

## Effect of international working experience of individual auditors on audit quality

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*Published in:*

Journal of Business Finance and Accounting

*DOI:*

[10.1111/jbfa.12257](https://doi.org/10.1111/jbfa.12257)

Published: 01/07/2017

[Link to publication](#)

*Citation for published version (APA):*

Chen, X., Dai, Y., Kong, D., & TAN, W. (2017). Effect of international working experience of individual auditors on audit quality: Evidence from China. *Journal of Business Finance and Accounting*, 44(7-8), 1073-1108. <https://doi.org/10.1111/jbfa.12257>

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# **Effect of International Working Experience of Individual Auditors on Audit Quality: Evidence from China**

## **Abstract**

This paper investigates the effects of auditors with international working experience on audit quality in emerging markets. Such auditors are associated with better audit quality, a pattern that is further supported by an examination based on a propensity score matching sample that controls for endogeneity. Chief financial officers with international experience are more conservative in the client company of their auditors with international working experience. Further, reviewer partners with international working experience provide better audit quality in terms of low accruals, less below-the-line items, and less audit reporting aggressiveness, while engagement partners with international working experience require high audit fees. Moreover, financial reports signed by auditors with international working experience are associated with analyst forecast accuracy and dispersion. Our results are robust to different specifications and alternative measures. Overall, this paper highlights the importance of human capital and provides direct evidence on how auditors with international working experience use their knowledge and audit skills in emerging markets.

**Keywords:** Individual auditor partner, Auditor working experience, International experience, Audit quality, China

## **1 Introduction**

Individual auditors may have heterogeneous beliefs, preferences, experiences, capabilities, and skills. Only a few studies have focused on the heterogeneity of individual auditors, while others have investigated the differences in the tenure, years of experience, and industry specialization of such auditors (e.g., Carey and Simnett, 2006; Chen et al., 2010; Kallunki et al., 2009). This paper examines whether and how the international working experience (IWE) of engaged individual signing auditors affects audit quality in China.

Instances of international talent backflow have frequently occurred over the last decade, especially in emerging markets (Giannetti et al., 2015). Previous studies find that emigrants or international talents eventually return to their home countries and bring with them substantial knowledge and skills gained abroad. In this paradigm, such returnees present a “brain gain” for the source country (Kerr, 2008; Beine et al., 2008; Giannetti et al., 2015). This study echoes such arguments in the auditing field by investigating how IWE affects the services of individual auditors in the international Big Four audit firms.

Individual auditors have various levels of experience in dealing with public companies. Previous studies identify experience as an important dimension of human capital (Becker, 1993). For instance, Danos et al. (1989) find that auditors tend to consult their peers within the same office when facing problems in their auditing work. Therefore, experience provides individual auditors with opportunities to acquire expertise in detecting material problems in financial statements. Moreover, given that auditors may freely move from one firm to another, auditors with varying levels of experience have different capabilities and skills to detect and report material problems in financial statements. From this perspective, one may expect that differences

in the working experience among auditors can lead to differences in their audit quality.

Given that talented individuals who migrate to foreign countries can accumulate knowledge, the professional knowledge that IWE auditors gain abroad allows them to offset institutional barriers and improve their audit quality. IWE can also help auditors understand operational complexities and judge accounting-related transactions and activities. Therefore, we examine whether individual auditors with IWE, hereinafter called IWE auditors, provide better audit quality than auditors with only domestic working experience.

We manually collect information on the IWE of auditors in Chinese audit firms. According to the Chinese Institute of Certified Public Accountants (CICPA), the total audit revenues of the 100 largest audit firms in China amounted to RMB 34.8 billion in 2013, ranking the Chinese audit market among the major audit markets in the world. Although individual auditor information is not publicly available in the US, firms in China are required to disclose the engaged individual auditors and audit firms in their audit reports, thereby allowing one to examine the characteristics and backgrounds of these auditors. Such data allow us to analyze individual auditors at the smallest possible unit, namely, the engaged individual auditor.

We examine the effects of IWE auditors on audit quality by performing a pooled OLS regression, and the results reveal an association between IWE and improved audit quality. Specifically, IWE auditors can decrease the accruals management, below-the-line item transactions, and audit reporting aggressiveness of a firm but increase its audit fees, and these factors are often used to measure the effort level of an auditor. We also conduct several tests that strongly support the effects of IWE on audit quality.

However, IWE can serve as a proxy for other characteristics of individual auditors. For example, certain kinds of individuals have a better chance of acquiring IWE than their

counterparts. To address this endogeneity concern, we manually collect information on the characteristics of individual auditors and conduct a principal component analysis to proxy for the other characteristics of these auditors. Moreover, given that cross-listed companies may have better disclosure mechanisms in a highly developed market economy and that they are subject to double audits, these companies have higher financial reporting quality (Lang et al., 2003). To exclude this potential effect, we control for the effect of companies that simultaneously issue B or H shares. The results all point toward the better audit quality of IWE auditors, thereby supporting the effects of IWE on audit quality.

We also address the self-selection problem – that is, IWE auditors prefer clients with better audit quality. To rule out this possibility, we adopt the propensity score matching (PSM) method to obtain one-to-one matching observations. Peel and Makepeace (2012) emphasize the importance of the PSM method in auditing research. In our PSM sample, an IWE auditor and his/her PSM-matched auditor are identical in terms of the predicted likelihood of being an IWE auditor *ex-ante*. We repeat our regression with the PSM sample and obtain similar results.

We further investigate how the IWE of chief financial officers (CFOs) and the different roles played by auditors influence the relationship between IWE auditors and audit quality. We find that CFOs with IWE are very conservative in the client company of IWE auditors. Following Lennox, Wu, and Zhang (2014) in distinguishing the roles played by auditors in the audit process, we find that reviewer partners have crucial roles in affecting audit quality. In particular, reviewer partners with IWE provide better audit quality in terms of low accruals, less below-the-line items, and less audit reporting aggressiveness. However, engagement partners with IWE request for high audit fees.

In addition, we also examine whether financial analysts benefit from the financial reports

audited by IWE auditors. Such financial reports are associated with highly precise analyst forecasts and narrow analyst forecast dispersion.

Our paper contributes to the literature in several ways. First, we show that talents with IWE return to their home countries with additional knowledge and skills. This finding supports the findings of Giannetti et al. (2015) in the audit field. Moreover, by using the unique data from China, which is the largest emerging economy in the world, we provide important policy implications for other emerging countries.

Second, previous studies on the relationship between auditor specialization and audit quality are mostly based on auditors' industry specialization, industry expertise, or audit experience (e.g., Payne, 2008; Krishnan, 2003; Balsam, Krishnan, and Yang, 2003; Lim and Tan, 2008; Kwon, Lim, and Tan, 2007; Duncan, Cahan, and Naiker, 2010). However, we focus on another dimension of auditor knowledge accumulation, namely, their skills and experience with different accounting and audit standards. In this way, we address a gap in the literature concerning auditors' skill and audit quality from a novel perspective.

Third, this paper complements the literature on auditors' professional judgment. Auditors' knowledge regarding accounting standards and their understanding of the fair disclosure of accounting information form a crucial basis for their sound professional judgment. In this regard, auditors' professional judgment is a function of their knowledge, skill, capability, and incentives, as well as the environment (Einhorn and Hogarth, 1981). Apart from introducing a new factor that significantly affects audit quality, this study complements the findings of Libby and Luft (1993) and Tan (1995) using archival data.

Fourth, to the best of our knowledge, this paper is the first to examine the difference between auditors with and without IWE in the Big Four accounting firms. Gul et al. (2013) study

the overall effects of the characteristics of individual auditors. We extend their work by identifying IWE as a source of variations in individual auditors' audit quality. We also analyze the interaction between IWE auditors and CFOs with international experience. The CFO literature shows that CFOs have a substantial amount of control over the reported financial results of their firms. Further, previous studies discuss the relationship between auditors and CFOs, while this study provides evidence on the overall effect of CFOs and auditors with international experiences on audit quality. We specifically find that CFOs with international experience become more conservative if IWE auditors audit the companies of the former.

This study offers important policy implications for policy makers and regulators. The findings explicitly indicate that IWE auditors offer better audit services, thereby motivating policy makers to find individual auditors who provide various auditing services. This study also provides evidence to support the heterogeneity of individual auditors. Given that the effects of individual auditors are reflected in their audit quality, the disclosure of engaged individual auditors in financial statements may provide additional information about the audit quality of these auditors based on their backgrounds.

The rest of this paper is organized as follows. Section 2 reviews the related literature and presents the hypothesis. Section 3 introduces the main variables, sources, and descriptive statistics of the data. Section 4 discusses the research design and presents the empirical results. Section 5 studies the effect of IWE auditors on analyst forecast accuracy and its dispersion. Section 6 concludes the paper.

## 2 Institutional Background, Literature Review, and Hypothesis

### 2.1 Institutional Background

The auditing profession was introduced in China in the early 1980s, and it has rapidly expanded ever since. Before 1998, almost all major audit firms in China, except for international firms, were sponsored by and affiliated with the government (DeFond et al., 1999), thereby compromising auditor independence, especially with the auditing of government-controlled companies. In 1998, China launched a disaffiliation program that required audit firms to disaffiliate themselves from governments or universities (Gul et al., 2009). After this point, to audit a public firm in China, the audit firm must have a minimum number of 55 certified public accountants (CPAs)<sup>1</sup> and obtain a special license from the Ministry of Finance of the People's Republic of China (MOF) and the China Securities Regulatory Commission (CSRC).

The Chinese audit market also has a high degree of dispersion. For instance, the 10 largest audit firms in the world audit only 20% to 30% of the publicly listed companies in China (Wang et al., 2008), while the international Big Four auditors obtained an 86.2% market share (in total assets audited) in 2014. Moreover, the auditing standards in China require that the engaged auditors sign audit reports to indicate responsibility for their audits. Audit reports usually have two signing auditors, with the senior signing auditor performing the review work (reviewer partner) and the junior signing auditor performing the fieldwork (engagement partner). Signing auditors can be partners or senior managers. This unique institutional arrangement allows us to examine whether international work experience produces a meaningful variation in audit quality while controlling for other individual characteristics of signing auditors.

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<sup>1</sup> Since 2012, the minimum number of CPAs has increased to 120.



## 2.2 Literature Review

### 2.2.1 International working experience

Previous studies show that emigrants may benefit emerging countries by returning to their home countries with additional skills and knowledge, a circumstance known as “brain gain.” Mountford (1997) shows that emigration may permanently increase the average productivity level of the source economy. Kerr (2008) further proposes that the migration of skilled human capital from poor countries may result not only in negative “brain drain” but also in a positive “brain bank” by accumulating knowledge abroad and transferring such knowledge to domestic investors. Using cross-sectional data from 127 countries, Beine et al. (2008) find that skilled migration prospects positively affect gross human capital formation.

At the firm level, de la Tour et al. (2011) and Luo and Yu (2012) find that internationally skilled executives contribute to the technological progress and development of a firm. Giannetti et al. (2015) further find that directors with international experience positively affect the policies, corporate governance, and performance of their firms. In this paper, we investigate how individual auditors with IWE provide audit services.

### 2.2.2 Audit quality

Previous studies have analyzed audit quality mostly at the level of the audit firm or a city-based practice office (e.g., Francis and Krishnan, 1999; Krishnan, 2005; Low, 2004; Reynolds and Francis, 2000)<sup>2</sup> in different markets, including the UK (Abidin et al., 2010). Audit quality is a product of auditor competence and independence, which are in turn determined by the ability of auditors to discover a breach of accounting standards and their incentives to report

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<sup>2</sup> Francis (2004) presents an excellent review related to this topic.

such breaches (Gul et al., 2013). Audit quality and auditor size can also be applied at the office level. For example, a client that is smaller than a Big Four firm may remain important to one of its offices (Gul et al., 2013). Accordingly, Reynolds and Francis (2000), Krishnan (2005), and Francis and Yu (2009) analyze audit quality at the office level, and they find that the larger offices of Big Four firms are of a higher quality, which can be attributed to their high level of in-house expertise.

In their review paper, DeFond and Francis (2005) suggest that audit quality analysis must be moved from the audit firm or office level to the individual auditor level. Similarly, Church et al. (2008) recommend performing additional research to determine whether a systematic relationship exists between individual characteristics and audit reporting quality. This paper investigates the effects of the recent tendency of international talent backflow and individual auditor characteristics to determine audit quality. Although analyzing audit quality can be extended from the office level to the individual auditor level, only a few studies have examined the roles of individual auditors in determining audit quality. With a few exceptions, including studies on the differences in the tenure, years of experience, and industry specialization of auditors (e.g., Carey and Simnett, 2006; Kallunki et al., 2009), previous studies have devoted little attention to the effects of the heterogeneity of individual auditors. Chen et al. (2010) analyze how economic dependence affects audit quality at the individual auditor level by using Chinese data and show that the effects of client importance on auditor independence are influenced by the strength of investor protection. Gul et al. (2013) use unique data from China to examine whether and how individual auditors affect audit outcomes at the individual auditor level and find that the effects of individual auditors on audit quality are both economically and statistically significant.

## 2.3 Hypothesis Development

Individual auditor engagement is arguably not the same within an audit firm or an audit office/branch. Indeed, engaged individual auditors have varying levels of experience in dealing with publicly listed companies at different stages of the auditing process. In this way, experience is an important dimension of human capital (Becker, 1993). Danos et al. (1989) find that auditors tend to consult their peers within the same office when facing problems in their auditing work. Therefore, the experience of individual auditors in serving a different firm or office provides them with opportunities to acquire expertise in detecting material problems in financial statements.

