DOES CHINESE INDIVIDUAL AUDITORS' ISSUANCE OF MODIFIED AUDIT OPINIONS REFLECT THEIR AUDIT CONSERVATISM?

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Abstract

This study is motivated by the aim of assessing the effectiveness of using modified audit opinions (MAOs) as a widely adopted measure of audit quality in existing research. We examine whether individual auditors' propensity to issue MAOs (PIMAO) is mainly attributable to their audit conservatism or client quality. We select a sample of client-year observations with no modified audit opinions (non-MAO clients) from China and perform a series of regression analyses on individual auditors' PIMAO using five different client quality measures: the predicted probability of receiving MAOs, signed abnormal accruals, absolute abnormal accruals, small profit, and non-operating income. We find that clients of individual auditors with high PIMAO (high-PIMAO auditors) exhibit higher signed and absolute abnormal accruals and higher non-operating income than clients of individual auditors with low PIMAO (low-PIMAO auditors). In addition, the predicted probability of receiving MAOs and the likelihood of small profit are not lower for clients of high-PIMAO auditors compared to clients of low-PIMAO auditors. These findings indicate that clients of high-PIMAO auditors generally exhibit lower quality, consistent with the notion that Chinese individual auditors' PIMAO is mainly attributed to client quality rather than audit conservatism. Our study provides implications for both auditing research and practice.

Keywords: Individual Auditors, Modified Audit Opinions, Audit Conservatism, Client Quality

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1. INTRODUCTION

Auditors provide their opinions on clients' annual financial statements in audit reports. They usually issue unqualified (clean) audit opinions when the financial statements are fairly presented in accordance with generally accepted accounting principles (GAAP). Otherwise, authors would issue "non-clean" audit opinions, including qualified, adverse, and disclaimed opinions, or unqualified opinions with explanatory notes, all of which are regarded as modified audit opinions (MAOs). Given that it is the auditor who makes the decision on the type of audit opinions to be issued, the propensity to issue MAOs (PIMOA) is, therefore, used to evaluate auditors' decision-making processes. Conventionally, the issuance of MAOs is perceived as reflective of audit conservatism, wherein auditors adopt a cautious approach in their judgements and decisions. However, the issuance of MAOs is at most an output-based measure of audit conservatism, which is confounded by financial

reporting system and client characteristics (DeFond & Zhang, 2014). To date, there remains a gap in understanding the extent to which individual auditors incorporate conservatism into their decision-making processes. Clarifying this aspect can help assess the effectiveness of using MAOs in measuring audit quality. It is also an issue of important practical significance as Paul Munter, Chief Accountant of the U.S. Securities and Exchange Commission (SEC), noted that auditors failed to obtain sufficient audit evidence to support their audit opinions in 40% of inspected audits performed in 2021 (Munter, 2024).

The issuance of MAOs is influenced by individual auditors' threshold value of conservative treatment (Krishnan, 1994)[1]. The conservatism threshold value reflects the individual auditor's risk tolerance, as risk preference tends to be a relatively stable personality trait (Frey et al., 2017; Pedroni et al., 2017). On the other hand, the issuance of MAOs is also conditional upon client characteristics (Francis & Krishnan, 1999). Low client quality raises the assessed level of audit risk[2], increasing the likelihood of surpassing the auditor's threshold value and, consequently, the propensity to issue MAOs (Bartov et al., 2000; Chen et al., 2001). Further, when auditors consistently audit low-quality clients, they may develop a propensity to issue more MAOs in response to the assessed high level of audit risk, even if their conservatism threshold values are no different than other auditors who regularly audit high-quality clients. Therefore, it is still unclear to what extent individual auditors' PIMAO reflects their audit conservatism or client quality.

The research question investigated in this study is whether individual auditors' PIMAO is mainly attributable to audit conservatism or client quality. If a high level of PIMAO is driven by audit conservatism, individual auditors with high PIMAO (high-PIMAO auditors) would have lower threshold values of conservative treatment than auditors with low PIMAO (low-PIMAO auditors). In this case, high-PIMAO auditors are less tolerant of clients' low accounting quality or financial viability (high assessed level of audit risk) compared to low-PIMAO auditors. As a result, clients of high-PIMAO auditors must have higher quality (lower assessed level of audit risk) to avoid receiving MAOs than clients of low-PIMAO auditors. In other words, non-MAO clients are expected to exhibit higher quality when they are audited by individual auditors with higher audit conservatism than by other auditors. Alternatively, a high level of PIMAO could be attributed to client quality, as auditors who consistently audit low-quality clients tend to issue more MAOs in response to assessed high level of audit risk, thereby becoming high-PIMAO auditors over time. In this case, on average, both MAOs and non-MAOs clients of these high-PIMAO auditors would have lower quality compared to clients of low-PIMAO auditors.

To examine the above question, we compare the quality of non-MAO clients between high- and low-PIMAO auditors[3], where client quality is measured by the predicted probability of receiving MAOs and four proxies of earnings management including signed abnormal accruals, absolute abnormal accruals, small profit, and non-operating income[4]. Using a sample of Chinese listed client-year observations with no MAOs over a 10-year period from 2007 to 2016[5], we find that the predicted probability of receiving MAOs is not lower for clients of high-PIMAO auditors than for clients of low-PIMAO auditors, suggesting that high-PIMAO auditors are not more conservative in issuing audit opinions than low-PIMAO auditors. We also find that clients of high-PIMAO auditors have higher earnings management, as measured by signed and absolute abnormal accruals and non-operating income, compared to clients of low-PIMAO auditors. These findings indicate lower audit quality among high-PIMAO auditors, contradicting the notion that high-PIMAO auditors are more conservative or less tolerant of clients' lower accounting quality. In addition, clients of high-PIMAO auditors are not less likely to report small profit, suggesting that these clients do not engage in less earnings management. Given that these five client quality measures capture audit quality[6], the results reveal that high-PIMAO auditors do not have higher audit quality than low-PIMAO auditors. Taking together, our findings suggest that high-PIMAO auditors are not less tolerant of lower client quality compared to low-PIMAO auditors. Thus, individual auditors' high PIMAO is less likely driven by higher audit conservatism and more likely attributed to lower client quality.

Furthermore, we run a reverse regression with PIMAO as the dependent variable and each client quality measure as the independent variable. We find that clients with lower accounting quality, as measured by signed and absolute abnormal accruals, small profit, and non-operating income, are more likely to be clients of high-PIMAO auditors, suggesting that these individual auditors consistently audit low-quality clients. We also examine the relationship between PIMAO and audit fees and find that high-PIMAO auditors charge less audit fees than low-PIMAO auditors. As audit fees reflect audit effort, this finding suggests that high-PIMAO auditors would not expend more effort to reduce audit risk, contradicting the notion that these auditors are more conservative than low-PIMAO auditors. Overall, the results of these additional tests provide further evidence that PIMAO is mainly attributed to client quality.

