 26 (2): 359-391.

Dechow, P. 1994. Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of Accounting and Economics* 18 (1): 3-42.

Dechow, P., and I. D. Dichev. 2002. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review* 77 (Supplement): 35-59.

Drake, M. S., and L. A. Myers. 2010. Analysts' accrual-related over-optimism: Do analyst characteristics play a role? *Review of Accounting Studies*, forthcoming.

Ederington, L. H., J. B. Yawitz, and B. E. Roberts. 1987. The informational content of bond ratings. *The Journal of Financial Research* 10: 211-226.

Ghosh, A., and D. Moon. 2005. Auditor tenure and perceptions of audit quality. *The Accounting Review* 80 (2): 585-612.

Hammersley, J. S. 2006. Pattern identification and industry-specialist auditors. *The Accounting Review* 81 (2): 309-336.

Hribar, P., and D. Collins. 2002. Errors and estimating accruals: implications for empirical research. *Journal of Accounting Research* 40 (1): 105-134.

Jiang, J. 2008. Beating earnings benchmarks and the cost of debt. *The Accounting Review* 83 (2): 377-416.

Johnson, V., I. Khurana, and J. Reynolds. 2002. Audit-firm tenure and the quality of financial reports. *Contemporary Accounting Research* 19 (4): 637-660.

Jones, J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29 (2): 193-228.

Kaplan, S. E., E. F. O'Donnell, and B. M. Arel. 2008. The influence of auditor experience on the persuasiveness of information provided by management. *Auditing: A Journal of Practice & Theory* 27(1): 67-83.

Keskek, S., L.A. Myers, T.C. Omer, and M. Shelley. 2010. Does earnings predictability affect the influence of analyst and forecast characteristics on analyst forecast accuracy? Working paper, Texas A&M University and University of Arkansas.

Kothari, S.P., A. Leone, and C. Wasley. 2005. Performance matched discretionary accrual measures. *Journal of Accounting and Economics* 39 (1): 163-197.

Mansi, S., W. Maxwell, and D. Miller. 2004. Does auditor quality and tenure matter to investors? Evidence from the bond market. *Journal of Accounting Research* 42 (Supplement): 755-793.

Mikhail, M. B., B. R. Walther, and R. H. Willis. 1997. Do security analysts improve their performance with experience? *Journal of Accounting Research* 35: 131-157.

Mikhail, M. B., B. R. Walther, and R. H. Willis. 2003. The effect of experience on security analyst underreaction. *Journal of Accounting & Economics* 35: 101-116.

Myers, J., L. Myers, and T. Omer. 2003. Exploring the term of auditor-client relationship and the quality of earnings: A case for mandatory auditor rotation? *The Accounting Review* 78 (3): 779-799.

Public Company Accounting Oversight Board (PCAOB). 2009. Concept release on requiring the engagement partner to sign the audit report. PCAOB Release No. 2009-005, http://www.pcaobus.org/Rules/Docket_029/2009-07-28_Release_No_2009-005.pdf.

Pittman, J. A., and S. Fortin. 2004. Auditor choice and the cost of debt capital in newly public firms. *Journal of Accounting and Economics* 37: 113-136.

Sengupta, P. 1998. Corporate disclosure quality and the cost of debt. *The Accounting Review* 73 (4): 459-474.

Shelton, S. W. 1999. The effect of experience on the use of irrelevant evidence in auditor judgment. *The Accounting Review* 74: 217-224.

Stanley, J. D, and F. T. DeZoort. 2007. Audit firm tenure and financial restatements: An analysis of industry specialization and fee effects. *Journal of Accounting and Public Policy* 26 (2): 131-159.

Trotman, K, A. Wright, and S. Wright. 2008. Auditor negotiations: An examination of the efficacy of intervention methods. Forthcoming, *The Accounting Review*. Available at SSRN: http://ssrn.com/abstract=691701.

Tubbs, R. M. 1992. The effect of experience on the auditor's organization and amount of knowledge. *The Accounting Review* 67 (4): 783-801.

Watts, R., and J. Zimmerman. 1986. *Positive Accounting Theory*, NJ: Prentice Hall.

Ziebart, D., and S. Reiter. 1992. Bond ratings, bond yields, and financial information. *Contemporary Accounting Research* 9 (1): 252-281.