Previous studies show that individual working experience affects auditor behavior. Bowlin, Hales, and Kachelmeier (2009) examine the effect of working experience as an auditor on individual professional behavior, and they find that CFOs with audit working experience are more conservative than those without experience. Giannetti et al. (2015) demonstrate that international directors can improve their firm's corporate governance and performance by using their expertise accumulated abroad. Our hypothesis focuses on the relationship between IWE auditors and audit quality. Similar to Giannetti et al. (2015), we anticipate that the IWE of individual auditors enhances their audit quality.

Audit quality may be influenced by the weak institutional environment of China (Ke et al., 2015). However, most individual auditors with working experience in countries with strong institutional environments may be highly independent and show a better performance in monitoring companies. Given that talented individuals who have migrated to foreign countries can accumulate knowledge (Saxenian, 2006), the professional knowledge that auditors gain

abroad can improve their audit service and allow them to offset institutional barriers, thereby improving their audit quality.

Moreover, auditors who work international usually obtain professional audit training and follow the high auditing standards and strict audit procedures of international auditor firms, which may consequently improve their professional abilities. Therefore, IWE can help them further understand operational complexities and judge related accounting transactions and activities.

Therefore, we propose the following:

*Hypothesis 1: Ceteris paribus, individual auditors with IWE offer better audit quality than those without IWE.*

### **3 Sample, Variable Definitions, and Descriptive Statistics**

#### **3.1 Sample and Data**

We conduct an empirical analysis using Chinese companies that were publicly traded in Chinese A-share markets and audited by the international Big Four audit firms from 2001 to 2012. We exclude firms in the financial sector and obtain data from difference sources. First, we manually collect information on the IWE of individual auditors from the official website of MOF,<sup>3</sup> which provides information about all individual audit partners. We collect information on the years during which these auditors have obtained their professional certification and the number of years during which they have been engaged in audit work. We also manually collect information on the background of auditors (e.g., gender, age, and education degree) from the

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<sup>3</sup> The website is available at <http://kjs.mof.gov.cn> (in Chinese).

official CICPA website. Following Gul et al. (2013), we collect information on the characteristics of auditors from the enquiry system of CICPA<sup>4</sup>. We manually input the full name of each individual auditor into the relevant search fields and then match the search results with the audit firm and individual auditor data collected from the annual report of their clients.

We obtain financial and industry information on clients and information on auditors and audit firms from the database of the China Stock Market and Accounting Research (CSMAR). We also manually classify the ultimate controllers of listed firms into state-owned enterprises and private firms. Appendix 1 presents the definitions of the variables that are used in our empirical analysis.

## 3.2 Main Variables

### 3.2.1 International working experience of individual auditors

This study investigates the effects of IWE auditors on the audit quality of individual auditors. We manually identify whether an individual auditor has IWE by consulting the official website of the MOF. We obtain information about the audit partner, including the name of the auditor, the year s/he received his/her professional certification, and how long s/he has been engaged in auditing work, from the announcements of MOF, which discloses ministerial agreements to set up audit firms. For instance, CPA Yang Shaoxin, who is the audit partner of PricewaterhouseCoopers, has more than 10 years of working experience, including 5 years of

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<sup>4</sup> The website is available at <http://cmis.cicpa.org.cn> (in Chinese).

domestic work experience. Based on this information, we conclude that Mr. Yang has 5 years of IWE. We identify whether an individual auditor has IWE based on this criterion.

The auditing standards in China require auditors to sign audit reports (MOF, 1995a, 1995b), with each report usually having two signing auditors. For each client, we construct the dummy variable *International*, which takes a value of 1 if the client is audited by at least one auditor with IWE and 0 otherwise<sup>5</sup>.

We also construct the continuous variable  $\ln(\text{International years})$ , which represents the natural logarithm of the auditor's number of years of IWE plus one. If we take Mr. Yang as an example, given his five years of IWE, the value of  $\ln(\text{International years})$  is  $\ln(5 \text{ years} + 1)$ . For this proxy, we take the maximum number of years of IWE if both engaged auditors have IWE.

### 3.2.2 Audit quality measures

According to DeFond and Zhang (2014), audit quality can be measured via the outputs and inputs of the audit process. Therefore, we consider discretionary accruals, below-the-line items, and aggressive audit opinions as indicators of output-based audit quality. Given that all firms in our sample are audited by Big Four auditors, we consider audit fees to be indicators of input-based audit quality, which we expect can be used to measure the effort level of an auditor.

We also consider both input- and output-related measures of audit quality. These measures complement one another, and evidence based on different measures can provide a highly

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<sup>5</sup> We also use a strict alternative to proxy for IWE auditors. This proxy takes a value of 1 if the client is audited by *all* auditors with international working experience and 0 otherwise. The same findings are obtained.

comprehensive understanding of how the IWE of auditors affects their audit quality (DeFond and Zhang, 2014; Goodwin and Wu, 2016).

### ***Accrual Management (DACC)***

Following prior studies, we use the absolute value of *DACC* as a proxy for accrual management. Given the low explanatory power of traditional *DACC* measures adopting the Jones (1991) model, we measure discretionary accruals following the performance-adjusted accrual model (Kothari et al., 2005) to decompose the total accruals into normal and discretionary components as follows:

$$\frac{TACC_{i,t}}{TA_{i,t-1}} = \alpha + \beta_1 \left( \frac{1}{TA_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta REV_{i,t}}{TA_{i,t-1}} \right) + \beta_3 \frac{PPE_{i,t}}{TA_{i,t-1}} + \beta_4 ROA + \varepsilon_{i,t} \quad , (1)$$

where *TACC* denotes the total accruals of the client, which is measured as the net income before extraordinary items less the cash flow from operations; *TA* denotes the total assets of the client;  $\Delta REV$  denotes the change in revenue; *PPE* denotes the gross property, plant, and equipment; and *ROA* denotes the return on assets.

We also control for year- and industry-fixed effects when estimating Eq. (1).<sup>6</sup> We then calculate *DAAC* as follows using the coefficient estimates obtained from Eq. (1):

$$DA_{i,t} = \frac{TACC_{i,t}}{TA_{i,t-1}} - \left[ \hat{\alpha} + \hat{\beta}_1 \left( \frac{1}{TA_{i,t-1}} \right) + \hat{\beta}_2 \left( \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{TA_{i,t-1}} \right) + \hat{\beta}_3 \frac{PPE_{i,t}}{TA_{i,t-1}} + \hat{\beta}_4 ROA \right] \quad , (2)$$

where  $\Delta REC$  denotes the change in receivables. We use the absolute, positive, and negative values of *DA* as proxies for the *DACC* of the client in our empirical analysis. Higher values of

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<sup>6</sup> We do not run cross-section regressions for each year and industry because of the limited number of firms in our sample. We use a two-digit code for all sectors following the CSRC industry classification scheme.

absolute and positive *DAAC* and lower values of negative *DAAC* indicate lower audit quality.

### ***Below-the-Line Items (BL)***

*BL* items usually refer to extraordinary income or expenses that a company does not incur in its daily operations. Previous studies have considered *BL* items, which are components of non-operating income, to be earnings management tools (Bartov, 1993; Herrmann et al., 2003). Walsh, Craig, and Clarke (1991) observe the same pattern in Australia. In China, Chen and Yuan (2004) find that firms with an operating ROE below the rights issue qualification (e.g., 10%) have higher levels of non-operating income to gain rights issue approval. *BL* transactions are often dubious related-party transactions (Gul et al., 2013). Following Gul et al. (2013), we define *BL* as the sum of investment net income, profit from other operations, and non-operating net income, which is scaled by the average of the beginning and ending total assets. A higher value of *BL* indicates lower audit quality.

### ***Audit Reporting Aggressiveness (ARAgg)***

The modified audit opinions (MAOs) in China include unqualified with explanatory notes, qualified, disclaimed, and adverse opinions. In this section, we investigate how international talent can affect audit opinions. We calculate *ARAgg* by following the procedures introduced in previous studies (DeFond et al., 1999; Gul et al., 2013). First, we construct a dummy variable, *MAO*, that equals to 1 if a client receives a modified audit opinion and 0 otherwise. Second, we use a logit regression model to estimate the predicted probability of MAO issuance. The independent variables include *Quick* (i.e., sum of cash, short-term investments, notes receivables, and accounts receivables divided by current liabilities), *Account Receivables*, *Inventory* and



*Other Receivables* (ending balances of the respective accounts divided by total assets), *ROA*, *Loss*, *Leverage*, *Size*, and *Age*. Third, we control for the industry effects based on the CSRC industry classification scheme and then estimate the logit model by year. After obtaining the predicted probability of *MAO* (*Predicted opinion*), we calculate *ARAgg* as follows:

$$ARAgg = Predicted\ opinion - Actual\ opinion \quad , (3)$$

where *Actual opinion* takes a value of 1 if the client receives an MAO and 0 otherwise. A higher value of *ARAgg* indicates that the propensity of the auditor to issue MAOs is lower than what can be predicted from the whole sample (Gul et al., 2013).

### ***Audit Fees***

According to DeFond and Zhang (2014), “Audit fees are used to proxy for audit quality because they are expected to measure the auditor’s effort level, which is an input to the audit process that is intuitively related to audit quality.” Following prior studies (e.g., Guan et al., 2016), we consider the natural logarithm of audit fees ( $Ln(Fee)$ ), with a higher value of  $Ln(Fee)$  indicating a higher effort level of the auditor and higher audit quality.

### 3.2.3 Control variables

As suggested in previous studies (Chan et al., 2006; Wang et al., 2008; Dechow et al., 2010), the financial characteristics and ultimate ownership of a client may affect his/her financial reporting quality. Therefore, we include several variables that reflect client characteristics, namely, the presence of loss (*Loss*), client size (*Size*; measured as the natural logarithm of total assets),

leverage ratio (*Leverage*), listing age ( $\ln(\text{Age})$ ; natural logarithm of the number of years that a company has been listed), operating cash flow ( $\ln(\text{OCF})$ ; natural logarithm of operating cash flows divided by the average of the beginning and ending total assets), growth rate of the client's sales (*Growth*), type of client ownership (*SOE*; equal to 1 if the client is ultimately controlled by the government and 0 otherwise), *International CEO* (equal to 1 if the client has a CEO with IWE and 0 otherwise), and *International CFO* (equal to 1 if the client has a CFO with IWE and 0 otherwise)<sup>7</sup>.

Following Gul et al. (2013), we control for auditor characteristics. We calculate the auditor size (*PSize*), tenure (*Tenure*), and relative importance of a client (*CI*) to an auditor at both the audit firm and individual auditor levels (denoted by subscripts AF and IA, respectively). When audit fees are used as the dependent variable, we also control for a dummy (*Interim*) to indicate whether the semi-annual report is audited and another dummy (*MAO*) to indicate the existence of an MAO, as suggested by Guan et al. (2016). Appendix 1 presents the detailed definitions of the control variables.

### 3.3 Summary Statistics

Table 1 presents the summary statistics of the main variables. We winsorize all continuous variables at the 1<sup>st</sup> and 99<sup>th</sup> levels to mitigate the potential influence of outliers. The *DAAC* estimates in Panel A are drawn from the clients of the international Big Four audit firms. *BL* has

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<sup>7</sup> To further exclude the influence of CFOs/CEOs with international experience, we drop the firm-year observations with the variable *International CFO* or *International CEO*, which takes the value of 1. We finally drop 127 firm-years and repeat the main model. The findings remain the same.

a mean value of 0.014, which is consistent with the findings of Gul et al. (2013), while  $\ln(\text{Fee})$  has a mean value of 14.391, which is close to the findings of Guan et al. (2016).

Panel B reports the descriptive statistics of the independent variables. Approximately 62.4% of the clients in the sample have been audited by at least one IWE auditor.  $\ln(\text{International years})$  has a mean value of 0.691, which indicates that the auditors have an average IWE of one year<sup>8</sup>.

Panel C shows the descriptive statistics of the control variables. The mean values of auditor size and client importance are similar as those obtained by Gul et al. (2013) at both the audit firm and individual auditor levels; however, Gul et al. (2013) report a higher mean value of average tenure. In terms of auditor characteristics, about 6.2% of the clients in the sample are audited by IWE auditors. The majority of the auditors have completed at least a bachelor's degree. About 70% of the clients are audited by at least one female auditor, and about two-thirds are audited by at least one auditor who has obtained a degree in accounting or finance.

**(Insert Table 1 about here)**

Table 2 compares the dependent and independent variables between the subsamples of clients that employ and do not employ IWE auditors. In terms of audit quality, the subsample with IWE auditors has a lower absolute value of  $DAAC$ , extent of  $ARAgg$ , and extent of  $BL$  items than the subsample with IWE auditors. However, the latter sample has higher audit fees than the former, which suggests that IWE auditors place much effort into their work. The results of these subsamples reveal statistically significant differences in their mean (median)  $|DACCC|$ ,  $BL$ , and  $\ln(\text{Fee})$ . For the independent variables, the client- and auditor-related characteristics present no

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<sup>8</sup>  $e^{0.691} - 1 \approx 1.00$

significant differences.

**(Insert Table 2 about here)**

## 4 Results

### 4.1 Baseline Results

We estimate the relationship between IWE auditors and audit quality by using the following specification:

$$Audit\ Quality_{i,t} = \alpha + \beta_1 Ln(International\ years) / International_{i,t} + \beta_n Control_{i,t} + FixedEffects + \varepsilon_{i,t}, \quad (4)$$

where *Audit Quality* represents the extent of *DACC*, *BL* items, *ARAgg*, and audit fees. The key independent variables in Eq. (4) include *Ln(International years)* and *International*, and we hypothesize a negative sign for  $\beta_1$  when using an absolute and positive value of *DACC*, *BL* and *ARAgg* as the dependent variable but a positive sign for  $\beta_1$  when using a negative value of *DACC* and *Ln(Fee)* as the dependent variable. *Control* represents a list of client-related determinants of audit quality. The regressions are estimated with year and industry effects, and the t-statistics are based on Huber–White standard errors that correct for clustering and are robust to heteroskedasticity and serial correlation (Huber, 1967; White, 1980).