This study contributes to the literature in the following two ways. First, our findings have implications for the use of MAOs in evaluating auditors' decision-making process. Audit conservatism, characterized by auditors' heightened

[1] Low threshold values indicate high audit conservatism.

[2] Low client quality refers to low accounting quality or financial viability. The assessed level of audit risk signifies the auditor's judgement on the client's audit risk (Krishnan, 1994).

[3] We focus on non-MAO clients in the main tests because our conjecture regarding audit conservatism is based on non-MAO clients. We also conduct a sensitivity test by including both non-MAO and MAO clients, as reported in subsection 4.3.

[4] These measures are also used as output-based measures of audit quality in the literature (Gul et al., 2013). Clients' accounting quality can be enhanced by high-quality audits.

[5] We focus on Chinese audit practice for two reasons: 1. To differentiate high- vs. low-PIMAO auditors, this study requires the identity of individual auditors who have signed their names on audit reports. Such information is available in China as Chinese-listed clients have been mandated to disclose the names of their signing auditors since the early 1990s. This enables us to measure individual auditors' PIMAO using observations over an extended period of 18 years. 2. China's weak institutional environment adversely impacts external auditing (Ke et al, 2015), further raising our concerns about the role that audit conservatism plays in the issuance of MAOs.

[6] We recognize that the literature lacks clarity on the extent to which these five client quality measures capture audit quality.

sensitivity to risk, is known to enhance audit quality (Dou et al., 2024). Our study suggests that the issuance of MAOs may not necessarily reflect audit conservatism in the Chinese context. This raises questions about the effectiveness of using MAOs in measuring audit quality. Nevertheless, excessive audit conservatism can lead to over-auditing of financial statements, which can have adverse consequences for clients (Hall et al., 2023). Second, this study contributes to the understanding of self-selection bias in output-based measures of audit quality. While prior research suggests the presence of self-selection bias (Lawrence et al., 2011; Minutti-Meza, 2013), explicit evidence supporting this notion is rarely documented. Our study fills this literature gap and underscores the importance of addressing this issue in archival auditing research, with a focus on China.

This study also has practical implications for external auditing in China. Our findings suggest that auditors may not exercise sufficient conservatism in auditing clients, potentially aggravating their type II errors in audit opinions[7]. This concern has been underscored by recent scrutiny from Chinese authorities regarding the role of PricewaterhouseCoopers LLP (PwC) in the accounting practices of China Evergrande Group, a giant and massively indebted real estate developer. The company is accused of perpetrating a $78 billion fraud, which includes substantial revenue inflation in 2019 and 2020 (Reuters, 2024). On both traditional and social media, there is widespread questioning about why PwC repeatedly issued unqualified (clean) audit opinions throughout their long-term engagement with the client from 2009 to 2020. This situation highlights a perceived lack of audit conservatism, prompting calls for accounting firms to urge their partners to adopt more conservative audit practices in China. Meanwhile, regulators and independent directors serving on client boards should strengthen their oversight to ensure the maintenance of adequate audit conservatism. This study also indicates that auditors are less inclined to exert excessive effort when auditing financial statements in China, thereby mitigating concerns about over-auditing.

The remainder of the paper is organized as follows. We introduce the theoretical background, review the literature, and formulate the research question in Section 2. We discuss the measurement of variables and models in Section 3 and report empirical results in Section 4. The paper concludes in Section 5.

2. THEORETICAL BACKGROUND, PRIOR RESEARCH, AND RESEARCH QUESTION

2.1. Auditors' decision-making

Krishnan (1994) develops a theoretical framework to illustrate auditors' decision-making process in audit reporting. The process hinges on two key parameters: 1) the auditor's judgement value of the client's condition, which is a function of client characteristics regarding accounting quality and financial viability, and 2) the auditor's threshold value of conservative treatment. The judgement value is the auditor's assessed level of audit risk, while the threshold value reflects the auditor's tolerance threshold of audit risk, i.e., the level of risk the auditor is willing to accept. Should the judgement value exceed the threshold value, the auditor will issue MAOs.

According to psychological theories on risk preference (Frey et al., 2017; Pedroni et al., 2017), an individual auditor's risk tolerance tends to remain relatively stable over time. While this tolerance may vary across different clients, there is a general predisposition that may be higher or lower relative to other individual auditors[8]. Audit conservatism reflects the sensitivity of individual auditors to audit risk, which is influenced by various personal attributes such as knowledge, skills, experience, professional values, ethics, and attitudes. Behavioral auditing research (Shanteau, 1987; Abdolmohammadi & Shanteau, 1992; Shafer et al., 2001) indicates an important role of individual characteristics in auditors' decision-making processes. Archival auditing research also reveals that audit quality or audit reporting is related to individual auditors' gender (Hardies et al., 2016; Hossain et al., 2018; Lee et al., 2019), experience (Chi et al., 2017; Cahan & Sun, 2015), age (Sundgren & Svanström, 2014) and educational background (Gul et al., 2013). Thus, the personal attributes of individual auditors may manifest in their inherent audit conservatism.

2.2. Client quality and audit opinions

Auditors are tasked with issuing going concern opinions, a type of MAOs, when they harbor doubts about a client's ability to continue business operations within one year of the financial statement date. A stream of studies (Mutchler et al., 1997; Carson et al., 2013; Desai et al., 2017) document a positive relationship between the issuance of going concern opinions and the financial distress experienced by clients. These studies delve into the influence of various client distress factors on the decision to issue going concern opinions, suggesting that auditors are more inclined to issue MAOs when clients are under significant financial strain.

Another research stream focuses on the association between audit opinions and accounting quality, investigating whether low accounting quality prompts auditors to issue non-clean opinions more frequently. Francis and Krishnan (1999) contend that high accruals signal a great chance of large estimation errors and undetected accounting problems. They find that firms with high accruals are more likely to receive MAOs than those with small accruals. Bartov et al. (2000) examine the effect of abnormal accruals on auditor reporting, concluding that auditors are more likely to issue MAOs to clients with high earnings management as measured by the absolute value of abnormal accruals. However, Bulter et al. (2004) indicate that the relationship is driven by large negative abnormal accruals of financially distressed clients, who are more likely to receive going concern opinions, rather than by income-increasing earnings management. Chen et al. (2001) and Liu and Sun (2024) employ small profits as a proxy for earnings management and show its significance in

[7] Type II errors occur when auditors fail to issue MAOs to clients who have accounting misstatements or who may go out of business within one year of the financial statement date.

[8] For example, client importance may raise risk tolerance, but the degree of this increase varies among individual auditors.

determining the issuance of MAOs. In addition, Fang et al. (2018) find that auditors are more likely to issue audit opinions with explanatory notes on related party transactions for clients with high amounts of related sales or lending.