TABLE 1: Descriptive Statistics for the Discretionary Accruals Sample

Panel A: Private Companies

Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
PMMJDA	0.0044	0.1508	-0.1575	-0.0735	-0.0060	0.0660	0.1785
|PMMJDA|	0.1059	0.1074	0.0119	0.0304	0.0699	0.1414	0.2533
TotExp	10.5286	4.0060	5.0000	8.0000	11.0000	14.0000	16.0000
IndExp	6.4800	3.4700	3.0000	4.0000	6.0000	9.0000	11.0000
IncGenExp	4.0486	3.3859	0.0000	1.0000	4.0000	6.0000	9.0000
IncIndExp	2.4669	2.9348	0.0000	0.0000	1.0000	4.0000	7.0000
PT	4.0132	2.4171	1.0000	2.0000	3.0000	5.0000	7.0000
FT	3.9534	2.4623	1.0000	2.0000	3.0000	5.0000	7.0000
Size	20.8908	0.9901	19.7298	20.2212	20.8334	21.4421	22.1463
Growth	0.5503	1.9901	-0.2658	-0.0572	0.1178	0.4059	1.1353
CFO	0.0111	0.1879	-0.1867	-0.0551	0.0300	0.1081	0.1972
BigN	0.6766	0.4678	0.0000	0.0000	1.0000	1.0000	1.0000
Age	16.1361	10.0516	5.0000	8.0000	14.0000	23.0000	30.0000

Panel B: Public Companies

Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
PMMJDA	0.0046	0.1183	-0.1102	-0.0540	-0.0034	0.0489	0.1243
|PMMJDA|	0.0787	0.0885	0.0085	0.0225	0.0513	0.0984	0.1818
TotExp	11.7281	3.7567	7.0000	9.0000	12.0000	15.0000	17.0000
IndExp	8.8532	3.8639	4.0000	6.0000	9.0000	11.0000	14.0000
IncGenExp	2.8748	2.9285	0.0000	0.0000	2.0000	5.0000	7.0000
IncIndExp	1.3753	2.2590	0.0000	0.0000	0.0000	2.0000	5.0000
PreListPT	2.6076	2.4789	0.0000	0.0000	3.0000	5.0000	6.0000
PreListFT	2.7491	2.5309	0.0000	0.0000	3.0000	5.0000	6.0000
PostListPT	4.8704	3.7827	1.0000	2.0000	4.0000	7.0000	10.0000
PostListFT	4.8731	3.8639	1.0000	2.0000	4.0000	7.0000	11.0000
Size	22.2620	1.1184	20.9300	21.4680	22.1665	22.9242	23.8212
Growth	0.1120	0.6233	-0.2257	-0.0734	0.0497	0.2014	0.4362
CFO	0.0405	0.1297	-0.0765	-0.0069	0.0450	0.1026	0.1670
BigN	0.7427	0.4372	0.0000	0.0000	1.0000	1.0000	1.0000
Age	24.7775	10.6113	11.0000	16.0000	24.0000	32.0000	40.0000

Note:
The discretionary accruals samples consist of 10,491 (5,137) company-year observations from 1990 through 2001 for private (public) companies.

Variable definitions:

PMMJDA = performance-matched, modified Jones model-estimated discretionary accruals in year t;

TotExp = audit partner's total experience for both private and public companies = the number of cumulative years from the first year when the partner became a signing partner for *any* company to year t;

IndExp = audit partner's industry experience for both private and public companies = the number of cumulative years from the first year in which the partner became a signing partner for any company in the same industry as the current company to year t;

IncGenExp = audit partner's incremental general experience for both private and public companies = the partner's total experience (*TotExp*) – the partner's industry experience (*IndExp*);

IncIndExp = audit partner's incremental industry experience for both private and public companies; for private companies, *IncIndExp* = the partner's industry experience (*IndExp*) – the partner's tenure (*PT*); for public companies, *IncIndExp* = the partner's industry experience (*IndExp*) – (the partner's pre-listing

audit partner tenure (*PreListPT*) + the partner's post-listing audit partner tenure (*PostListPT*));

PT = audit partner tenure for private companies = the number of cumulative years during which the audit partner has audited the current private company (since 1983 or the year of the company's establishment, whichever is later, to year t);