Table 3 presents the results of the main regressions, with the first three columns reporting the effect of IWE auditors on the *DACC* of clients. The coefficient of *Ln(International years)* is significantly negative when we use the absolute value of *DACC* (*/DACC*). As we further divide the sample into two subsamples according to the sign of *DACC*, we find that IWE auditors can

reduce the income-increasing earnings management and downward *DACC* of clients.

The last three columns of Table 3 show that IWE auditors have a significantly negative relationship with the *BL* items and *ARAgg* of clients as well as a significant and positive relationship with audit fees. IWE auditors are given opportunities to accumulate professional knowledge abroad (Giannetti et al., 2015), and such knowledge can improve their capacity. International talent is usually associated with extensive audit experience with international firms and helps auditors (especially those in China) understand principles-based accounting standards. Therefore, the IWE of auditors positively affects the audit quality and financial reporting quality of the client. These findings support Hypothesis 1.

**(Insert Table 3 about here)**

We use alternative measures of  $\ln(\text{International years})$  to confirm the robustness of the aforementioned results. First, we use the dummy variable *International* to verify our results. Second, given that some firms may be audited by two IWE auditors, we take the average or minimum number of years of IWE if both of the engaged auditors have IWE and then construct the variables  $\ln(\text{International years mean})$  and  $\ln(\text{international years min})$ . In this case, we categorize the firm-years into “International Group” only if both signing auditors have IWE. We repeat the regression in Table 3, and the estimation results presented in Table 4 are consistent with the previous results.

**(Insert Table 4 about here)**

#### 4.2 The Timing of Obtaining IWE

Although the above results show that IWE auditors can improve the audit quality of the client, the timing of obtaining IWE may affect this conclusion<sup>9</sup>. If the auditors provide audit services to their clients before working in international countries/regions, then our measure of IWE cannot capture the effect of such experience. We further analyze the dataset to address this concern.

First, our sample period involves 99 IWE auditors. We track the client (listed company) records of these auditors between 2001 and 2012. Among these auditors, 28 (28%) have continuously worked for domestic listed companies from the date of their first appearance in our records to 2012. For example, the signature of individual auditor Mr. Weili Gong first appeared in 2006. Since then, Mr. Gong provided audit services for A-share clients every year until 2012. Our records exclude the possibility that Mr. Gong has worked abroad between 2006 and 2012. Therefore, Mr. Gong most likely obtained his IWE before 2006. We define IWE based on these 28 individual auditors ( $\text{Ln}(\text{International years continue})$ ), and we then repeat the regression in Table 3. Panel A of Table 5 presents the results, which are generally consistent with those presented in Table 3. The coefficients on the key variable  $\text{Ln}(\text{International years continue})$  in the regression model  $BL$  and  $ARA_{agg}$  become marginally significant ( $t = -1.45$  and  $-1.61$ , respectively)

Second, we assume that an individual auditor works abroad if his/her signature in the A-share market does not appear for a specific year. We then compare the number of years that we cannot track in his/her record (*Missing Years*) to the number of years that s/he has worked abroad

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<sup>9</sup> We thank an anonymous reviewer for his comment.

(*International Years*). If the number of *International Years* is greater than *Missing Years*, then the individual auditor has obtained his/her IWE before the year that his/her signature is first observed. For example, the signature of individual auditor Jun Li first appeared in 2006. Since then, Mr. Li provided audit services for A-share clients until 2012, except in 2011. In this case, the number of *Missing Years* is 1, while the number of *International Years* is 2. Therefore, Mr. Li obtained at least one year of IWE before his signature first appeared in 2006.

A total of 53 (61%) individual auditors in our sample are identified as IWE auditors based on this definition<sup>10</sup>. We define IWE auditors by using a conservative approach ( $\ln(\text{International years missing})$ )<sup>11</sup> and then repeat the regression in Table 3. Panel B of Table 5 presents the results, which are generally consistent with those presented in Table 3. The coefficient on the key variable  $\ln(\text{International years missing})$  in the regression model *BL* becomes marginally significant ( $t = -1.64$ ).

Overall, the results in Table 5 are the same as those previously reported, which implies that our measure for IWE captures the effect of such experience.

**(Insert Table 5 about here)**

#### 4.3 Controlling for Auditor Characteristics and Cross-Listing

Our findings may also suffer from an endogeneity problem if IWE auditors have different

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<sup>10</sup> Here, we get 53 IWE auditors when we identify IWE auditors if the number of *International Years* of the auditor is greater than *Missing Years* of this auditor, whereas we have 28 IWE auditors when we identify IWE auditors if the auditor continuously worked for domestic listed companies from the date of their first appearance. We get more IWE auditors here because we use loose the identification requirement.

<sup>11</sup> For the case of Jun Li, the value of  $\ln(\text{International years missing})$  is  $\ln(1+1)$ .

characteristics than non-IWE auditors.<sup>12</sup> To address this problem, we collect data on the characteristics of auditors, including their international education experience, education degree (whether on finance or accounting), age, number of years working as an auditor, and gender. Given that audit reports are usually signed by two auditors, we construct the dummy variable *International Education* for each client, which equals to 1 if the client has been audited by at least one auditor with international education experience and 0 otherwise. *Education* denotes the average education level of the signing auditors; we code this variable as 3, 2, or 1 if the auditor has a master's degree (or higher), bachelor's degree, or no bachelor's degree, respectively. *Auditor Age* and *CPA Experience* represent the average age and number of years than an auditor has spent since s/he has obtained professional certification, respectively. *Female* is equal to 1 if the client has been audited by at least one female auditor and 0 otherwise. *Major* is equal to 1 if the client has been audited by at least one auditor with a degree in accounting or finance and 0 otherwise. To ensure that the auditor characteristics do not affect one another, we conduct principal component analysis and use the first principal components of auditor-related characteristics as proxies for *Auditor Characteristics*.<sup>13</sup>

Given that cross-listed companies may have better disclosure mechanisms under a highly developed market economy and are subject to double audits, these firms have better financial reporting quality (Lang et al., 2003). Ke et al. (2015) assert that the strict institutional environment of Hong Kong positively affects the audit quality of A- and H-share companies.

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<sup>12</sup> We thank an anonymous reviewer for this suggestion.

<sup>13</sup> Appendix 2 presents the results of the principal component analysis.



Therefore, we introduce a dummy variable, *CROSSLIST*, which takes a value of 1 if the client issues B or H shares and 0 otherwise. We control for *Auditor Characteristics* and *CROSSLIST* and then repeat the regression in Table 3. Table 6 presents the regression results, which are substantially consistent with those reported in Table 3.

**(Insert Table 6 about here)**

#### 4.3 PSM Method

Although our regression results indicate that IWE auditors offer high-quality audits, our findings may suffer from another endogeneity problem, that is, the international-trained partner may be self-selecting clients with high demands for audit quality. To rule out the possibility of such endogeneity, we adopt the PSM method (Rosenbaum and Rubin, 1983) to obtain one-to-one matching observations. Given that auditors without IWE (37.6% of the full sample) audit fewer clients than IWE auditors, we match the probability that clients choose the same auditors by constructing a dummy variable, *Non-International*, which is the opposite of *International* and takes a value of 1 if the client has not been audited by IWE auditors and 0 otherwise. For each treatment sample (*Non-International*), we select a matched sample (*International*) with the closest propensity score, which is predicted from a logit model of the probability for a client to choose an auditor without IWE.

Following Chen et al. (2011), we control for several client characteristics, including *SOE*, *Size*, *Leverage*, *ROA*, *ISSUE*, *LLOSS*, *GEO*, *OWNER*, and *CROSSLIST*, as matching variables in the first stage of PSM. We also control for *International CEO* and *International CFO*, which

equal to 1 if the client has a CEO (CFO) with IWE and 0 otherwise. Appendix 1 presents the detailed variable definitions.

To maintain the statistical independence of our tests, we adopt a nearest neighbor matching algorithm without replacement. This algorithm uses the distance between covariate patterns to define “closest.” After selecting a matching sample for the control sample, the selected sample is removed from the matching pool. In the PSM sample, the auditors have no IWE, while the PSM-matched auditors have the same chances of being selected by clients *ex-ante*. Panel A of Appendix 3 shows the logit regression results, while Panel B compares the treatment (*Non-International*) and control (*International*) samples.

Using the samples from the treatment and control groups, we repeat our regression and present the results in Table 7. The coefficients of *Ln(International Years)* remain significant after we control for the potential endogenous problem, which suggests that IWE auditors contribute to audit quality as previously reported.

**(Insert Table 7 about here)**

#### 4.4 Effect of CFOs with International Experience on the Audit Quality of IWE Auditors

CFOs have a substantial amount of control over the financial results being reported by a firm (Geiger and North, 2006). CFOs are also more influential than CEOs in managing accruals (Jiang, Petroni, and Wang, 2010). Recent corporate fraud cases, such as those of Enron, Worldcom, Qwest, and Adelphia, indicate how CFOs can significantly affect accounting quality. Feng, Ge, Luo, and Shevlin (2011) find that about 21% of the CFOs in a sample of 493 firms

associated with the Accounting and Auditing Enforcement Releases between 1982 and 2005 have been charged with fraud. However, none of the CEOs in this sample have faced the same charges. Hennes, Leone, and Miller (2008) show that CFO turnover rates are higher than those of CEOs following accounting restatements.

Therefore, we investigate the effect of CFOs on the audit quality of IWE auditors.<sup>14</sup> Feng, Ge, Luo, and Shevlin (2011) find that individual CFO characteristics may affect the probability of accounting manipulation in a firm. We conjecture that CFOs with IWE may strengthen our findings and help provide highly conservative financial reports.

In Table 8, we include the interaction between a CFO with IWE (*International CFO*) and an IWE auditor. The CFO is more conservative than the IWE auditor in terms of *DACC* and *BL* items, considering that the firm is audited by the latter. The coefficients on the interaction  $\ln(\text{International years}) \times \text{International CFO}$  are negative and significant in the models of positive and negative *DACC* and in the model of *BL*, thereby confirming that CFOs with international experience are very conservative in the client company of IWE auditors.

**(Insert Table 8 about here)**

#### 4.5 The Role of the Reviewer and Engagement Partners

The two signing auditors in a financial statement may play different roles in the audit process. Therefore, we identify the effects of partners and senior managers. Following Lennox, Wu, and Zhang (2014), we identify the first signing auditor (top signature) as the reviewer partner and the second signing auditor (bottom signature) as the engagement partner.

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<sup>14</sup> We thank an anonymous reviewer for his suggestion.

We include the IWE of both partners in the regression, and Table 9 reports the results.<sup>15</sup> The reviewer partner plays a more important role in audit quality than the engagement partner. Reviewer partners with IWE also provide better audit quality in terms of lower accruals, less *BL* items, and less *ARAgg* than engagement partners, while engagement partners with IWE request higher audit fees than reviewer partners.

**(Insert Table 9 about here)**

## 5 Additional Analysis: Analyst Forecast Accuracy and Dispersion

The IWE of auditors significantly improves their audit quality and their clients' financial reporting quality. Such improvements may then affect the perceptions of other market participants. For instance, Krishnan et al. (2013) find that the industry expertise of auditors can decrease the cost of equity because of the enhanced quality of the financial statements that are audited by auditors with industrial expertise. This positive effect on financial reporting quality also improves the earnings forecast accuracy of analysts and decreases forecast dispersion (Behn et al., 2008). This section examines whether security analysts can benefit from the financial reports of IWE auditors. Following previous studies (Behn et al., 2008), we employ the following specification:

$$AFA / AFD_{i,t} = \alpha + \beta_1 \text{Ln}(\text{Overseas years})_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{ZScore}_{i,t} + \beta_4 \text{UE}_{i,t} + \beta_5 \text{VAREARN}_{i,t} + \beta_6 \text{Horizon}_{i,t} + \beta_7 \text{NANA}_{i,t} + \beta_8 \text{LOSS}_{i,t} + \beta_9 \text{EL}_{i,t} + \text{FixedEffects} + \varepsilon_{i,t} \quad (5)$$

In Eq. (5), analyst forecast accuracy (*AFA*) is measured as the mean absolute difference

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<sup>15</sup> We thank an anonymous reviewer for his constructive comment.

between the forecasted earnings per share (EPS) and the actual EPS of the individual analyst divided by the closing price at the end of the year. Analyst forecast dispersion (*AFD*) is defined as the standard deviation of the forecasted EPS that is issued by the individual analyst divided by the closing price at the end of the year.

Firm size (*Size*) is the natural logarithm of the total assets of the client. Financial health (*ZScore*) is calculated using a modified version of Altman's Z-score (Altman, 1968) as follows:

$$ZScore = 3.3 \frac{Earnings\ Before\ Interest\ and\ Taxes_t}{TA_t} + 1.0 \frac{REV_t}{TA_t} + 1.4 \frac{Retained\ Earnings_t}{TA_t} + 1.2 \frac{Working\ Capital_t}{TA_t} + 0.6 \frac{Market\ Capitalization_t}{Total\ Liabilities_t} \quad (6)$$

The unexpected earnings (*UE*) are calculated as the absolute difference between the EPS in the current and previous years divided by the absolute value of EPS in the previous year. *VAREARN* represents the time-series standard deviation of the EPS of a company over the past three years. *HORIZON* denotes the natural logarithm of the average number of calendar days between the forecasted announcement date and the actual earnings announcement date. *NANA* represents the natural logarithm of the number of analysts following a specific client. *EL* denotes the EPS of the client. All stock return and analyst forecast data are obtained from the CSMAR database<sup>16</sup>.