Prior research also examines whether the issuance of MAOs is an indication of clients' low accounting quality. Bulter et al. (2004) provide mixed evidence on this issue. They document that clients receiving MAOs such as going concern or material uncertainty (accounting change) opinions have higher (lower) absolute abnormal accruals but lower (higher) signed abnormal accruals. Extending this inquiry, Czerney et al. (2014) revisit this issue by observing the occurrence of financial restatements following MAO issuance. They find that financial statements are more likely to be restated subsequent to the issuance of audit opinions with explanatory language concerning accounting change, previous restatements, or division of responsibility, suggesting that the issuance of these MAOs signals low accounting quality. Moreover, Fang et al. (2018) reveal that MAOs regarding related party transactions have predictive value for future restatements in related party transactions.

2.3. Self-selection bias in audit quality measures

A big challenge to archival auditing research is that audit quality is not explicitly observable. Researchers usually use financial reporting quality measures or the issuance of MAOs as a proxy for audit quality. However, these audit quality measures are output-based measures, which are affected not only by audit quality but also by financial reporting systems and client characteristics (DeFond & Zhang, 2014). Consequently, if an auditor consistently handles high-quality clients, employing these output-based measures may lead to self-selection bias, confounding the effort to accurately assess the auditor's quality.

Little research has shown the existence of self-selection bias in output-based measures of audit quality. Lawrence et al. (2011) question whether differences in audit quality measures between Big 4 and non-Big 4 audit firms really reflect the higher audit quality of Big 4 audit firms. By using propensity-score and attribute-based matching models to control for client characteristics, they reveal that three output-based audit quality measures — abnormal accruals, cost of capital, and analyst forecast accuracy— exhibit no significant differences between Big 4 and non-Big 4 audit firms. This finding suggests that the differences observed in audit quality measures between Big 4 and non-Big 4 audit firms are likely due to variations in client characteristics.

In a similar vein, Minutti-Meza (2013) examines whether differences in audit quality measures between industry specialist and non-specialist auditors are attributable to the higher audit quality of specialist auditors. Employing propensity scores to match clients of both types of auditors, he finds that, after controlling for client characteristics, there are no significant differences in two output-based audit quality measures: abnormal accruals and the propensity to meet or beat analysts' forecasts.

2.4. Research question

Krishnan (1994) indicates that the decision-making process regarding the issuance of audit opinions resembles a comparison of auditors' judgement value (assessed level of audit risk) and their threshold value of conservative treatment (tolerance of audit risk). MAOs are issued when the judgement value exceeds the threshold value. As discussed earlier in subsections 2.2 and 2.3, client quality significantly influences judgment value, as audit risk tends to rise with lower client quality. It is plausible that individual auditors issue more MAOs either because 1) they maintain relatively lower threshold values compared to other auditors or 2) they have similar threshold values but their clients typically have lower quality and higher assessed risk. In other words, it remains unclear whether individual auditors' PIMAO is mainly attributed to their audit conservatism, captured in the threshold value, or to client quality, reflected in the judgement value.

If PIMAO is mostly driven by audit conservatism, high-PIMAO auditors should have lower threshold values of conservative treatment and, thus, be less tolerant of low client quality compared to low-PIMAO auditors. In this case, clients not receiving MAOs from high-PIMAO auditors must exhibit higher quality (lower judgment values) to avoid receiving MAOs compared to non-MAO clients of low-PIMAO auditors. Thus, there would be a positive association between PIMAO and client quality, driven by individual auditors' conservative auditing practices in non-MAO instances.

On the other hand, client characteristics also affect auditors' issuance of MAOs. Prior research (Francis & Krishnan, 1999; Bartov et al., 2000; Chen et al., 2001) finds that auditors are more likely to issue MAOs to clients with low accounting quality (high judgment values) than to clients with high accounting quality (low judgement values). It is likely that certain auditors persistently audit low-quality clients. Extant research indicates that auditor choice is influenced by client characteristics. For instance, Chaney et al. (2004) reveal that clients are not randomly assigned between Big 5 and non-Big 5 auditors. Hsu et al. (2015) document that clients engaging in high (low) earnings management opt for smaller (larger) auditors, suggesting that client quality is related to their auditor choice. Ke et al. (2015) find that Big 4 accounting firms assign less experienced partners to clients solely listed in mainland China compared to clients cross-listed in Hong Kong. Even within the same audit firm, individual auditors do not have equal opportunities to audit high-quality clients, particularly in China where seniority culture prevails. For auditors consistently auditing low-quality clients, their high propensity to issue MAOs could simply reflect low client quality, resulting in a negative association between PIMAO and client quality. In this case, a high level of PIMAO is driven by low client quality.

Based on the above discussion, we formulate our research question as follows:

RQ: Is a high level of PIMAO driven by high audit conservatism or by low client quality?

3. METHODOLOGY

3.1. Signing auditors' PIMAO

In China, audit reports on the financial statements of listed clients must be signed by at least two individual auditors who either conduct the final review of the audit or manage the daily work of the audit. Chinese auditors can issue five types of audit opinions, including 1) unqualified (clean) opinion, 2) qualified opinion, 3) adverse opinion, 4) disclaimed opinion, and 5) unqualified opinion with explanatory notes[9]. Audit opinions other than unqualified (clean) opinions are classified as MAOs. We use the entire data of the China Stock Market & Accounting Research (CSMAR) Audit Opinion database from 1990 to 2016 to measure signing auditors' PIMAO[10].

As the names of signing auditors are publicly available in China, this allows us to compute, for each signing auditor *j*, the total number of annual audits signed off (denoted as TAS_j) and the total number of MAOs issued (denoted as MAO_j) from 1990 to 2016. These two variables are based on all observations in the database and are used to measure PIMAO for observations in the sample discussed below.

Next, we select a sample over a 10-year period from 2007 through 2016, encompassing all annual audits with no MAOs[11]. This sample is restricted to client-year observations with no MAOs (i.e., non-MAO observations) because to examine our research question, we need to test whether non-MAO clients of high-PIMAO auditors would have higher quality to avoid receiving MAOs compared to non-MAO clients of low-PIMAO auditors[12], as discussed in subsection 2.4.

For each client-year observation in the sample, i.e., an audit report on client *i*'s annual financial statements at year *t* signed off by *n* individual auditors ($n \geq 2$, and $2007 \leq t \leq 2016$), we compute the signing auditors' propensity to issue MAOs for client *i* at year *t* as follows:

$$PIMAO_{i,t} = \sum_{j=1}^{n} MAO_j / \sum_{j=1}^{n} TAS_j \quad (1)$$

The numerator in Eq. (1) is the total number of MAOs from 1990 to 2016, issued by all (two or more) individual auditors who signed the audit report of client *i*'s annual financial statements at year *t*. The denominator is the total number of audit reports signed by these individual auditors from 1990 to 2016.