PreListPT = pre-listing audit partner tenure for public companies = the number of cumulative years during which the partner audited the current company while it was private (since 1983 or the year of the company's establishment, whichever is later, to the IPO year);

PostListPT = post-listing audit partner tenure for public companies = the number of cumulative years during which the partner has audited the current company since the IPO year to year t;

FT = audit firm tenure for private companies = the number of consecutive years during which the audit firm has audited the current private company (since 1983 or the year of the company's establishment, whichever is later, to year t);

PreListFT = pre-listing audit firm tenure for public companies = the number of consecutive years during which the audit firm audited the company while it was private (since 1983 or the year of the company's establishment, whichever is later, to the IPO year);

PostListFT = post-listing audit firm tenure for public companies = the number of consecutive years during which the audit firm has audited the current company since the IPO year to year t;

Size = the natural logarithm of total assets in year t;

Growth = growth rate of net sales over the previous year;

CFO = cash from operations from the statement of cash flows in year t, scaled by total assets at the beginning of year t;

BigN = a dummy variable equal to 1 if the auditor is from a Big 4 (or 5 or 6) audit firm, and 0 otherwise;

Age = the number of years since the company was established.

TABLE 2: Effects of Pre-Client and Client-Specific Experience on Discretionary Accruals for Private Companies

$$PMMJDA = \alpha_0 + \alpha_1 IncGenExp + \alpha_2 IncIndExp + \alpha_3 PT + \alpha_4 FT + \alpha_5 Size + \alpha_6 Growth + \alpha_7 CFO + \alpha_8 BigN + \alpha_9 Age + \eta Year + \theta Industry + \rho \quad (2)$$

Variables	|PMMJDA|	PMMJDA ≥ 0	PMMJDA < 0
Constant (α_0)	0.2238	-0.0714	-0.4164
	(0.00)	(0.06)	(0.00)
IncGenExp (α_1)	-0.0006	-0.0010	-0.0003
	(0.10)	(0.01)	(0.36)
IncIndExp (α_2)	0.0003	0.0001	-0.0004
	(0.40)	(0.87)	(0.31)
PT (α_3)	-0.0024	-0.0024	0.0013
	(0.00)	(0.01)	(0.10)
FT (α_4)	-0.0015	-0.0019	-0.0005
	(0.04)	(0.02)	(0.47)
Control variables:			
Size (α_5)	-0.0056	0.0063	0.0179
	(0.00)	(0.00)	(0.00)
Growth (α_6)	0.0016	-0.0014	-0.0017
	(0.02)	(0.01)	(0.00)
CFO (α_7)	-0.1711	-0.4695	-0.2028
	(0.00)	(0.00)	(0.00)
BigN (α_8)	0.0004	0.0006	-0.0012
	(0.86)	(0.80)	(0.61)
Age (α_9)	-0.0007	-0.0002	0.0009
	(0.00)	(0.16)	(0.00)
Year and industry dummies included			
IncGenExp + *IncIndExp* ($\alpha_1 + \alpha_2$)	-0.0002	-0.0009	-0.0007
	(0.71)	(0.16)	(0.24)
PT + *FT* ($\alpha_3 + \alpha_4$)	-0.0040	-0.0043	0.0008
	(0.00)	(0.00)	(0.14)
Adj. R^2	0.2441	–	–
N	10,491	4,972	5,519

Notes:
See Table 1 for variable definitions.
Numbers in parentheses are two-tailed *p*-values for t-statistics in the |*PMMJDA*| column and z-statistics in the *PMMJDA* ≥ 0 and *PMMJDA* < 0 columns or for F-statistics.