The coefficients of  $\ln(International\ years)$  are negative and statistically significant in Table 10, which suggests that the financial reports signed by IWE auditors significantly increase analyst forecast accuracy and decrease analyst forecast dispersion. Therefore, IWE auditors have

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<sup>16</sup> Following Behn et al. (2008), we exclude the number of analysts (*NANA*), loss dummy (*LOSS*), and earnings level (*EL*) when using *AFD* as the dependent variable.

high-quality audits and help analysts judge the financial situation of a company.

**(Insert Table 10 about here)**

## **6 Conclusion**

By examining non-financial Chinese companies that were publicly traded in the Chinese A-share markets and audited by the Big Four audit firms between 2001 and 2012, we study the effects of IWE auditors on audit quality in emerging markets. We find that IWE auditors can significantly improve their audit quality. Our findings suggest that IWE can contribute to the human capital of an auditor, which echoes the findings of Giannetti et al. (2015). Our results remain robust when the potential influence of endogeneity is considered.

We conduct several additional tests, the results of which strongly support the effects of IWE on audit quality. CEOs with IWE are very conservative in the client company of IWE auditors. Concerning the effect of the different roles played by auditors, we find that the reviewer partner plays a more important role in audit quality than the engagement partner. Moreover, reviewer partners with IWE provide better audit quality than engagement partners in terms of lower accruals, less *BL* items, and less *ARA*g. However, engagement partners with IWE request higher audit fees than reviewer partners. Security analysts can also benefit from the financial reports of IWE auditors.

These findings emphasize the importance of auditor knowledge or human capital for audit quality. Although previous studies have investigated the determinants of audit quality, most have been based on auditors' industry specializations. For instance, Gul et al. (2013) examine whether

and how individual auditors affect audit outcomes. Our results extend their study because we focus on a new factor (IWE of auditors) that affects audit quality. However, we acknowledge that foreign countries do not comprise a homogeneous group.

Given issues concerning data availability, we cannot explore the nature of IWE, including from where (regions/countries) the experience was obtained or the type of industry or role in which the experience was obtained. We find that an auditor's assumption of an accounting role in a developed country can help us explore the effect of IWE on audit quality. Therefore, this topic requires further research.

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## Appendix 1: Variable Definitions

Variable	Definition
<i> DACC </i>	Absolute value of <i>DACC</i> , which is estimated by a modified Jones model in the regression residuals while controlling for current ROA.
<i>ARAgg</i>	Audit reporting aggressiveness, which is estimated following DeFond et al. (1999).
<i>BL</i>	Sum of investment net income, profit from other operations, and non-operating net income scaled by the average of the beginning and ending total assets.
<i>Ln(Fees)</i>	Natural logarithm of the audit fees of the client.
<i>International</i>	Dummy variable that equals to 1 if the client has been audited by at least one IWE auditor and 0 otherwise.
<i>Ln(International years)</i>	Natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor with more international working experience.
<i>Ln(International years min)</i>	Natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor with less international working experience if more than one individual auditor from the audit team has international working experience.
<i>Ln(International years mean)</i>	Natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on the average international working experience of an auditor if more than one individual auditor from the audit team has international working experience.
<i>Ln(International years reviewer)</i>	Natural logarithm of the number of years of international working experience plus 1 for the reviewer auditor.
<i>Ln(International years engagement)</i>	Natural logarithm of the number of years of international working experience plus 1 for the engagement auditor.
<i>Ln(International years continue)</i>	Natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor who has international working experience and continuous domestic experience since the first appearance of his/her signature in our records between 2001 and 2012.
<i>Ln(International years missing)</i>	Natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor with more <i>Abroad years</i> than <i>Missing years</i> . <i>Abroad years</i> denote the number of years that individual auditors have worked abroad, while <i>Missing years</i> denote the number of years that we cannot track the audit service record of an auditor for A-share clients since the first appearance of his/her signature in our records between 2001 and 2012.
<i>Loss</i>	Dummy variable that equals to 1 if the client has reported a loss and 0 otherwise.

<i>Size</i>	Natural logarithm of the total assets of the client.
<i>Leverage</i>	Total liabilities divided by total assets.
<i>Ln(Age)</i>	Natural logarithm of the number of years that the company has been listed.
<i>Ln(OCF)</i>	Natural logarithm of operating cash flows divided by the average of the beginning and ending total assets.
<i>Growth</i>	Annual growth rate of the sales of the client.
<i>SOE</i>	Dummy variable that equals to 1 if the client is ultimately controlled by the government and 0 otherwise.
<i>International CEO</i>	Dummy variable that equals to 1 if the client has a CEO with international experience and 0 otherwise.
<i>International CFO</i>	Dummy variable that equals to 1 if the client has a CFO with international experience and 0 otherwise.
<i>PSize<sub>af</sub></i>	Client portfolio size of the audit firm, which is measured as $\sum_{i=1}^n Size_i$ , where $Size_i$ is the natural logarithm of the total assets of client $i$ and $n$ is the number of clients that is audited by the audit firm in a given year.
<i>PSize<sub>ia</sub></i>	Client portfolio size of an individual auditor, which is measured as $\sum_{k=1}^m \sum_{i=1}^l Size_i$ , where $i$ is the number of clients that is audited by auditor $k$ in a given year and $m$ is the number of auditors that sign the audit reports.
<i>Tenure<sub>af</sub></i>	Number of consecutive years that the audit firm has audited the client.
<i>Tenure<sub>ia</sub></i>	Mean number of consecutive years that the signing auditors have signed the annual audit report of the client.
<i>CI<sub>af</sub></i>	Client importance at the audit-firm level, which is measured as client size divided by $PSize_{AF}$ .
<i>CI<sub>ia</sub></i>	Client importance at the individual auditor level, which is measured as client size divided by $PSize_{IA}$ .
<i>MAO</i>	Dummy variable that equals to 1 if the client has received an MAO (including unqualified opinions with explanatory notes, qualified opinions, and disclaimers or adverse opinions) and 0 otherwise.
<i>Interim</i>	Dummy variable that equals to 1 if the interim (semi-annual) report of the client is audited and 0 otherwise.
<i>International Education</i>	Dummy variable that equals to 1 if the client has been audited by at least one auditor with foreign education and 0 otherwise.
<i>Education</i>	Average education level of the signing auditors. We code the education level of the auditor who has obtained a master's degree (or higher), a bachelor's degree, and no

	bachelor's degree as 3, 2, and 1, respectively.
<i>Auditor Age</i>	Mean age of the signing auditors.
<i>CPA Experience</i>	Mean working experience of the signing auditors. Working experience is equal to the number of years since the auditor has obtained professional certification.
<i>Female</i>	Dummy variable that equals to 1 if the client has been audited by at least one female auditor and 0 otherwise.
<i>Major</i>	Dummy variable that equals to 1 if the client has been audited by at least one auditor with a degree in accounting or finance and 0 otherwise.
<i>Auditor Characteristics</i>	First principal component of auditor characteristics, including <i>International education, Education, CPA Experience, Female, and Major</i> .
<i>ROA</i>	Return on assets.
<i>ISSUE</i>	Dummy variable that equals to 1 if the client issues equity in the current year and 0 otherwise.
<i>LLOSS</i>	Dummy variable that equals to 1 if the client has reported a loss in the previous year and 0 otherwise.
<i>GEO</i>	Natural logarithm of the marketization index for each province.
<i>OWNER</i>	Percentage of ownership held by the largest shareholder.
<i>CROSSLIST</i>	Dummy variable that equals to 1 if the client issues B or H shares and 0 otherwise.
<i>AFA</i>	Analyst forecast accuracy, which is defined as the mean absolute difference between the forecasted EPS of an individual analyst and the actual EPS divided by the closing price at the end of the year.
<i>AFD</i>	Analyst forecast dispersion, which is defined as the standard deviation of the forecasted EPS issued by the individual analyst divided by the closing price at the end of the year.
<i>ZScore</i>	Financial health of the client, which is calculated using a modified version of Altman's Z-score (Altman, 1968).
<i>UE</i>	Unexpected earnings, which are calculated as the absolute difference between the EPS in the current and previous years divided by the absolute value of EPS in the previous year.
<i>VAREARN</i>	Time-series standard deviation of the EPS of a company over the past three years.
<i>HORIZON</i>	Natural logarithm of the average number of calendar days between the forecast announcement date and the actual earnings announcement date.
<i>NANA</i>	Natural logarithm of the number of analysts that follow a specific client.
<i>EL</i>	Earnings per share of the client.

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## Appendix 2: Principal Components Analysis Results

Variable	Comp1
<i>International Education</i>	-0.104
<i>Education</i>	0.213
<i>Auditor Age</i>	<b>0.634</b>
<i>CPA Experience</i>	<b>0.661</b>
<i>Female</i>	-0.011
<i>Major</i>	0.323
<i>Eigenvalue</i>	1.543
<i>Proportion</i>	0.257

### Notes:

This table presents the principal components analysis results. *International Education* equals to 1 if the client has been audited by at least one auditor with foreign education, and 0 if otherwise. *Education* denotes the average education level of the signing auditors. *Auditor Age* denotes the average age of the signing auditors. *CPA Experience* denotes the average number of years of work experience of the signing auditors. *Female* equals to 1 if the client has been audited by at least one female auditor, and 0 if otherwise. *Major* equals to 1 if the client has been audited by at least one auditor with a degree in accounting or finance, and 0 if otherwise. Refer to Appendix 1 for further definitions.

### Appendix 3: PSM Results

Panel A: First-stage regression results of PSM method

Variables	<i>Non-International</i>
<i>SOE</i>	-0.449*** (-2.69)
<i>Size</i>	-0.109** (-1.98)
<i>Leverage</i>	-0.355 (-0.80)
<i>ROA</i>	0.344 (0.28)
<i>ISSUE</i>	0.251 (1.03)
<i>LLOSS</i>	-0.300 (-0.85)
<i>GEO</i>	0.307 (1.12)
<i>OWNER</i>	0.600 (1.29)
<i>CROSSLIST</i>	-0.116 (-0.79)
<i>International CEO</i>	-0.057 (-0.22)
<i>International CFO</i>	0.041 (0.14)
<i>Constant</i>	1.614 (1.43)
<i>Obs.</i>	1002
<i>Pseudo R-squared</i>	0.019



Panel B: Comparison between the treatment (Non-International) and control (International) samples

Variable	Mean		% bias	<i>t</i> test	
	Treatment Group (Non-International)	Control Group (International)		<i>t</i> -value	<i>p</i> -value
<i>SOE</i>	0.725	0.722	0.6	0.08	0.0935
<i>Size</i>	22.784	22.837	-3.5	-0.48	0.634
<i>Leverage</i>	0.474	0.478	-2.2	-0.31	0.757
<i>ROA</i>	0.055	0.053	2.3	0.32	0.747
<i>ISSUE</i>	0.087	0.090	-0.9	-0.13	0.898
<i>LLOSS</i>	0.034	0.053	-9.1	-1.25	0.213
<i>GEO</i>	2.176	2.161	6.0	0.83	0.407
<i>OWNER</i>	0.459	0.452	4.0	0.55	0.585
<i>CROSSLIST</i>	0.468	0.476	-1.6	-0.22	0.827
<i>International CEO</i>	0.082	0.085	-1.0	-0.13	0.895
<i>International CFO</i>	0.066	0.053	5.6	0.77	0.443

*Notes:*

This table presents the first-stage PSM regression results and compares the treatment and control samples. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets. *ROA* is the return on assets of the client. *ISSUE* equals to 1 if the client issues equity in the current year, and 0 if otherwise. *LLOSS* equals to 1 if the client has reported a loss in the previous year, and 0 if otherwise. *GEO* is the natural logarithm of the marketization index for each province. *OWNER* denotes the percentage of ownership being held by the largest shareholder. *CROSSLIST* equals to 1 if the client issues B or H shares, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise. Appendix 1 presents further definitions. The *t*-statistics are enclosed in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table 1: Descriptive Statistics**

Variable	Obs.	Mean	Std. Dev.	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile
Panel A: Dependent variables						
<i> DACC </i>	988	0.051	0.043	0.017	0.041	0.071
<i>ARAgg</i>	1013	-0.008	0.143	0.002	0.006	0.019
<i>BL</i>	1032	0.014	0.023	0.002	0.007	0.020
<i>Ln(Fee)</i>	958	14.391	1.113	13.592	14.263	15.068
Panel B: Treatment variable						
<i>International</i>	1032	0.624	0.485	0.000	1.000	1.000
<i>Ln(International years)</i>	1032	0.691	0.540	0.000	1.099	1.099
Panel C: Control variables						
<i>Loss</i>	1032	0.067	0.250	0.000	0.000	0.000
<i>Size</i>	1032	22.963	1.564	21.776	22.764	23.936
<i>Leverage</i>	1032	0.490	0.190	0.356	0.493	0.629
<i>Ln(Age)</i>	1032	2.076	0.610	1.792	2.197	2.485
<i>Ln(OCF)</i>	1032	-1.795	2.271	-2.914	-2.268	-1.775
<i>Growth</i>	1032	0.197	0.319	0.024	0.155	0.314
<i>SOE</i>	1032	0.780	0.414	1.000	1.000	1.000
<i>International CEO</i>	1032	0.083	0.277	0.000	0.000	0.000
<i>International CFO</i>	1032	0.063	0.243	0.000	0.000	0.000
<i>PSize<sub>af</sub></i>	1032	762.617	324.218	480.181	802.561	980.893
<i>PSize<sub>ia</sub></i>	1032	122.616	70.938	69.730	105.021	153.156
<i>Tenure<sub>af</sub></i>	1032	2.641	2.499	1.000	2.000	4.000
<i>Tenure<sub>ia</sub></i>	1032	0.978	0.913	0.000	1.000	1.500
<i>CI<sub>af</sub></i>	1032	0.038	0.023	0.023	0.028	0.050
<i>CI<sub>ia</sub></i>	1032	0.255	0.139	0.145	0.213	0.335
<i>MAO</i>	1032	0.032	0.176	0.000	0.000	1.000
<i>Interim</i>	1032	0.053	0.225	0.000	0.000	1.000
<i>International Education</i>	1032	0.062	0.241	0.000	0.000	0.000
<i>Education</i>	1032	2.088	0.437	2.000	2.000	2.500
<i>Auditor Age</i>	1032	36.832	3.740	34.500	36.000	39.000
<i>CPA Experience</i>	1032	8.369	3.275	6.000	8.500	10.500
<i>Female</i>	1032	0.700	0.459	0.000	1.000	1.000
<i>Major</i>	1032	0.575	0.495	0.000	1.000	1.000

*Notes:*

This table presents the descriptive statistics for the sample, which comprises firm observations from 2001 to 2012. *|DACC|* is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm. *Ln(Fee)* is the natural logarithm of audit fee. *International* is an indicator variable that equals to 1 if the client has been audited by at least one auditor with international working experience, and 0 if otherwise. *Ln(International years)* is the natural logarithm of the number of

years of international working experience plus 1. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets. *Ln(Age)* is the natural logarithm of the number of years that a company has been listed. *Ln(OCF)* is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* denotes the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise. *PSize<sub>af</sub>* and *PSize<sub>ia</sub>* denote the client portfolio sizes of the audit firm and an individual auditor, respectively. *Tenure<sub>af</sub>* denotes the number of consecutive years that the audit firm has audited the client, while *Tenure<sub>ia</sub>* denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client. *CI<sub>af</sub>* and *CI<sub>ia</sub>* denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. *International Education* equals to 1 if the client has been audited by at least one auditor with foreign education, and 0 if otherwise. *Education* is the average education level of the signing auditors. *Auditor Age* is the average age of the signing auditors. *CPA Experience* is the average work experience of the signing auditors. *Female* equals to 1 if the client has been audited by at least one female auditor, and 0 if otherwise. *Major* equals to 1 if the client has been audited by at least one auditor with a degree in accounting or finance, and 0 if otherwise. Refer to Appendix 1 for further definitions.