3.2. Client quality measures

First, we estimate the following logistic regression using all clients at each year in the sample period of 2007 through 2016[13]:

$$DMAO = \alpha_0 + \alpha_1 QUICK + \alpha_2 ARINV + \alpha_3 ROA + \alpha_4 LOSS + \alpha_5 SIZE + \alpha_6 LEV + \alpha_7 AGE + \alpha_8 OTHREC + Industry\ dummies + \varepsilon \quad (2)$$

In Eq. (2), *DMAO* is a dummy variable, coded as 1 if the client receives a MAO on the annual financial statements at a year, and 0 otherwise. *QUICK* is the ratio of the sum of cash, short-term investments, notes receivable, and accounts receivable to current liabilities. *ARINV* is the ratio of the sum of accounts receivable and inventory to total assets. *ROA* is the ratio of net income to average total assets. *LOSS* is coded as 1 if the client reports loss and 0 otherwise. *SIZE* is the natural logarithm of total assets. *LEV* is the ratio of total liabilities to total assets. *AGE* is the number of years the client has been publicly listed. *OTHREC* is the ratio of other receivables to total assets. We also include industry dummies for each two-digit Standard Industrial Classification (SIC) code. The predicted value of *DMAO* from Eq. (2) reflects the probability that auditors are expected to issue MAOs based on client characteristics. Our first measure of client quality is the predicted probability of receiving MAOs (*PPRM*), which is the predicted value of *DMAO* from Eq. (2). A high level of *PRRM* indicates that clients have low quality, increasing the probability of receiving MAOs.

Next, we estimate the modified Jones (1991) model using all clients within each year and two-digit SIC industry in the sample period[14]:

$$TAC/TA_{-1} = \beta_0 1/TA_{-1} + \beta_1(\Delta SALES - \Delta AR)/TA_{-1} + \beta_2 PPE/TA_{-1} + \varepsilon \quad (3)$$

In Eq. (3), *TAC* is total accruals, as measured by income before extraordinary items minus cash flow from operating activities. TA_{-1}denotes total assets at the beginning of a year. $\Delta SALES$ and ΔAR refer to annual changes in sales revenue and accounts receivable, respectively. *PPE* is gross property, plant, and equipment. Following the estimation of Eq. (3), we compute the residual value for each observation in the test sample, denoted as signed abnormal accruals (*SAAC*). Then, we take the absolute value of *SAAC* to obtain absolute abnormal accruals (*AAAC*). The signed and absolute abnormal accruals serve as the second and third measures of client quality. A large value of *SAAC* or *AAAC* indicates high earnings management and, thus, low client quality.

Burgstahler and Dichev (1997) find that small profits occur at a disproportionately higher frequency than small losses, indicating that firms manipulate earnings to intentionally avoid reporting losses. Chen et al. (2001) and Liu and Sun (2024) suggest that Chinese auditors are more likely to issue MAOs to clients with small profits. We use an indicator variable of small profits (*SP*) as

[9] Among 34,444 audit opinions on annual financial statements in the entire database spanning from 1990 to 2016, there are 31,972 unqualified (clean) opinions, 630 qualified opinions, 3 adverse opinions, 271 disclaimed opinions, and 1,568 unqualified opinions with explanatory notes.

[10] The CSMAR Audit Opinion database provides audit data for Chinese firms listed on two Chinese stock exchanges: the Shanghai Stock Exchange, which began operations on December 19, 1990, and the Shenzhen Stock Exchange, which began operations on July 3, 1991.

[11] To avoid confounding of different accounting standards, we select the sample from the period of 2007 through 2016. The year 2007 marks the beginning of Chinese accounting standards converging with International Financial Reporting Standards (IFRS), and 2016 is the latest year in the database from which we collect audit data.

[12] As reported in footnote 9, about 92.84% (31,972 out of 34,444) of all observations in the entire database are non-MAO observations.

[13] The model is based on Gul et al. (2013).

[14] This modified Jones model is suggested by Kothari et al. (2005). To estimate the model, we exclude outliers that fall below the 1st percentile and above the 99th percentile of each variable. Also, a minimum of 10 clients within each two-digit SIC industry at a year is required for estimation.

the fourth measure of client quality, coded as 1 if the return on assets falls between 0.00 and 0.01, and 0 otherwise. A high occurrence of small profits indicates high earnings management and, thus, low client quality.

Extant research (Chen & Yuan, 2004; Haw et al., 2005) provides evidence that Chinese clients use below-the-line items and non-core earnings to inflate reported earnings. Our fifth proxy for client quality is non-operating income (*NOIC*), calculated as non-operating income divided by average total assets. A large amount of *NOIC* indicates high inflation of reported earnings and, thus, low client quality.

3.3. Regression model

We examine the relationship between signing auditors' PIMAO and client quality measures by estimating the following model based on the sample that includes only non-MAO client-year observations[15]:

$$\begin{gathered} NCQ = \gamma_0 + \gamma_1 PIMAO + \gamma_2 ROA + \gamma_3 LOSS + \\ \gamma_4 TURN + \gamma_5 SIZE + \gamma_6 BM + \gamma_7 LEV + \gamma_8 AGE + \\ \gamma_9 PAF + \gamma_{10} AFSIZE + \gamma_{11} IASIZE + \gamma_{12} AFCI + \\ \gamma_{13} IACI + \gamma_{14} AFTEN + \gamma_{15} IFTEN + \\ Year\ dummies + Industry\ dummies + \varepsilon \end{gathered} \quad (4)$$

In Eq. (4), *NCQ* signifies negative client quality, determined by *PPRM*, *SAAC*, *AAAC*, *SP*, and *NOIC*, respectively. Control variables are included in the model following Gul et al. (2013). *ROA* is the return on assets, computed by net income divided by average total assets. *LOSS* is loss indicator, coded as 1 if the client reports loss and 0 otherwise. *TURN* is turnover, expressed as the ratio of sales to average total assets. *SIZE* is client size, computed by the natural logarithm of total assets. *BM* is book-to-market ratio, defined as the ratio of book value to market value of common equity. *LEV* is leverage, computed by total liabilities divided by total assets. *AGE* is client age, measured as the number of years the client has been publicly listed. *PAF* serves as a partnership indicator, coded as 1 if the audit firm is organized as partnerships, and 0 otherwise. *AFSIZE* is audit firm size, computed by summing each client's natural logarithm of total assets for the audit firm's clients. *IASIZE* is individual auditor size, computed by summing each client's natural logarithm of total assets for the signing auditors' clients. *AFCI* is audit firm client importance, computed by dividing the natural logarithm of total assets of the client by *AFSIZE*. *IACI* is individual auditor client importance, computed by dividing the natural logarithm of total assets of the client by *IASIZE*. *AFTEN* is audit firm tenure, measured as the number of consecutive years the audit firm has audited the client. *IATEN* is individual auditor tenure, computed as the average number of consecutive years the signing auditors have audited the client.