TABLE 3: Effects of Pre-Client and Client-Specific Experience on Discretionary Accruals for Public Companies

$$PMMJDA = \beta_0 + \beta_1 IncGenExp + \beta_2 IncIndExp + \beta_3 PreListPT + \beta_4 PreListFT + \beta_5 PostListPT + \beta_6 PostListFT + \beta_7 Size + \beta_8 Growth + \beta_9 CFO + \beta_{10} BigN + \beta_{11} Age + \kappa Year + \mu Industry + \zeta \quad (3)$$

Variables	|PMMJDA|	PMMJDA ≥ 0	PMMJDA < 0
Constant (β_0)	0.1715	0.0845	-0.2542
	(0.00)	(0.01)	(0.00)
IncGenExp (β_1)	-0.0012	-0.0002	0.0013
	(0.03)	(0.65)	(0.01)
IncIndExp (β_2)	-0.0007	-0.0004	0.0010
	(0.32)	(0.51)	(0.11)
PreListPT (β_3)	-0.0019	0.0012	0.0044
	(0.04)	(0.13)	(0.00)
PreListFT (β_4)	-0.0011	-0.0001	0.0023
	(0.19)	(0.87)	(0.00)
PostListPT (β_5)	-0.0016	-0.0013	0.0016
	(0.00)	(0.06)	(0.01)
PostListFT (β_6)	-0.0012	-0.0007	0.0002
	(0.01)	(0.23)	(0.68)
Control variables:			
Size (β_7)	-0.0007	0.0008	0.0058
	(0.66)	(0.56)	(0.00)
Growth (β_8)	0.0163	0.0126	0.0090
	(0.00)	(0.00)	(0.00)
CFO (β_9)	-0.2580	-0.5627	-0.2139
	(0.00)	(0.00)	(0.00)
BigN (β_{10})	0.0001	-0.0025	0.0022
	(0.97)	(0.41)	(0.46)
Age (β_{11})	-0.0009	-0.0006	0.0004
	(0.00)	(0.00)	(0.01)
Year and industry dummies included			
IncGenExp + *IncIndExp* ($\beta_1 + \beta_2$)	-0.0019	-0.0007	0.0023
	(0.06)	(0.49)	(0.01)
PreListPT + *PreListFT* ($\beta_3 + \beta_4$)	-0.0030	0.0011	0.0067
	(0.00)	(0.14)	(0.00)
PostListPT + *PostListFT* ($\beta_5 + \beta_6$)	-0.0028	-0.0021	0.0018
	(0.00)	(0.00)	(0.00)
Adj. R^2	0.2762	–	–
N	5,137	2,460	2,677

Notes:
See Table 1 for variable definitions.
Numbers in parentheses are two-tailed *p*-values for t-statistics in the |*PMMJDA*| column and z-statistics in the *PMMJDA* ≥ 0 and *PMMJDA* < 0 columns or for F-statistics.

TABLE 4: Descriptive Statistics for the Bank Loan Sample

Panel A: Private Companies							
Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
LeadRATE (%)	6.7204	1.8145	4.0000	5.7451	6.9902	8.0709	8.7300
LEV (%)	50.8852	15.3593	30.1800	40.7700	51.9500	62.3800	69.3600
ROA (%)	5.1503	8.0746	-2.0233	1.9304	4.9430	8.4835	13.5967
LOSS	0.1300	0.3364	0.0000	0.0000	0.0000	0.0000	1.0000
DIntCOV	0.4746	0.4995	0.0000	0.0000	0.0000	1.0000	1.0000
R_F *(%)*	5.1782	1.1277	3.7530	4.7410	5.0130	5.3700	6.8820
Panel B: Public Companies							
Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
LeadRATE (%)	6.1161	1.8692	3.2477	4.9478	6.4188	7.4957	8.2893
LEV (%)	46.6222	15.1115	26.7900	36.3500	46.8500	56.8400	65.3900
ROA (%)	1.4875	8.3609	-6.2917	-1.6233	2.0770	5.5020	9.4257
LOSS	0.3386	0.4733	0.0000	0.0000	0.0000	1.0000	1.0000
DIntCOV	0.4726	0.4993	0.0000	0.0000	0.0000	1.0000	1.0000
R_F *(%)*	5.0445	1.1335	3.7530	4.7410	4.8300	5.3700	6.8820

Note:
The bank loan samples consist of 1,907 (2,552) company-year observations during 1990 to 2001 for the private (public) companies.

Variable definitions:

LeadRATE = the weighted-average interest rate of new loans initiated in year t+1 with loan amounts as weights;
LEV = financial leverage, measured as the ratio of total liabilities to total assets in year t;
ROA = return on assets in year t;
LOSS = a dummy variable equal to 1 if income before extraordinary items is negative in year t, and 0 otherwise;
DIntCOV = a dummy variable equal to 1 if the interest coverage ratio (income before interest expense and taxes divided by interest expense) is greater than the median interest coverage ratio in year t, and 0 otherwise;
R_F = the risk-free rate, proxied by the average interest rate on 91-day Taiwan Treasury bills in year t.