**Table 2: Univariate Test for Main Variables**

Variable	Non-International (Obs=388)		International (Obs=644)		T-test	Wilcoxon test
	Mean	Median	Mean	Median	p-value	p-value
<b>Audit quality measure<sup>17</sup></b>						
<i> DACC </i>	0.055	0.044	0.049	0.039	0.045	0.035
<i>ARAgg</i>	-0.004	0.008	-0.011	0.006	0.411	0.054
<i>BL</i>	0.019	0.012	0.012	0.006	0.000	0.000
<i>Ln(Fee)</i>	14.209	13.989	14.499	14.403	0.000	0.000
<b>Firm characteristics</b>						
<i>Loss</i>	0.067	0.000	0.067	0.000	0.988	0.988
<i>Size</i>	22.769	22.440	23.080	22.870	0.002	0.001
<i>Leverage</i>	0.474	0.491	0.499	0.502	0.037	0.062
<i>Ln(Age)</i>	2.032	2.197	2.102	2.197	0.074	0.075
<i>Ln(OCF)</i>	-1.969	-2.381	-1.691	-2.221	0.057	0.021
<i>Growth</i>	0.188	0.147	0.202	0.165	0.508	0.169
<i>SOE</i>	0.732	1.000	0.809	1.000	0.004	0.004
<i>International CEO</i>	0.080	0.000	0.085	0.000	0.757	0.757
<i>International CFO</i>	0.067	0.000	0.061	0.000	0.680	0.680
<i>PSize<sub>af</sub></i>	683.469	729.964	810.302	853.043	0.000	0.000
<i>PSize<sub>ia</sub></i>	124.444	111.409	121.514	98.011	0.521	0.132
<i>Tenure<sub>af</sub></i>	2.515	2.000	2.717	2.000	0.209	0.146
<i>Tenure<sub>ia</sub></i>	1.073	1.000	0.920	1.000	0.009	0.004
<i>CI<sub>af</sub></i>	0.042	0.030	0.036	0.026	0.000	0.000
<i>CI<sub>ia</sub></i>	0.247	0.203	0.260	0.237	0.170	0.080
<i>MAO</i>	0.031	0.000	0.033	0.000	0.882	0.882
<i>Interim</i>	0.062	0.000	0.048	0.000	0.342	0.342
<b>Auditor characteristics</b>						
<i>International Education</i>	0.000	0.000	0.099	0.000	0.000	0.000
<i>Education</i>	2.050	2.000	2.111	2.000	0.030	0.022
<i>Auditor Age</i>	37.133	36.000	36.651	36.000	0.045	0.748
<i>CPA Experience</i>	8.271	8.500	8.429	8.000	0.453	0.858
<i>Female</i>	0.693	1.000	0.703	1.000	0.732	0.731
<i>Major</i>	0.608	1.000	0.554	1.000	0.090	0.090

**Notes:**

This table presents the results of univariate tests for the main variables. The sample comprises firm observations from 2001 to 2012. *|DACC|* is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm. *Ln(Fee)* is the natural logarithm of audit fee. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets. *Ln(Age)* is the natural logarithm of the number of years that a company has been listed. *Ln(OCF)* is the natural

<sup>17</sup> *|DACC|*, *DACC*, *ARAgg*, and *Ln(Fee)* may have less than 388 or 644 observations because of missing data.

logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* is the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise. *PSize<sub>af</sub>* and *PSize<sub>ia</sub>* denote the client portfolio sizes of the audit firm and an individual auditor, respectively. *Tenure<sub>af</sub>* denotes the number of consecutive years that the audit firm has audited the client, while *Tenure<sub>ia</sub>* denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client. *CI<sub>af</sub>* and *CI<sub>ia</sub>* denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. *International Education* equals to 1 if the client has been audited by at least one auditor with foreign education, and 0 if otherwise. *Education* denotes the average education level of the signing auditors. *Auditor Age* denotes the average age of the signing auditors. *CPA Experience* denotes the average work experience of the signing auditors. *Female* equals to 1 if the client has been audited by at least one female auditor, and 0 otherwise. *Major* equals to 1 if the client has been audited by at least one auditor with a degree in accounting or finance, and 0 if otherwise. Refer to Appendix 1 for further definitions.

**Table 3: Effects of IWE Auditor on Audit Quality: Main Results**

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>Ln(International years)</i>	<b>-0.007***</b> (-2.68)	<b>-0.011***</b> (-2.66)	<b>0.005**</b> (2.03)	<b>-0.003***</b> (-2.59)	<b>-0.014*</b> (-1.69)	<b>0.107***</b> (2.91)
<i>Loss</i>	0.020*** (3.01)	-0.011 (-0.92)	-0.024*** (-3.29)	-0.006* (-1.86)	-0.045 (-1.38)	0.086 (1.10)
<i>Size</i>	-0.002 (-1.24)	-0.004 (-1.57)	0.001 (0.39)	-0.001 (-1.08)	0.016*** (2.64)	0.476*** (22.10)
<i>Leverage</i>	-0.018* (-1.94)	-0.033** (-2.27)	0.009 (0.73)	-0.016*** (-3.00)	-0.083* (-1.76)	0.825*** (5.93)
<i>Ln(Age)</i>	0.006** (2.14)	-0.005 (-1.01)	-0.009*** (-3.30)	0.006*** (5.30)	-0.005 (-0.79)	-0.177*** (-4.35)
<i>Ln(OCF)</i>	0.005*** (7.10)	0.005*** (7.86)	-0.014*** (-4.34)	0.000 (0.17)	-0.003 (-0.79)	-0.013 (-1.53)
<i>Growth</i>	0.015*** (2.93)	0.025*** (3.41)	-0.006 (-0.99)	-0.001 (-0.30)	0.036** (2.40)	-0.043 (-0.80)
<i>SOE</i>	0.000 (0.13)	0.000 (0.01)	-0.002 (-0.60)	0.001 (0.40)	0.022 (1.25)	-0.102* (-1.68)
<i>International CEO</i>	0.002 (0.41)	-0.006 (-0.68)	-0.002 (-0.28)	-0.006*** (-3.01)	-0.007 (-0.53)	0.076 (0.79)
<i>International CFO</i>	0.005 (0.79)	0.015 (1.02)	-0.002 (-0.28)	0.001 (0.27)	0.026** (2.25)	-0.434*** (-3.73)
<i>PSize<sub>af</sub></i>	0.000*** (4.25)	0.000** (2.38)	-0.000*** (-3.30)	-0.000*** (-4.37)	0.000* (1.79)	-0.000** (-2.20)
<i>PSize<sub>ia</sub></i>	0.000** (1.96)	0.000** (1.99)	-0.000 (-0.86)	-0.000 (-0.56)	0.000** (2.55)	-0.000 (-0.35)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.28)	-0.000 (-0.13)	0.001 (1.54)	-0.000 (-0.52)	-0.003 (-1.63)	0.030*** (3.19)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.43)	-0.004 (-1.29)	-0.001 (-0.55)	0.000 (0.17)	0.005 (1.10)	-0.000 (-0.02)
<i>CI<sub>af</sub></i>	0.421*** (3.24)	0.650* (1.89)	-0.351*** (-2.93)	-0.123** (-2.55)	0.254 (0.83)	-0.599 (-0.28)
<i>CI<sub>ia</sub></i>	0.039** (1.98)	0.046 (1.26)	-0.030 (-1.49)	0.004 (0.37)	0.031 (0.48)	-0.125 (-0.43)
<i>MAO</i>						0.177 (1.33)
<i>Interim</i>						-0.199 (-1.52)
<i>Constant</i>	0.037 (1.20)	0.034 (0.67)	-0.045 (-1.18)	0.032** (2.01)	-0.511*** (-3.62)	3.768*** (6.64)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.179	-0.161	-0.097	0.221	0.057	0.719

*Notes:*

This table presents the findings on the effect of the international working experience of auditors on audit quality.  $|DACC|$  is the absolute value of discretionary accruals ( $DACC$ ) and a proxy for accrual management.  $ARAgg$  denotes audit reporting aggressiveness.  $BL$  denotes the below-the-line items of the firm.  $Ln(Fee)$  is the natural logarithm of audit fee.  $Ln(International\ years)$  is the natural logarithm of the number of years of international working experience plus 1.  $Loss$  equals to 1 if the client has reported a loss, and 0 if otherwise.  $Size$  is the natural logarithm of the total assets of the client.  $Leverage$  is the total liabilities of the client divided by its total assets.  $Ln(Age)$  is the natural logarithm of the number of years that a company has been listed.  $Ln(OCF)$  is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets.  $Growth$  is the sales growth rate of the client.  $SOE$  equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise.  $International\ CEO$  equals to 1 if the client has a CEO with international working experience, and 0 if otherwise.  $International\ CFO$  equals to 1 if the client has a CFO with international working experience, and 0 if otherwise.  $PSize_{af}$  and  $PSize_{ia}$  denote the client portfolio sizes of the audit firm and an individual auditor, respectively.  $Tenure_{af}$  denotes the number of consecutive years that the audit firm has audited the client, while  $Tenure_{ia}$  denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client.  $CI_{af}$  and  $CI_{ia}$  denote client importance at the audit firm and individual auditor levels, respectively.  $MAO$  equals to 1 if the client has received an MAO, and 0 if otherwise.  $Interim$  equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table 4: Alternative Measures of the International Working Experience of Auditors**  
 Panel A: Alternative measure – *International dummy*

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>International dummy</i>	<b>-0.007***</b> (-2.62)	<b>-0.013***</b> (-2.67)	<b>0.006*</b> (1.95)	<b>-0.004**</b> (-2.55)	<b>-0.016*</b> (-1.73)	<b>0.117***</b> (2.84)
<i>Loss</i>	0.020*** (3.02)	-0.011 (-0.90)	-0.024*** (-3.29)	-0.006* (-1.86)	-0.045 (-1.38)	0.085 (1.10)
<i>Size</i>	-0.002 (-1.24)	-0.004 (-1.59)	0.001 (0.39)	-0.001 (-1.08)	0.016*** (2.64)	0.476*** (22.10)
<i>Leverage</i>	-0.018* (-1.94)	-0.033** (-2.26)	0.009 (0.72)	-0.016*** (-3.00)	-0.083* (-1.76)	0.824*** (5.92)
<i>Ln(Age)</i>	0.005** (2.11)	-0.005 (-1.03)	-0.009*** (-3.27)	0.006*** (5.28)	-0.005 (-0.80)	-0.176*** (-4.32)
<i>Ln(OCF)</i>	0.005*** (7.10)	0.005*** (7.86)	-0.014*** (-4.34)	0.000 (0.17)	-0.002 (-0.79)	-0.013 (-1.53)
<i>Growth</i>	0.015*** (2.93)	0.025*** (3.42)	-0.006 (-0.99)	-0.001 (-0.31)	0.036** (2.40)	-0.043 (-0.80)
<i>SOE</i>	0.001 (0.14)	0.000 (0.02)	-0.002 (-0.61)	0.001 (0.41)	0.022 (1.26)	-0.102* (-1.69)
<i>International CEO</i>	0.002 (0.41)	-0.006 (-0.69)	-0.002 (-0.29)	-0.006*** (-3.00)	-0.007 (-0.52)	0.076 (0.78)
<i>International CFO</i>	0.005 (0.79)	0.015 (1.02)	-0.002 (-0.28)	0.001 (0.27)	0.026** (2.25)	-0.434*** (-3.73)
<i>PSize<sub>af</sub></i>	0.000*** (4.22)	0.000** (2.38)	-0.000*** (-3.27)	-0.000*** (-4.42)	0.000* (1.78)	-0.000** (-2.17)
<i>PSize<sub>ia</sub></i>	0.000** (1.98)	0.000** (2.00)	-0.000 (-0.87)	-0.000 (-0.55)	0.000** (2.56)	-0.000 (-0.36)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.29)	-0.000 (-0.12)	0.001 (1.54)	-0.000 (-0.52)	-0.003 (-1.62)	0.030*** (3.19)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.42)	-0.004 (-1.29)	-0.001 (-0.56)	0.000 (0.18)	0.005 (1.10)	-0.000 (-0.02)
<i>CI<sub>af</sub></i>	0.418*** (3.23)	0.651* (1.90)	-0.349*** (-2.91)	-0.125** (-2.57)	0.251 (0.82)	-0.558 (-0.26)
<i>CI<sub>ia</sub></i>	0.039** (1.99)	0.046 (1.27)	-0.031 (-1.51)	0.004 (0.39)	0.032 (0.49)	-0.130 (-0.45)
<i>MAO</i>						0.177 (1.33)
<i>Interim</i>						-0.198 (-1.52)
<i>Constant</i>	0.038 (1.21)	0.035 (0.68)	-0.045 (-1.18)	0.032** (2.02)	-0.511*** (-3.62)	3.763*** (6.64)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.179	-0.162	-0.097	0.221	0.057	0.719