In Eq. (4), we also include year dummies and two-digit SIC industry dummies to control for fixed year and industry effects. As discussed in subsection 2.4, if signing auditors with high PIMAO maintain higher audit conservatism than auditors with low PIMAO, clients of high-PIMAO auditors should have higher quality to avoid receiving MAOs compared to clients of low-PIMAO auditors. In this case, the coefficient on *PIMAO* (i.e., γ_1) is expected to be negative and significant. Otherwise, the coefficient is either significantly positive or statistically insignificant.

4. RESULTS

4.1. Sample and descriptive statistics

Our sample selection process begins with all 22,695 client-year observations for the 10-year period of 2007 to 2016 from the CSMAR Audit Opinion database[16]. Each client-year observation corresponds to an audit report on a client's annual financial statements for a particular year. After the exclusion of observations with MAOs, the sample size is reduced to 21,668 observations with no MAOs[17]. Next, we delete six observations with only one signing auditor's name in the database[18], yielding a sample of 21,662 observations with no MAOs. Among these, 20,999 and 663 audit reports are signed off by two and three individual auditors, respectively. We then merge this audit dataset with the Compustat Global database to collect clients' financial data for computing the client quality measures and control variables[19]. Our final sample comprises 16,202 non-MAO client-year observations.

Table 1a. Sample breakdown by year

Year	*Frequency*	*Percentage (%)*
2007	1,008	6.22
2008	1,172	7.23
2009	1,218	7.52
2010	1,600	9.88
2011	1,734	10.70
2012	1,919	11.85
2013	1,926	11.89
2014	1,891	11.67
2015	1,875	11.57
2016	1,859	11.47
Total	16,202	100.00

[15] All continuous variables in this model are winsorized at the levels of 1% and 99%. We also conduct a sensitivity test by including both non-MAO and MAO observations and the results are reported in subsection 4.3.

[16] We explain the selection of 2007 as the first year in footnote 11.

[17] We focus on non-MAO observations because to examine our research question, we need to test whether non-MAO clients of high-PIMAO auditors would have higher quality to avoid receiving MAOs compared to non-MAO clients of low-PIMAO auditors, as discussed in subsection 2.4. We also conduct a sensitivity by including both non-MAO and MAO observations in subsection 4.3.

[18] We delete these six observations because in China audit reports must be signed off by at least two individual auditors.

[19] The Compustat Global database covers all firms publicly listed in China.

Table 1b. Sample breakdown by industry

Two-digit SIC	*Industry description*	*Frequency*	*Percentage (%)*
28	Chemicals and allied products	2,692	16.62
36	Electronic and electrical equipment and components	2,094	12.92
35	Machinery and computer equipment	1,550	9.57
33	Primary metal industries	1,008	6.22
37	Transportation equipment	762	4.70
49	Electric, gas, and sanitary services	759	4.68
20	Food and kindred products	749	4.62
73	Business services	672	4.15
32	Stone, clay, glass, and concrete products	515	3.18
22	Textile mill products	435	2.68
38	Measuring instruments; photographic goods; watches and clocks	394	2.43
53	General merchandise stores	371	2.29
34	Fabricated metal products	358	2.21
47	Transportation services	314	1.94
26	Paper and allied products	295	1.82
30	Rubber and miscellaneous plastics products	283	1.75
50	Wholesale trade-durable goods	283	1.75
12	Coal mining	267	1.65
Other		2,401	14.82
Total		16,202	100.00

We break down the final sample by year and industry. Table 1a presents the distribution of non-MAO clients across the years 2007 to 2016. The substantial increase in frequency in 2010 is due to a large number of Chinese companies going public that year. In Table 1b, observations are categorized by industry using the two-digit SIC code. There are no clients from the financial sector. The leading industry categories include "Chemicals and allied products" (16.62%), "Electronic and electrical equipment and components" (12.92%), "Machinery and computer equipment" (9.57%), "Primary metal industries" (6.22%), and "Transportation equipment" (4.70%), all belonging to the manufacturing industry. Table 2 reports descriptive statistics of the five client quality measures and all control variables.

Table 2. Descriptive statistics

Variables	*Mean*	*Q1*	*Median*	*Q3*	*Std. dev.*
PPRM	0.028	0.003	0.012	0.027	0.050
SAAC	0.010	-0.036	0.004	0.046	0.089
AAAC	0.063	0.018	0.041	0.079	0.074
SP	0.136	0.000	0.000	0.000	0.343
NOIC	0.017	0.004	0.011	0.023	0.026
PIMAO	0.052	0.000	0.035	0.079	0.058
ROA	0.044	0.013	0.036	0.070	0.055
LOSS	0.080	0.000	0.000	0.000	0.271
TURN	0.719	0.398	0.602	0.889	0.489
SIZE	8.111	7.211	7.951	8.820	1.253
BM	0.800	0.170	0.320	0.623	1.907
LEV	0.475	0.307	0.478	0.645	0.218
AGE	10.802	5.000	10.000	16.000	6.549
PAF	0.541	0.000	1.000	1.000	0.498
AFSIZE	1,085.470	300.431	634.636	1,516.890	1,051.000
IASIZE	44.058	25.285	38.726	57.389	24.104
AFCI	0.021	0.005	0.013	0.027	0.025
IACI	0.245	0.139	0.209	0.327	0.134
AFTEN	4.422	2.000	3.000	6.000	3.569
IATEN	1.900	1.000	2.000	2.500	0.899

Note: PPRM = predicted probability of receiving MAOs, measured by the predicted value from Eq. (2); SAAC = signed abnormal accruals, measured by the residual value from Eq. (3); AAAC = absolute abnormal accruals, measured by the absolute value of SAAC; SP = small profit, coded as 1 if return on assets lies between 0.00 and 0.01, and 0 otherwise; NOIC = non-operating income, computed by non-operating income divided by average total assets; PIMAO = auditors' propensity to issue modified audit opinions (MAOs), computed by the total number of MAOs issued by the client's signing auditors divided by the total number of annual audit reports signed by these auditors from 1990 to 2016; ROA = return on assets, computed by net income divided by average total assets; LOSS = loss indicator, coded as 1 if the client reports loss and 0 otherwise; TURN = turnover, computed by sales divided by average total assets; SIZE = client size, computed by the natural logarithm of total assets; BM = book-to-market ratio, computed by book value of common equity divided by market value of common equity; LEV = leverage, computed by total liabilities divided by total assets; AGE = client age, measured by the number of years the client has been listed; PAF = partnership indicator, coded as 1 if the audit firm is organized as partnerships, and 0 otherwise; AFSIZE = audit firm size, computed by summing each client's natural logarithm of total assets for the whole audit firm; IASIZE = individual auditor size, computed by summing each client's natural logarithm of total assets for all the signing auditors; AFCI = audit firm client importance, computed by dividing the natural logarithm of total assets of the client by AFSIZE; IACI = individual auditor client importance, computed by dividing the natural logarithm of total assets of the client by IASIZE; AFTEN = audit firm tenure, measured by the number of consecutive years the audit firm has audited the client; IATEN = individual auditor tenure, computed by the average number of consecutive years the signing auditors have audited the client.