TABLE 5: The Effects of Pre-client and Client-Specific Experience on the Bank Loan Pricing

$$LeadRATE = \gamma_0 + \gamma_1 IncGenExp + \gamma_2 IncIndExp + \gamma_3 PT + \gamma_4 FT + \gamma_5 Size + \gamma_6 Growth + \gamma_7 CFO + \gamma_8 BigN + \gamma_9 Age + \gamma_{10} LEV + \gamma_{11} ROA + \gamma_{12} LOSS + \gamma_{13} DIntCOV + \gamma_{14} R_F + \omega Industry + \xi \quad (4)$$

$$LeadRATE = \delta_0 + \delta_1 IncGenExp + \delta_2 IncIndExp + \delta_3 PreListPT + \delta_4 PreListFT + \delta_5 PostListPT + \delta_6 PostListFT + \delta_7 Size + \delta_8 Growth + \delta_9 CFO + \delta_{10} BigN + \delta_{11} Age + \delta_{12} LEV + \delta_{13} ROA + \delta_{14} LOSS + \delta_{15} DIntCOV + \delta_{16} R_F + \psi Industry + \varsigma \quad (5)$$

Variable	Panel A: Private Companies		Variable	Panel B: Public Companies	
Constant (γ_0)	8.5661	(0.00)	Constant (δ_0)	7.3534	(0.00)
IncGenExp (γ_1)	-0.0540	(0.00)	*IncGenExp* (δ_1)	-0.0989	(0.00)
IncIndExp (γ_2)	-0.0767	(0.00)	*IncIndExp* (δ_2)	-0.1285	(0.00)
PT (γ_3)	-0.0994	(0.01)	*PreListPT* (δ_3)	-0.0599	(0.01)
			PreListFT (δ_4)	-0.0592	(0.00)
FT (γ_4)	-0.0035	(0.93)	*PostListPT* (δ_5)	-0.0766	(0.00)
			PostListFT (δ_6)	-0.0365	(0.01)
Control variables:					
Size (γ_5)	-0.1352	(0.00)	*Size* (δ_7)	-0.0998	(0.01)
Growth (γ_6)	-0.0091	(0.69)	*Growth* (δ_8)	0.2676	(0.00)
CFO (γ_7)	-0.4141	(0.07)	*CFO* (δ_9)	-1.0964	(0.00)
BigN (γ_8)	-0.3401	(0.00)	*BigN* (δ_{10})	-0.1859	(0.02)
Age (γ_9)	0.0003	(0.95)	*Age* (δ_{11})	-0.0119	(0.00)
LEV (γ_{10})	0.0223	(0.00)	*LEV* (δ_{12})	0.0157	(0.00)
ROA (γ_{11})	0.0094	(0.14)	*ROA* (δ_{13})	-0.0009	(0.86)
LOSS (γ_{12})	-0.1108	(0.43)	*LOSS* (δ_{14})	0.0601	(0.50)
DIntCOV (γ_{13})	-0.3655	(0.00)	*DIntCOV* (δ_{15})	-0.5338	(0.00)
R_F (γ_{14})	0.4368	(0.00)	R_F (δ_{16})	0.4301	(0.00)
Industry dummies included					
IncGenExp + IncIndExp ($\gamma_1 + \gamma_2$)	-0.1306	(0.00)	*IncGenExp + IncIndExp* ($\delta_1 + \delta_2$)	-0.2274	(0.00)
PT + FT ($\gamma_3 + \gamma_4$)	-0.1029	(0.00)	*PreListPT + PreListFT* ($\delta_3 + \delta_4$)	-0.1191	(0.00)
			PostListPT + PostListFT ($\delta_5 + \delta_6$)	-0.1130	(0.00)
Adj. R^2		0.3259	Adj. R^2		0.3103
N		1,907	N		2,552

Notes:
See Table 1 and Table 4 for variable definitions.
Numbers in parentheses are two-tailed *p*-values for t-statistics or F-statistics.