Panel B: Alternative measure –  $\ln(\text{International years mean})$

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<b><i>Ln(International years mean)</i></b>	<b>-0.006**</b> (-2.57)	<b>-0.011***</b> (-2.65)	<b>0.005*</b> (1.88)	<b>-0.003**</b> (-2.57)	<b>-0.015*</b> (-1.74)	<b>0.110***</b> (2.97)
<i>Loss</i>	0.020*** (3.01)	-0.011 (-0.92)	-0.024*** (-3.28)	-0.006* (-1.88)	-0.044 (-1.36)	0.086 (1.11)
<i>Size</i>	-0.001 (-1.14)	-0.003 (-1.54)	0.000 (0.29)	-0.001 (-1.08)	0.016*** (2.58)	0.479*** (21.68)
<i>Leverage</i>	-0.019** (-2.04)	-0.034** (-2.25)	0.012 (0.89)	-0.016*** (-2.90)	-0.085* (-1.76)	0.786*** (5.55)
<i>Ln(Age)</i>	0.005** (2.08)	-0.005 (-1.00)	-0.009*** (-3.16)	0.006*** (5.14)	-0.004 (-0.63)	-0.180*** (-4.40)
<i>Ln(OCF)</i>	0.005*** (7.10)	0.005*** (7.87)	-0.014*** (-4.34)	0.000 (0.16)	-0.002 (-0.79)	-0.012 (-1.44)
<i>Growth</i>	0.015*** (2.97)	0.025*** (3.41)	-0.006 (-1.03)	-0.001 (-0.30)	0.036** (2.39)	-0.044 (-0.81)
<i>SOE</i>	0.001 (0.14)	0.000 (0.00)	-0.002 (-0.61)	0.001 (0.43)	0.021 (1.20)	-0.103* (-1.69)
<i>International CEO</i>	0.002 (0.49)	-0.006 (-0.69)	-0.002 (-0.37)	-0.006*** (-3.02)	-0.007 (-0.49)	0.066 (0.67)
<i>International CFO</i>	0.006 (0.91)	0.015 (1.02)	-0.003 (-0.41)	0.001 (0.23)	0.026** (2.28)	-0.451*** (-3.83)
<i>PSize<sub>af</sub></i>	0.000*** (4.19)	0.000** (2.37)	-0.000*** (-3.25)	-0.000*** (-4.32)	0.000* (1.75)	-0.000** (-2.13)
<i>PSize<sub>ia</sub></i>	0.000* (1.93)	0.000** (1.99)	-0.000 (-0.79)	-0.000 (-0.51)	0.000*** (2.60)	-0.000 (-0.40)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.38)	-0.000 (-0.14)	0.001 (1.63)	-0.000 (-0.50)	-0.003* (-1.69)	0.030*** (3.16)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.43)	-0.004 (-1.29)	-0.001 (-0.55)	0.000 (0.20)	0.005 (1.09)	0.002 (0.11)
<i>CI<sub>af</sub></i>	0.404*** (3.07)	0.646* (1.87)	-0.331*** (-2.72)	-0.122** (-2.48)	0.276 (0.89)	-0.771 (-0.36)
<i>CI<sub>ia</sub></i>	0.039* (1.96)	0.046 (1.26)	-0.030 (-1.46)	0.004 (0.42)	0.033 (0.51)	-0.139 (-0.48)
<i>MAO</i>						0.179 (1.35)
<i>Interim</i>						-0.140 (-1.01)
<i>Constant</i>	0.038 (1.22)	0.034 (0.66)	-0.046 (-1.17)	0.032** (1.98)	-0.510*** (-3.57)	3.715*** (6.45)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	971	292	679	1014	995	942
<i>Adjusted/Pseudo R-squared</i>	0.177	-0.161	-0.097	0.219	0.058	0.718

Panel C: Alternative measure –  $\ln(\text{International years min})$

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<b><i>Ln(International years min)</i></b>	<b>-0.006**</b> <b>(-2.54)</b>	<b>-0.011***</b> <b>(-2.65)</b>	<b>0.005*</b> <b>(1.83)</b>	<b>-0.003**</b> <b>(-2.51)</b>	<b>-0.015*</b> <b>(-1.75)</b>	<b>0.109***</b> <b>(2.90)</b>
<i>Loss</i>	0.020*** (3.01)	-0.011 (-0.92)	-0.024*** (-3.28)	-0.006* (-1.88)	-0.044 (-1.36)	0.086 (1.10)
<i>Size</i>	-0.001 (-1.14)	-0.003 (-1.54)	0.000 (0.29)	-0.001 (-1.08)	0.016** (2.58)	0.479*** (21.68)
<i>Leverage</i>	-0.019** (-2.04)	-0.034** (-2.25)	0.012 (0.88)	-0.016*** (-2.90)	-0.085* (-1.76)	0.785*** (5.54)
<i>Ln(Age)</i>	0.005** (2.07)	-0.005 (-1.00)	-0.009*** (-3.15)	0.006*** (5.13)	-0.004 (-0.64)	-0.180*** (-4.38)
<i>Ln(OCF)</i>	0.005*** (7.10)	0.005*** (7.87)	-0.014*** (-4.34)	0.000 (0.16)	-0.002 (-0.78)	-0.012 (-1.44)
<i>Growth</i>	0.015*** (2.97)	0.025*** (3.41)	-0.006 (-1.03)	-0.001 (-0.30)	0.036** (2.39)	-0.044 (-0.82)
<i>SOE</i>	0.001 (0.14)	0.000 (0.00)	-0.002 (-0.62)	0.001 (0.43)	0.021 (1.20)	-0.103* (-1.69)
<i>International CEO</i>	0.002 (0.49)	-0.006 (-0.69)	-0.002 (-0.38)	-0.006*** (-3.01)	-0.007 (-0.48)	0.065 (0.67)
<i>International CFO</i>	0.006 (0.91)	0.015 (1.02)	-0.003 (-0.41)	0.001 (0.23)	0.026** (2.27)	-0.451*** (-3.83)
<i>PSize<sub>af</sub></i>	0.000*** (4.17)	0.000** (2.37)	-0.000*** (-3.24)	-0.000*** (-4.34)	0.000* (1.74)	-0.000** (-2.11)
<i>PSize<sub>ia</sub></i>	0.000* (1.94)	0.000** (1.99)	-0.000 (-0.80)	-0.000 (-0.50)	0.000*** (2.60)	-0.000 (-0.41)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.37)	-0.000 (-0.14)	0.001 (1.62)	-0.000 (-0.50)	-0.003* (-1.69)	0.030*** (3.15)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.43)	-0.004 (-1.29)	-0.001 (-0.55)	0.000 (0.21)	0.005 (1.09)	0.002 (0.10)
<i>CI<sub>af</sub></i>	0.403*** (3.06)	0.646* (1.87)	-0.330*** (-2.71)	-0.123** (-2.50)	0.275 (0.88)	-0.746 (-0.35)
<i>CI<sub>ia</sub></i>	0.039** (1.97)	0.046 (1.26)	-0.030 (-1.46)	0.004 (0.43)	0.034 (0.51)	-0.141 (-0.48)
<i>MAO</i>						0.179 (1.35)
<i>Interim</i>						-0.139 (-1.00)
<i>Constant</i>	0.038 (1.22)	0.034 (0.66)	-0.046 (-1.18)	0.032** (1.98)	-0.510*** (-3.57)	3.712*** (6.45)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	971	292	679	1014	995	942
<i>Adjusted/Pseudo R-squared</i>	0.177	-0.161	-0.097	0.219	0.058	0.718

*Notes:*

This table presents the results when alternative proxies for the international working experience of auditors are used. The dependent variables are defined as follows:  $|DACC|$  is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm.  $\ln(Fee)$  is the natural logarithm of audit fee. The independent variables are defined as follows: *International* is an indicator variable that equals to 1 if the client has been audited by at least one IWE auditor, and 0 if otherwise.  $\ln(International\ years\ mean)$  is the natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on average international working experience.  $\ln(International\ years\ min)$  is the natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor with less international working experience. The control variables are defined as follows: *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets.  $\ln(Age)$  is the natural logarithm of the number of years that a company has been listed.  $\ln(OCF)$  is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* denotes the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise.  $PSize_{af}$  and  $PSize_{ia}$  denote the client portfolio sizes of the audit firm and an individual auditor, respectively.  $Tenure_{af}$  denotes the number of consecutive years that the audit firm has audited the client, while  $Tenure_{ia}$  denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client.  $CI_{af}$  and  $CI_{ia}$  denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table 5: Results on the Timing of Obtaining International Working Experience**Panel A: Alternative measure –  $\ln(\text{International years continue})$ 

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>Ln(International years continue)</i>	<b>-0.010***</b> (-3.33)	<b>-0.015**</b> (-2.59)	<b>0.010***</b> (3.21)	<b>-0.003</b> (-1.45)	<b>-0.021</b> (-1.61)	<b>0.106**</b> (2.34)
<i>Loss</i>	0.023*** (3.02)	-0.008 (-0.53)	-0.027*** (-2.97)	-0.003 (-0.71)	-0.032 (-0.80)	-0.031 (-0.31)
<i>Size</i>	-0.003** (-2.19)	0.003 (0.98)	0.004** (2.07)	0.000 (0.21)	0.024** (2.51)	0.483*** (18.87)
<i>Leverage</i>	-0.012 (-0.99)	-0.050*** (-3.08)	-0.004 (-0.23)	-0.025*** (-3.19)	-0.118* (-1.93)	0.818*** (5.01)
<i>Ln(Age)</i>	0.006* (1.66)	-0.004 (-0.50)	-0.007* (-1.91)	0.009*** (4.97)	0.003 (0.56)	-0.209*** (-3.90)
<i>Ln(OCF)</i>	0.006*** (6.39)	0.007*** (8.04)	-0.015*** (-3.09)	-0.000 (-0.94)	0.001 (0.15)	-0.015 (-1.58)
<i>Growth</i>	0.017*** (2.81)	0.024*** (2.73)	-0.009 (-1.35)	0.000 (0.09)	0.023 (1.52)	-0.039 (-0.64)
<i>SOE</i>	-0.006 (-1.27)	0.004 (0.36)	0.003 (0.58)	-0.002 (-0.79)	-0.003 (-0.25)	-0.238*** (-3.13)
<i>International CEO</i>	-0.012** (-2.49)	-0.027** (-2.31)	0.010* (1.93)	-0.002 (-0.67)	-0.005 (-0.34)	0.076 (0.59)
<i>International CFO</i>	0.002 (0.29)	0.031 (1.59)	0.006 (0.89)	0.003 (1.02)	0.026* (1.86)	-0.511*** (-3.23)
<i>PSize<sub>af</sub></i>	0.000*** (2.99)	0.000 (1.11)	-0.000** (-2.23)	-0.000*** (-3.07)	0.000** (2.03)	-0.000 (-0.71)
<i>PSize<sub>ia</sub></i>	0.000 (1.12)	0.000 (0.98)	-0.000 (-1.25)	-0.000 (-0.16)	0.000 (1.43)	0.001 (0.72)
<i>Tenure<sub>af</sub></i>	0.000 (0.06)	-0.001 (-0.64)	-0.000 (-0.25)	-0.000 (-0.73)	-0.002 (-1.29)	0.022* (1.86)
<i>Tenure<sub>ia</sub></i>	-0.004** (-2.28)	-0.007** (-2.34)	-0.000 (-0.07)	0.001 (0.46)	0.009 (1.51)	-0.014 (-0.64)
<i>CI<sub>af</sub></i>	0.500*** (4.14)	0.010 (0.03)	-0.501*** (-3.66)	-0.188*** (-3.00)	0.499 (1.30)	1.065 (0.42)
<i>CI<sub>ia</sub></i>	0.016 (0.63)	-0.011 (-0.27)	-0.030 (-1.07)	0.008 (0.59)	-0.023 (-0.29)	0.271 (0.78)
<i>MAO</i>						0.144 (0.97)
<i>Interim</i>						-0.350** (-2.34)
<i>Constant</i>	0.089** (2.19)	0.003 (0.04)	-0.100** (-1.99)	0.006 (0.27)	-0.645*** (-2.90)	3.754*** (5.61)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.199	-0.197	-0.112	0.236	0.042	0.766