4.2. Main results

The main results of this study are reported in Table 3. We document an insignificant relationship between the predicted probability of receiving MAOs (*PPRM*) and signing auditors' PIMAO (*PIMAO*) (t-statistic = 0.95), suggesting that high-PIMAO auditors are not inherently more conservative in issuing audit reports compared to low-PIMAO auditors. Moreover, we find a positive and significant association between signed abnormal accruals (*SAAC*) and *PIMAO* (t-statistic = 3.35),

indicating that clients of high-PIMAO auditors engage in higher earnings management than clients of low-PIMAO auditors. This pattern extends to absolute abnormal accruals (*AAAC*), which also exhibit a positive and significant association with *PIMAO* (t-statistic = 4.15). When we run a logistic regression for the indicator variable of small profit (*SP*), the coefficient on *PIMAO* is still positive but insignificant (t-statistic = 1.21). Again, clients of high-PIMAO auditors are not less likely to manage earnings to avoid reporting losses. Lastly, we find a positive and significant association between non-operating income (*NOIC*) and *PIMAO* (t-statistic = 5.00), suggesting that clients of high-PIMAO auditors are more likely to use non-operating income to manage reported earnings.

Table 3. Main results

Variables	*PPRM (1)*		*SAAC (2)*		*AAAC (3)*		*SP (4)*		*NOIC (5)*	
	Coef.	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*
Intercept	0.085	18.74***	-0.008	-0.77	0.090	10.05***	67.141	33.34***	0.025	8.25***
PIMAO	0.005	0.95	0.039	3.35***	0.041	4.15***	2.447	1.21	0.016	5.00***
ROA	-0.009	-1.30	0.451	27.05***	0.340	24.28***	-5,670.500	-36.21***	0.164	35.22***
LOSS	0.079	62.27***	-0.018	-5.89***	0.047	18.62***	-810.500	-36.69***	-0.002	-2.22**
TURN	-0.008	-11.25***	-0.013	-8.39***	0.008	6.27***	0.397	1.56	-0.008	-17.59***
SIZE	-0.017	-55.18***	0.003	3.53***	-0.008	-12.43***	-0.228	-2.25**	-0.003	-12.22***
BM	-0.000	-0.08	-0.001	-2.81***	-0.000	-0.79	-0.016	-0.30	0.000	0.27
LEV	0.087	47.74***	0.012	2.86**	0.057	15.97***	0.942	1.51	0.007	5.72***
AGE	0.001	19.94***	-0.000	-3.32***	0.000	4.01***	0.051	2.38**	0.001	24.90***
PAF	-0.000	-0.05	-0.004	-1.08	-0.003	-0.95	-0.102	-0.18	0.000	0.01
AFSIZE	-0.000	-1.95*	0.000	0.74	-0.000	-0.31	-0.000	-0.79	-0.000	-1.84*
IASIZE	-0.000	-0.83	0.000	1.61	0.000	2.16**	-0.003	-0.42	0.000	0.57
AFCI	-0.009	-0.66	0.038	1.16	0.092	3.33***	0.466	0.11	-0.022	-2.38**
IACI	0.000	0.06	0.010	1.08	0.012	1.45	-0.802	-0.57	0.002	0.88
AFTEN	0.000	0.60	-0.001	-3.81***	-0.001	-6.80***	0.013	0.44	0.000	2.77***
IATEN	0.000	0.91	-0.003	-3.82***	-0.003	-5.27***	0.109	0.96	0.000	1.90*
Year dummies	Included		Included		Included		Included		Included	
Industry dummies	Included		Included		Included		Included		Included	
R^2	50.10%		10.17%		8.81%				17.38%	
-2 Log L							86.91			
F-stat.	249.24***		28.09***		23.99***		196.92***		52.22***	
N	16,202		16,202		16,202		16,202		16,202	

*Note: ***, **, and * denote significance at the level of 1%, 5%, and 10% (two-tailed tests), respectively. All the variables are defined in Table 2.*

In summary, Table 3 provides evidence of a positive relationship between measures of negative client quality and signing auditors' PIMAO for non-MAO observations. As discussed in subsection 2.4 in the formulation of the research question, if a high PIMAO reflects the signing auditor's high audit conservatism, non-MAO clients of the high-PIMAO auditor would need to exhibit high quality to avoid receiving MAOs. This would result in a negative and significant relationship between the negative client quality measures and *PIMAO*. However, since we do not find such a negative relationship, there is no evidence to support the notion that signing auditors with high PIMAO have higher audit conservatism than other auditors. Instead, we find a positive and significant relationship between the negative client quality measures and *PIMAO*, indicating that lower client quality is positively associated with a higher likelihood of issuing MAOs. Thus, our findings suggest that individual auditors' high PIMAO is more likely driven by clients' low quality rather than by audit conservatism.

4.3. Sensitivity tests

We conduct several sensitivity tests to check the robustness of our main results. First, we exclude clients whose signing auditors together performed fewer than 79 annual audits from 1990 to 2016, which represents the third quartile of total annual audits performed by signing auditors across all clients. This step aims to determine whether our main results are influenced by clients whose signing auditors had limited opportunities to audit publicly listed companies, which could potentially reduce their likelihood of issuing MAOs. Panel A of Table 4 summarizes the results of this sensitivity test. We find that the coefficient on *PIMAO* is positive for all five client quality measures and significant for *PPRM*, *SAAC*, *AAAC*, and *NOIC* (t-statistic = 2.11, 3.58, 2.25, and 4.07, respectively), consistent with the notion that PIMAO is mainly attributed to client quality.

Second, we remove clients who have received at least one MAOs during the sample period. After the exclusion, the reduced sample only includes clients who did not receive any MAOs from 2007 to 2016. This sample restriction alleviates concerns that our main test results might be driven by specific qualitative characteristics of clients who experienced MAOs in some years but not others within the sample period. Panel B of Table 4 indicates positive and significant associations between *PIMAO* and *PPRM*, *SAAC*, or *NOIC* (t-statistic = 2.14, 1.96, or 2.81, respectively). Although *PIMAO* is not significantly associated with *AAAC* or *SP*, we still observe positive associations. Again, there is no evidence to suggest that clients of high-PIMAO auditors have higher quality to avoid receiving MAOs than clients of low-PIMAO auditors.

Third, we narrow down MAOs to qualified audit opinions (QAOs) by excluding observations that received unqualified opinions with explanatory notes during the sample period. Since QAOs are a more conservative measure than MAOs, we calculate the propensity to issue QAOs (i.e., *PIQAO*) to replace *PIMAO*. We re-run the analysis and summarize related results in Panel C of Table 4. Like the results on *PIMAO*, *PIQAO* is positively and significantly associated with *SAAC*, *AAAC*, and *NOIC* (t-statistic = 2.95, 3.60, and 3.27, respectively),

suggesting that clients of auditors with high *PIQAO* do not necessarily have higher quality compared to clients of auditors with low *PIQAO*.

Fourth, we replace *PIMAO* with two indicator variables in the model to signify high (low)-PIMAO auditors. *IVMAO1* is coded as 1 if *PIMAO* ≥ the 75th percentile and 0 otherwise, and *IVMAO2* is coded as 1 if *PIMAO* ≤ the 25th percentile and 0 otherwise. In Panel D of Table 4, we show a positive and significant coefficient on *IVMAO1* for *SAAC* and *NOIC* (t-statistic = 2.57 and 4.70, respectively) and a negative and significant coefficient on *IVMAO2* for *AAAC* (t-statistic = -2.07). Meanwhile, the coefficient on *IVMAO1* (*IVMAO2*) is insignificant for *PPRM, AAAC*, and *SP* (*PPRM, SAAC, SP*, and *NOIC*). Once again, there is still no evidence that clients of high-PIMAO auditors have higher quality to avoid receiving MAOs compared to clients of low-PIMAO auditors.

Fifth, we re-run regressions by including both non-MAO and MAO observations for the period of 2007–2016 and report the results in Panel E of Table 4. We find that *PIMAO* is positively and significantly associated with *PPRM, SAAC, AAAC*, and *NOIC* (t-statistic = 18.82, 2.50, 7.42, and 11.14, respectively) and is not significantly associated with *SP*. Overall, these findings indicate that clients of high-PIMAO auditors do not exhibit higher quality than clients of low-PIMAO auditors.

Sixth, we examine whether the main results are sensitive to an alternative calculation of *PIMAO* using audit reports from 2007 to 2016, instead of 1990 to 2016. The results, summarized in Panel F of Table 4, show a positive and significant coefficient on *PIMAO* for *SAAC*, *AAAC*, *SP*, and *NOIC* (t-statistic = 2.52, 3.43, 2.43, and 3.53, respectively) and an insignificant coefficient for *PPRM*. These are consistent with our earlier findings that clients of high-PIMAO auditors do not exhibit higher quality compared to clients of low-PIMAO auditors. In essence, our sensitivity tests reinforce the inference drawn from the main analyses, underscoring that individual auditors' PIMAO is not a primary indicator of audit conservatism.

Table 4. Sensitivity tests

Variables	*PPRM (1)*		*SAAC (2)*		*AAAC (3)*		*SP (4)*		*NOIC (5)*	
	Coef.	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*
Panel A: Auditors with extensive experience (signing more than 79 audit reports)										
PIMAO	0.026	2.11**	0.106	3.58***	0.060	2.25**	2.177	0.92	0.036	4.07***
R^2	50.76%		10.98%		8.76%				20.12%	
-2 Log L							65.83			
F-stat.	67.36***		8.06***		6.27***		46.94***		16.45***	
N	3,981		3,981		3,981		3,981		3,981	
Panel B: Clients receiving a clean audit opinion each year from 2007 to 2016										
PIMAO	0.010	2.14**	0.026	1.96**	0.016	1.51	1.847	0.71	0.010	2.81***
R^2	48.37%		9.46%		8.31%				16.59%	
-2 Log L							51.63			
F-stat.	172.30***		19.22***		16.67***		132.91***		36.57***	
N	12,019		12,019		12,019		12,019		12,019	
Panel C: Propensity to issue qualified audit opinions										
PIQAO	0.007	0.64	0.075	2.95***	0.077	3.60***	2.057	0.46	0.023	3.27***
R^2	50.10%		10.15%		8.79%				17.31%	
-2 Log L							87.25			
F-stat.	249.23***		28.05***		23.92***		196.92***		51.95***	
N	16,202		16,202		16,202		16,202		16,202	
Panel D: High (low) PIMAO indicators: IVMAO1 (IVMAO2) =1 if PIMAO ≥ 75th (≤ 25th) percentile and 0 otherwise										
IVMAO1	0.001	1.00	0.004	2.57**	0.002	1.25	-0.090	-0.34	0.002	4.70***
IVMAO2	0.001	1.35	-0.001	-0.75	-0.003	-2.07**	-0.247	-1.00	0.001	1.22
R^2	50.10%		10.16%		8.77%				17.37%	
-2 Log L							86.87			
F-stat.	245.48***		27.65***		23.50***		193.94***		51.38***	
N	16,202		16,202		16,202		16,202		16,202	
Panel E: Inclusion of observations with MAOs										
PIMAO	0.164	18.82**	0.027	2.50**	0.074	7.42***	1.213	1.24	0.037	11.14***
R^2	54.69%		15.08%		11.26%				23.06%	
-2 Log L							278.24			
F-stat.	313.33***		46.11***		32.95***		203.73***		77.82***	
N	16,941		16,941		16,941		16,941		16,941	
Panel F: Inclusion of observations with MAOs										
PIMAO	0.001	0.12	0.032	2.52**	0.036	3.43***	4.704	2.43**	0.013	3.53***
R^2	50.10%		10.14%		8.78%				17.32%	
-2 Log L							85.50			
F-stat.	249.21***		28.01***		23.90***		196.94***		51.99***	
N	16,202		16,202		16,202		16,202		16,202	

*Note: ***, **, and * denote significance at the level of 1%, 5%, and 10% (two-tailed tests), respectively. PIMAO is defined in Table 2. PIQAO = auditors' propensity to issue QAOs, computed as the total number of QAOs issued by the client's signing auditors divided by the total number of annual audit reports signed off by these auditors from 1990 to 2016. IVMAO1(IVMAO2) is coded as 1 if PIMAO ≥ 75th (≤ 25th) percentile and 0 otherwise.*

4.4. Reverse regressions

As discussed in subsection 2.2, client characteristics associated with low accounting quality or financial viability may prompt auditors to issue MAOs. Auditors may resort to issuing MAOs as a response when they suspect but are unable to effectively constrain, the client's earnings management. In the Chinese context, Chen et al. (2001) find that clients reporting small profits are more likely to receive MAOs. Hence, signing auditors' high PIMAO is likely to be driven by high earnings management or low financial viability of their clients. To further substantiate this assertion, we run a series of reverse regressions for Eq. (4) by swapping the positions of PIMAO and the five client quality measures in the model.