Panel B: Alternative measure –  $\ln(\text{International years missing})$

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<b><i>Ln(International years missing)</i></b>	<b>-0.011***</b> (-3.41)	<b>-0.014**</b> (-2.44)	<b>0.010***</b> (3.10)	<b>-0.003</b> (-1.64)	<b>-0.023*</b> (-1.83)	<b>0.135***</b> (2.89)
<i>Loss</i>	0.023*** (2.92)	0.002 (0.13)	-0.027*** (-3.33)	-0.003 (-0.77)	-0.035 (-0.92)	-0.006 (-0.07)
<i>Size</i>	-0.003** (-2.03)	-0.001 (-0.33)	0.003* (1.68)	0.000 (0.35)	0.023** (2.48)	0.505*** (19.11)
<i>Leverage</i>	-0.012 (-1.04)	-0.047** (-2.52)	0.005 (0.35)	-0.024*** (-3.34)	-0.118** (-2.09)	0.729*** (4.62)
<i>Ln(Age)</i>	0.004 (0.93)	-0.006 (-0.82)	-0.008** (-1.99)	0.009*** (4.80)	0.001 (0.18)	-0.162*** (-2.87)
<i>Ln(OCF)</i>	0.005*** (6.00)	0.007*** (8.68)	-0.010*** (-2.87)	-0.000 (-1.13)	0.001 (0.35)	-0.025*** (-2.62)
<i>Growth</i>	0.016** (2.50)	0.024** (2.39)	-0.010 (-1.49)	0.000 (0.07)	0.033** (2.16)	-0.067 (-1.05)
<i>SOE</i>	-0.001 (-0.17)	0.006 (0.48)	0.000 (0.01)	-0.002 (-0.69)	0.001 (0.10)	-0.197*** (-2.63)
<i>International CEO</i>	-0.008 (-1.59)	-0.015 (-1.59)	0.009 (1.57)	-0.002 (-0.76)	0.005 (0.33)	0.066 (0.51)
<i>International CFO</i>	0.004 (0.53)	0.036** (2.01)	0.002 (0.29)	0.003 (0.92)	0.020 (1.54)	-0.443*** (-3.08)
<i>PSize<sub>af</sub></i>	0.000*** (4.39)	0.000** (2.36)	-0.000*** (-3.26)	-0.000*** (-3.12)	0.000** (2.23)	-0.000 (-1.42)
<i>PSize<sub>ia</sub></i>	0.000 (0.60)	0.000 (1.10)	-0.000 (-0.61)	-0.000 (-0.01)	0.000** (2.01)	-0.001 (-0.79)
<i>Tenure<sub>af</sub></i>	0.000 (0.52)	0.001 (0.45)	0.000 (0.09)	-0.000 (-0.46)	-0.002 (-1.22)	0.012 (1.08)
<i>Tenure<sub>ia</sub></i>	-0.003 (-1.47)	-0.004 (-1.30)	-0.001 (-0.30)	0.001 (0.50)	0.008 (1.42)	-0.041* (-1.76)
<i>CI<sub>af</sub></i>	0.546*** (4.57)	0.350 (0.97)	-0.532*** (-4.10)	-0.172*** (-2.73)	0.507 (1.36)	0.156 (0.06)
<i>CI<sub>ia</sub></i>	-0.002 (-0.09)	-0.000 (-0.01)	-0.009 (-0.32)	0.012 (0.91)	0.022 (0.28)	-0.332 (-0.97)
<i>MAO</i>						0.109 (0.74)
<i>Interim</i>						-0.372** (-2.54)
<i>Constant</i>	0.063 (1.52)	-0.004 (-0.05)	-0.068 (-1.39)	-0.002 (-0.11)	-0.686*** (-3.02)	3.750*** (5.43)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.174	-0.187	-0.087	0.227	0.049	0.768

*Notes:*

This table presents the results when alternative proxies for the international working experience of auditors are used.  $|DACC|$  is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm.  $\ln(Fee)$  is the natural logarithm of audit fee.  $\ln(International\ years\ continue)$  is the natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor who has international working experience and continuous domestic experience since the first appearance of his/her signature in our records between 2001 and 2012.  $\ln(International\ years\ missing)$  is the natural logarithm of the number of years of international working experience plus 1. We calculate this measure based on an auditor with more *Abroad years* than *Missing years*. *Abroad years* denote the number of years that individual auditors work abroad, while *Missing years* denote the number of years that we cannot track the audit service records of an auditor for A-share clients since the first appearance of his/her signature in our records between 2001 and 2012. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets.  $\ln(Age)$  is the natural logarithm of the number of years that a company has been listed.  $\ln(OCF)$  is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* is the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise.  $PSize_{af}$  and  $PSize_{ia}$  denote the client portfolio sizes of the audit firm and an individual auditor, respectively.  $Tenure_{af}$  denotes the number of consecutive years that the audit firm has audited the client, while  $Tenure_{ia}$  denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client.  $CI_{af}$  and  $CI_{ia}$  denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table 6: Effects of IWE Auditor on Audit Quality: Further Control for Auditor Characteristics and Cross-Listing**

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>Ln(International years)</i>	<b>-0.007***</b> (-2.67)	<b>-0.011**</b> (-2.52)	<b>0.005**</b> (2.04)	<b>-0.003***</b> (-2.63)	<b>-0.014*</b> (-1.67)	<b>0.104***</b> (2.93)
<i>Loss</i>	0.019*** (2.95)	-0.014 (-1.08)	-0.023*** (-3.26)	-0.006* (-1.73)	-0.044 (-1.39)	0.061 (0.80)
<i>Size</i>	-0.001 (-0.98)	-0.002 (-1.05)	0.000 (0.31)	-0.000 (-0.33)	0.019*** (2.95)	0.425*** (21.31)
<i>Leverage</i>	-0.020** (-2.09)	-0.036** (-2.39)	0.011 (0.85)	-0.015*** (-2.90)	-0.087* (-1.85)	0.782*** (5.93)
<i>Ln(Age)</i>	0.006** (2.18)	-0.004 (-0.81)	-0.009*** (-3.29)	0.007*** (5.78)	-0.002 (-0.34)	-0.243*** (-6.02)
<i>Ln(OCF)</i>	0.005*** (7.14)	0.005*** (8.24)	-0.014*** (-4.35)	0.000 (0.21)	-0.002 (-0.74)	-0.015* (-1.82)
<i>Growth</i>	0.014*** (2.81)	0.022*** (3.11)	-0.005 (-0.96)	-0.001 (-0.40)	0.032** (2.19)	-0.005 (-0.09)
<i>SOE</i>	0.000 (0.13)	-0.001 (-0.12)	-0.002 (-0.61)	0.001 (0.66)	0.024 (1.36)	-0.146** (-2.42)
<i>International CEO</i>	0.002 (0.37)	-0.008 (-0.96)	-0.002 (-0.27)	-0.006*** (-3.00)	-0.009 (-0.63)	0.084 (0.92)
<i>International CFO</i>	0.005 (0.72)	0.014 (0.96)	-0.002 (-0.25)	0.000 (0.19)	0.023** (2.02)	-0.405*** (-3.71)
<i>PSize<sub>af</sub></i>	0.000*** (4.41)	0.000** (2.50)	-0.000*** (-3.44)	-0.000*** (-4.48)	0.000** (1.97)	-0.000** (-2.10)
<i>PSize<sub>ia</sub></i>	0.000** (2.02)	0.000** (2.26)	-0.000 (-0.87)	-0.000 (-0.55)	0.000*** (2.67)	-0.000 (-0.56)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.33)	-0.000 (-0.32)	0.001 (1.55)	-0.000 (-0.48)	-0.003* (-1.66)	0.027*** (3.04)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.16)	-0.003 (-1.01)	-0.001 (-0.75)	0.000 (0.10)	0.006 (1.43)	0.005 (0.25)
<i>CI<sub>af</sub></i>	0.470*** (3.51)	0.734** (2.23)	-0.397*** (-3.14)	-0.130*** (-2.65)	0.448 (1.36)	-0.558 (-0.28)
<i>CI<sub>ia</sub></i>	0.038* (1.91)	0.050 (1.36)	-0.029 (-1.41)	0.003 (0.28)	0.023 (0.35)	-0.046 (-0.17)
<i>MAO</i>						0.077 (0.62)
<i>Interim</i>						-0.137 (-1.16)
<i>CROSSLIST</i>	-0.002 (-0.85)	-0.008 (-1.37)	0.001 (0.37)	-0.004*** (-2.69)	-0.027** (-2.40)	0.436*** (10.37)
<i>Auditor Characteristics</i>	-0.002* (-1.81)	-0.005*** (-2.87)	0.002 (1.42)	0.000 (0.44)	-0.008** (-2.18)	-0.004 (-0.24)
<i>Constant</i>	0.029	0.002	-0.040	0.023	-0.583***	4.725***

	(0.91)	(0.03)	(-1.03)	(1.38)	(-3.93)	(8.77)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.181	-0.170	-0.098	0.226	0.066	0.747

Notes:

This table presents the findings when controlling auditor characteristics and cross-listing are considered. */DACC/* is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm. *Ln(Fee)* is the natural logarithm of audit fee. *Ln(International years)* is the natural logarithm of the number of years of international working experience plus 1. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets. *Ln(Age)* is the natural logarithm of the number of years that a company has been listed. *Ln(OCF)* is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* is the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise. *PSize<sub>af</sub>* and *PSize<sub>ia</sub>* denote the client portfolio sizes of the audit firm and an individual auditor, respectively. *Tenure<sub>af</sub>* denotes the number of consecutive years that the audit firm has audited the client, while *Tenure<sub>ia</sub>* denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client. *CI<sub>af</sub>* and *CI<sub>ia</sub>* denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. *CROSSLIST* equals to 1 if the client issues B or H shares, and 0 if otherwise. *Auditor Characteristics* is the first principal component of auditor characteristics, which include *Overseas education*, *Education*, *CPA Experience*, *Female*, and *Major*. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.



**Table 7: Results of PSM Method**

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>Ln(International years)</i>	<b>-0.006*</b> (-1.94)	<b>-0.008*</b> (-1.91)	<b>0.005*</b> (1.67)	<b>-0.004**</b> (-2.23)	<b>-0.018*</b> (-1.78)	<b>0.080*</b> (1.79)
<i>Loss</i>	0.017** (2.17)	-0.016 (-1.18)	-0.029*** (-3.48)	-0.006 (-1.47)	-0.070* (-1.83)	0.042 (0.42)
<i>Size</i>	-0.002* (-1.71)	-0.002 (-1.02)	0.002 (1.35)	-0.000 (-0.38)	0.016** (2.19)	0.482*** (18.44)
<i>Leverage</i>	-0.027** (-2.53)	-0.063*** (-3.94)	0.016 (1.09)	-0.020*** (-2.99)	-0.099* (-1.69)	0.753*** (4.58)
<i>Ln(Age)</i>	0.007** (2.32)	-0.005 (-0.82)	-0.012*** (-3.71)	0.006*** (3.95)	-0.009 (-1.01)	-0.144*** (-2.80)
<i>Ln(OCF)</i>	0.005*** (5.82)	0.005*** (7.14)	-0.017*** (-3.53)	0.000 (0.18)	0.001 (0.33)	-0.015 (-1.50)
<i>Growth</i>	0.014** (2.41)	0.020** (2.59)	-0.004 (-0.72)	-0.000 (-0.09)	0.041** (2.23)	0.026 (0.41)
<i>SOE</i>	0.003 (0.68)	0.007 (1.08)	-0.003 (-0.66)	0.001 (0.50)	0.037* (1.84)	-0.149** (-2.07)
<i>International CEO</i>	-0.004 (-0.70)	-0.009 (-1.01)	0.004 (0.72)	-0.005** (-2.02)	0.002 (0.09)	0.123 (1.02)
<i>International CFO</i>	0.011 (1.52)	0.042** (2.51)	-0.004 (-0.50)	0.003 (1.17)	0.037** (2.35)	-0.386*** (-2.68)
<i>PSize<sub>af</sub></i>	0.000*** (3.38)	0.000* (1.67)	-0.000*** (-2.89)	-0.000*** (-3.48)	0.000** (1.98)	-0.000** (-2.20)
<i>PSize<sub>ia</sub></i>	0.000 (0.65)	0.000 (0.52)	-0.000 (-0.39)	-0.000 (-1.45)	0.001** (2.50)	-0.000 (-0.16)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.46)	-0.001 (-0.93)	0.001 (1.21)	-0.000 (-0.08)	-0.002 (-1.25)	0.030*** (2.61)
<i>Tenure<sub>ia</sub></i>	-0.003* (-1.67)	-0.004 (-1.63)	-0.000 (-0.14)	-0.001 (-0.52)	0.004 (0.77)	0.000 (0.01)
<i>CI<sub>af</sub></i>	0.373*** (2.92)	0.147 (0.55)	-0.407*** (-3.10)	-0.171*** (-2.92)	0.487 (1.17)	-0.512 (-0.20)
<i>CI<sub>ia</sub></i>	0.013 (0.57)	-0.013 (-0.35)	-0.018 (-0.75)	-0.003 (-0.25)	0.011 (0.12)	-0.098 (-0.27)
<i>MAO</i>						0.212 (1.35)
<i>Interim</i>						-0.254* (-1.76)
<i>Auditor Characteristics</i>	-0.002 (-1.62)	-0.004** (-2.17)	0.002 (1.59)	0.000 (0.57)	-0.007 (-1.53)	-0.001 (-0.04)
<i>Constant</i>	0.067* (1.91)	0.075 (1.50)	-0.079* (-1.80)	0.032* (1.67)	-0.566*** (-3.18)	3.422*** (5.03)
<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	739	217	522	756	742	694

<i>Adjusted/Pseudo R-squared</i>	0.195	-0.212	-0.128	0.251	0.074	0.709
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*Notes:*

This table presents the PSM results.  $|DACC|$  is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm.  $\ln(Fee)$  is the natural logarithm of audit fee.  $\ln(International\ years)$  is the natural logarithm of the number of years of international working experience plus 1. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets.  $\ln(Age)$  is the natural logarithm of the number of years that a company has been listed.  $\ln(OCF)$  is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* is the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise.  $PSize_{af}$  and  $PSize_{ia}$  denote the client portfolio sizes of the audit firm and an individual auditor, respectively.  $Tenure_{af}$  denotes the number of consecutive years that the audit firm has audited the client, while  $Tenure_{ia}$  denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client.  $CI_{af}$  and  $CI_{ia}$  denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. *Auditor Characteristics* is the first principal component of auditor characteristics, which include *Overseas education*, *Education*, *CPA Experience*, *Female*, and *Major*. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table 8: Effects of CFO with International Working Experience**