We document a positive and significant association between signing auditors' PIMAO and the four earnings management measures in the reverse regressions. The results, summarized in Table 5, reveal significantly positive coefficients for *SAAC*, *AAAC*, *SP*, and *NOIC* (t-statistic = 3.35, 4.15, 2.44, and 5.00, respectively), suggesting that clients engaged in a high level of earnings management are more likely to be audited by high-PIMAO auditors. When auditors are frequently assigned clients with low-quality characteristics, they are likely to issue more MAOs in response to clients' low quality, and eventually become high-PIMAO auditors over time. Essentially, findings from the reverse regressions support the notion that PIMAO is mainly driven by client quality.

Table 5. Reverse regressions

Variables	*Coef.*	*t-stat.*	*R^2*	*F-stat.*	*N*
Panel A: Predicted probability of receiving MAOs (PPRM)					
PPRM	0.012	0.95	4.77%	12.42***	16,202
Panel B: Signed abnormal accruals (SAAC)					
SAAC	0.018	3.35***	4.83%	12.60***	16,202
Panel C: Absolute abnormal accruals (AAAC)					
AAAC	0.026	4.15***	4.86%	12.70***	16,202
Panel D: Small profit (SP)					
SP	0.004	2.44**	4.80%	12.52***	16,202
Panel E: Non-operating income (NOIC)					
NOIC	0.094	5.00***	4.91%	12.82***	16,202

*Note: ***, **, and * denote significance at the level of 1%, 5%, and 10% (two-tailed tests), respectively. The dependent variable is PIMAO. All the variables are defined in Table 2.*

4.5. Audit fees

We also examine the relationship between PIMAO and audit fees for observations with no MAOs. On the one hand, if high-PIMAO auditors uphold higher audit conservatism than low-PIMAO auditors, they may charge higher audit fees so that they can allocate more resources toward reducing audit risk. In this case, there should be a positive association between PIMAO and audit fees. On the other hand, low-quality clients may have a lower demand for audit efforts. Mali and Lim (2021) find that more efficient clients demand more audit effort, suggesting that client quality may influence the demand for audit services. PIMAO could be negatively associated with audit fees if clients of high-PIMAO auditors have lower quality compared to clients of low-PIMAO auditors. Hence, the relationship between PIMAO and audit fees remains uncertain. To address this issue, we re-run regressions (Eq. (4)) by replacing the dependent variable with the natural logarithm of audit fees.

Table 6 reports the results of audit fees. We find that audit fees are negatively related to signing auditors' PIMAO (t-statistic = -5.28). After controlling for the five client quality measures in the regression, we still document a negative and significant association between audit fees and PIMAO (t-statistic = -5.52). This negative relationship suggests that clients of high-PIMAO auditors have a lower demand for audit effort compared to clients of low-PIMAO auditors, possibly due to the former's lower quality. Additionally, reduced audit fees might inadvertently lead to less effort by high-PIMAO auditors on their clients, potentially compromising audit quality. The absence of a positive association between PIMAO and audit fees suggests that high-PIMAO auditors do not necessarily have higher audit conservatism, as higher audit fees typically signify greater audit effort. Thus, the results on audit fees are consistent with our notion that high PIMAO is not mainly attributed to audit conservatism.

Table 6. Audit fees

Variables	*(1)*		*(2)*	
	Coef.	*t-stat.*	*Coef.*	*t-stat.*
Intercept	10.361	191.67***	10.270	187.76***
PIMAO	-0.312	-5.28***	-0.325	-5.52***
PPRM			0.697	7.34***
SAAC			-0.200	-4.67***
AAAC			0.004	0.07
SP			-0.027	-2.45**
NOIC			1.265	8.89***
ROA	0.008	0.09	-0.177	-1.87*
LOSS	0.055	3.72***	-0.013	-0.74
TURN	0.129	16.40***	0.140	17.52***
SIZE	0.365	97.08***	0.381	92.69***
BM	0.001	0.74	0.001	0.59
LEV	-0.056	-2.62***	-0.118	-5.09***
AGE	-0.002	-2.75***	-0.004	-5.47***
PAF	0.034	2.10**	0.033	2.06**
AFSIZE	0.000	3.29***	0.000	3.57***
IASIZE	0.001	3.42***	0.001	3.47***
AFCI	-1.595	-9.43***	-1.547	-9.19***
IACI	0.111	2.33**	0.110	2.30**
AFTEN	0.009	8.96***	0.009	8.59***
IATEN	0.005	1.23	0.003	0.88
Year dummies	Included		Included	
Industry dummies	Included		Included	
Adj. R^2	56.58%		57.05%	
F-stat.	300.33***		284.19***	
N	15,050		15,050	

*Note: ***, **, and * denote significance at the level of 1%, 5%, and 10% (two-tailed tests), respectively. The dependent variable is measured as the natural logarithm of audit fees. All the other variables are defined in Table 2.*

5. CONCLUSION

This study examines whether individual auditors' PIMAO is mainly attributable to audit conservatism or client quality. We determine signing auditors' PIMAO using the entire dataset that includes audits of Chinese listed clients' annual financial statements from 1990 to 2016. Our main tests focus on a sample of audits with no MAOs over the period of 2007 to 2016. We find that three out of the five negative client quality measures are positively associated with PIMAO, while the other two measures are positively but not significantly associated with PIMAO. Hence, we document evidence that high-PIMAO auditors are not more conservative in issuing audit opinions than low-PIMAO auditors. We also find that clients of high-PIMAO auditors have higher earnings management and pay less audit fees compared to clients of low-PIMAO auditors. Our findings suggest that individual auditors' high PIMAO is mainly attributed to client quality rather than to audit conservatism.

While archival auditing research often uses the issuance of MAOs as a measure of audit quality, the potential lack of audit conservatism in this measure may undermine its effectiveness. Therefore, it is imperative to conscientiously address this issue when researching the audit quality of individual auditors, especially in the Chinese context. Meanwhile, there is a pressing need for auditors to strengthen audit conservatism in their practices. Moreover, our study provides explicit evidence of self-selection bias in using output-based MAOs as a measure of audit quality, an aspect that has rarely been investigated.

This study has certain limitations. Our analysis is based solely on data from China. Given the relatively weak institutional environment in China (Ke et al., 2015), individual auditors may exhibit lower audit conservatism compared to auditors in countries with stronger institutional frameworks. As a result, the generalizability of our findings to other contexts remains uncertain. Future research could address this limitation by examining data from other countries to further explore the research question.

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