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>Ln(International years)</i>	-0.007*** (-2.71)	-0.009** (-2.10)	0.006** (2.46)	-0.003** (-2.21)	-0.015* (-1.68)	0.116*** (3.21)
<b>Ln(International years)</b>	<b>0.005</b>	<b>-0.049*</b>	<b>-0.018*</b>	<b>-0.006*</b>	<b>0.016</b>	<b>-0.150</b>
<b>×International CFO</b>	<b>(0.46)</b>	<b>(-1.84)</b>	<b>(-1.85)</b>	<b>(-1.71)</b>	<b>(0.87)</b>	<b>(-0.66)</b>
<i>Loss</i>	0.019*** (2.89)	-0.013 (-1.02)	-0.022*** (-3.13)	-0.006* (-1.77)	-0.047 (-1.46)	0.092 (1.18)
<i>Size</i>	-0.002 (-1.27)	-0.004* (-1.81)	0.001 (0.50)	-0.001 (-1.06)	0.016*** (2.62)	0.477*** (22.15)
<i>Leverage</i>	-0.020** (-2.13)	-0.034** (-2.25)	0.011 (0.86)	-0.016*** (-2.94)	-0.090* (-1.88)	0.818*** (5.91)
<i>Ln(Age)</i>	0.005** (2.07)	-0.005 (-0.94)	-0.009*** (-3.14)	0.006*** (5.37)	-0.006 (-0.93)	-0.175*** (-4.28)
<i>Ln(OCF)</i>	0.005*** (7.12)	0.005*** (8.20)	-0.014*** (-4.35)	0.000 (0.17)	-0.002 (-0.77)	-0.013 (-1.52)
<i>Growth</i>	0.014*** (2.85)	0.024*** (3.36)	-0.005 (-0.96)	-0.001 (-0.28)	0.034** (2.30)	-0.045 (-0.83)
<i>SOE</i>	0.000 (0.05)	0.001 (0.15)	-0.002 (-0.59)	0.001 (0.45)	0.021 (1.20)	-0.101* (-1.66)
<i>International CEO</i>	0.002 (0.36)	-0.002 (-0.27)	-0.001 (-0.24)	-0.006*** (-2.90)	-0.009 (-0.62)	0.082 (0.82)
<i>International CFO</i>	0.001 (0.12)	0.047* (1.80)	0.011 (1.22)	0.005* (1.65)	0.014 (0.96)	-0.338 (-1.61)
<i>PSize<sub>af</sub></i>	0.000*** (4.43)	0.000*** (2.76)	-0.000*** (-3.44)	-0.000*** (-4.37)	0.000** (2.00)	-0.000** (-2.15)
<i>PSize<sub>ia</sub></i>	0.000** (1.99)	0.000** (2.21)	-0.000 (-0.81)	-0.000 (-0.54)	0.000*** (2.62)	-0.000 (-0.30)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.30)	-0.000 (-0.37)	0.001 (1.41)	-0.000 (-0.59)	-0.003 (-1.64)	0.029*** (3.12)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.17)	-0.003 (-0.91)	-0.001 (-0.61)	0.000 (0.21)	0.006 (1.40)	0.002 (0.11)
<i>CI<sub>af</sub></i>	0.473*** (3.51)	0.757** (2.34)	-0.401*** (-3.18)	-0.129*** (-2.64)	0.451 (1.38)	-0.506 (-0.23)
<i>CI<sub>ia</sub></i>	0.038* (1.91)	0.051 (1.43)	-0.028 (-1.38)	0.004 (0.44)	0.028 (0.42)	-0.110 (-0.38)
<i>MAO</i>						0.176 (1.32)
<i>Interim</i>						-0.201 (-1.52)
<i>Auditor Characteristics</i>	-0.002* (-1.77)	-0.005*** (-2.93)	0.001 (1.26)	0.000 (0.32)	-0.008** (-2.12)	-0.005 (-0.28)
<i>Constant</i>	0.035 (1.11)	0.031 (0.62)	-0.047 (-1.22)	0.031* (1.96)	-0.523*** (-3.66)	3.730*** (6.65)

<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.180	-0.173	-0.099	0.221	0.059	0.718

*Notes:*

This table presents the results regarding the effect of CFO with international experience on the relationship between the international working experience of auditors and audit quality.  $|DACC|$  is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm.  $\ln(Fee)$  is the natural logarithm of audit fee.  $\ln(International\ years)$  is the natural logarithm of the number of years of international working experience plus 1. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets.  $\ln(Age)$  is the natural logarithm of the number of years that a company has been listed.  $\ln(OCF)$  is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* is the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise. *PSize<sub>af</sub>* and *PSize<sub>ia</sub>* denote the client portfolio sizes of the audit firm and an individual auditor, respectively. *Tenure<sub>af</sub>* denotes the number of consecutive years that the audit firm has audited the client, while *Tenure<sub>ia</sub>* denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client. *CI<sub>af</sub>* and *CI<sub>ia</sub>* denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. *Auditor Characteristics* is the first principal component of auditor characteristics, which include *Overseas education*, *Education*, *CPA Experience*, *Female*, and *Major*. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table 9: Effects of Different Roles Played by Auditors**

Variables	DACC			BL	ARAgg	Ln(Fee)
	DACC	Positive	Negative			
<i>Ln(International years reviewer)</i>	<b>-0.005*</b> (-1.85)	<b>-0.008*</b> (-1.91)	<b>0.003</b> (1.33)	<b>-0.003**</b> (-2.40)	<b>-0.019**</b> (-2.25)	<b>0.053</b> (1.37)
<i>Ln(International years engagement)</i>	<b>-0.001</b> (-0.49)	<b>-0.002</b> (-0.42)	<b>-0.000</b> (-0.07)	<b>-0.000</b> (-0.26)	<b>-0.004</b> (-0.37)	<b>0.161***</b> (3.56)
<i>Loss</i>	0.019*** (2.91)	-0.014 (-1.13)	-0.023*** (-3.25)	-0.006* (-1.86)	-0.047 (-1.46)	0.094 (1.17)
<i>Size</i>	-0.002 (-1.32)	-0.004 (-1.62)	0.001 (0.51)	-0.001 (-1.12)	0.016*** (2.61)	0.473*** (22.01)
<i>Leverage</i>	-0.020** (-2.13)	-0.035** (-2.39)	0.011 (0.87)	-0.015** (-2.89)	-0.088* (-1.85)	0.849*** (6.16)
<i>Ln(Age)</i>	0.005** (2.04)	-0.004 (-0.87)	-0.009*** (-3.10)	0.006*** (5.33)	-0.005 (-0.80)	-0.185** (-4.55)
<i>Ln(OCF)</i>	0.005*** (7.05)	0.005*** (7.95)	-0.014*** (-4.34)	0.000 (0.11)	-0.002 (-0.75)	-0.014* (-1.75)
<i>Growth</i>	0.014*** (2.83)	0.023*** (3.25)	-0.006 (-0.97)	-0.001 (-0.27)	0.035** (2.33)	-0.037 (-0.67)
<i>SOE</i>	0.000 (0.02)	-0.002 (-0.33)	-0.002 (-0.58)	0.001 (0.40)	0.021 (1.22)	-0.092 (-1.51)
<i>International CEO</i>	0.002 (0.43)	-0.007 (-0.86)	-0.002 (-0.29)	-0.006** (-2.94)	-0.007 (-0.52)	0.058 (0.59)
<i>International CFO</i>	0.005 (0.78)	0.013 (0.95)	-0.002 (-0.31)	0.001 (0.34)	0.025** (2.19)	-0.426** (-3.66)
<i>PSize<sub>af</sub></i>	0.000*** (4.33)	0.000** (2.40)	-0.000*** (-3.32)	-0.000** (-4.40)	0.000** (2.08)	-0.000** (-2.37)
<i>PSize<sub>ia</sub></i>	0.000** (1.97)	0.000** (2.05)	-0.000 (-0.83)	-0.000 (-0.63)	0.000*** (2.70)	-0.000 (-0.55)
<i>Tenure<sub>af</sub></i>	-0.000 (-0.30)	-0.000 (-0.40)	0.001 (1.53)	-0.000 (-0.44)	-0.003 (-1.63)	0.029*** (3.11)
<i>Tenure<sub>ia</sub></i>	-0.002 (-1.14)	-0.003 (-0.98)	-0.001 (-0.81)	0.000 (0.09)	0.006 (1.31)	0.004 (0.19)
<i>CI<sub>af</sub></i>	0.471*** (3.50)	0.669** (2.05)	-0.395*** (-3.12)	-0.130** (-2.63)	0.470 (1.40)	-0.810 (-0.38)
<i>CI<sub>ia</sub></i>	0.038* (1.89)	0.044 (1.19)	-0.028 (-1.37)	0.003 (0.33)	0.029 (0.45)	-0.171 (-0.60)
<i>MAO</i>						0.157 (1.19)
<i>Interim</i>						-0.193 (-1.50)
<i>Auditor Characteristics</i>	-0.002* (-1.81)	-0.005*** (-2.97)	0.002 (1.41)	0.000 (0.46)	-0.008** (-2.13)	-0.007 (-0.41)
<i>Constant</i>	0.033 (1.07)	0.031 (0.61)	-0.044 (-1.15)	0.033** (2.00)	-0.530*** (-3.68)	3.886*** (6.83)

<i>Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs.</i>	988	294	694	1032	1013	958
<i>Adjusted/Pseudo R-squared</i>	0.178	-0.167	-0.097	0.219	0.062	0.721

*Notes:*

This table presents the findings regarding the effect of the different roles being played by auditors on the relationship between the international working experience of auditors and audit quality.  $|DACC|$  is the absolute value of discretionary accruals (*DACC*) and a proxy for accrual management. *ARAgg* denotes audit reporting aggressiveness. *BL* denotes the below-the-line items of the firm.  $\ln(Fee)$  is the natural logarithm of audit fee.  $\ln(International\ years\ reviewer)$  is the natural logarithm of the number of years of international working experience plus 1 for the first auditor.  $\ln(International\ years\ engagement)$  is the natural logarithm of the number of years of international working experience plus 1 for the second auditor. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets.  $\ln(Age)$  is the natural logarithm of the number of years that a company has been listed.  $\ln(OCF)$  is the natural logarithm of operating cash flows divided by the average of the beginning and ending total assets. *Growth* is the sales growth rate of the client. *SOE* equals to 1 if the client is ultimately controlled by the government, and 0 if otherwise. *International CEO* equals to 1 if the client has a CEO with international working experience, and 0 if otherwise. *International CFO* equals to 1 if the client has a CFO with international working experience, and 0 if otherwise.  $PSize_{af}$  and  $PSize_{ia}$  denote the client portfolio sizes of the audit firm and an individual auditor, respectively.  $Tenure_{af}$  denotes the number of consecutive years that the audit firm has audited the client, while  $Tenure_{ia}$  denotes the mean number of consecutive years that the signing auditors have signed the annual audit report of the client.  $CI_{af}$  and  $CI_{ia}$  denote client importance at the audit firm and individual auditor levels, respectively. *MAO* equals to 1 if the client has received an MAO, and 0 if otherwise. *Interim* equals to 1 if the interim (semi-annual) reports of the client are audited, and 0 if otherwise. *Auditor Characteristics* is the first principal component of auditor characteristics, which include *International Education*, *Education*, *CPA Experience*, *Female*, and *Major*. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively

**Table 10: Effects of the International Working Experience of Auditors on Analyst Forecast**

	(1)	(2)
	AFA	AFD
<i>Ln(International years)</i>	<b>-0.005**</b>	<b>-0.003*</b>
	<b>(-2.20)</b>	<b>(-1.91)</b>
<i>Size</i>	0.001	0.002***
	(1.26)	(3.02)
<i>ZScore</i>	-0.002**	-0.003***
	(-2.11)	(-3.81)
<i>UE</i>	0.001	0.001
	(1.56)	(1.50)
<i>VAREARN</i>	0.008***	0.005***
	(6.09)	(4.43)
<i>HORIZON</i>	-0.000	-0.005**
	(-0.03)	(-2.04)
<i>NANA</i>	0.001	
	(0.65)	
<i>LOSS</i>	0.042***	
	(3.96)	
<i>EL</i>	-0.017***	
	(-6.23)	
<i>Constant</i>	0.006	-0.013
	(0.24)	(-0.76)
<i>Fixed Effects</i>	Yes	Yes
<i>Obs.</i>	497	471
<i>Adjusted R-squared</i>	0.544	0.263

Notes:

This table presents the findings relating to the effect of the international working experience of auditors on analyst forecast. *AFA* denotes analyst forecast accuracy, while *AFD* denotes analyst forecast dispersion. *Ln(International years)* is the natural logarithm of the number of years of international working experience plus 1. *Size* is the natural logarithm of the total assets of the client. *Leverage* is the total liabilities of the client divided by its total assets. *ZScore* denotes the financial health of the client. *UE* denotes the unexpected earnings of the client. *VAREARN* is the standard deviation of the EPS of the client over the past three years. *HORIZON* is the natural logarithm of the average number of calendar days between the forecast and actual earnings announcement dates. *NANA* is the natural logarithm of the number of analysts that follow a specific client. *Loss* equals to 1 if the client has reported a loss, and 0 if otherwise. *EL* denotes the earnings per share of the client. Refer to Appendix 1 for further definitions. Each regression includes year- and industry-fixed effects. The t-statistics based on Huber–White standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.