Does Size Still Matter? Change in Continuous Relation Between Audit Firm Size and Audit Quality in China Post IFRS Convergence

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Abstract

Our study replicates Li (2008) in a new context. According to the Deep Pocket Theory (DPT), smaller or less financially robust audit firms may face challenges in competing with larger, deep-pocketed firms in terms of audit quality (DeAngelo, 1981; Dye, 1993). Accordingly, we empirically re-examine the relationship between audit firms and audit quality in the context of China's developing audit market, between 2017-2019.

Following Li (2008), we build a regression model with modified opinion as the dependent variable. Specifically, we use three different measures, including assets, sales, and revenues, to quantify audit firm size, while taking steps to address potential confounders and endogeneity. The sample we used has characteristics that match the original literature.

Our results suggest that the Chinese audit market has changed dramatically and that the previously observed positive association between audit firm size and audit quality, as reported by Li (2008), no longer retains statistical significance in the contemporary Chinese audit environment. Our result remains robust even when private and foreign joint venture audit firms are excluded, highlighting the importance of revisiting related topics. Our contribution is to provide new empirical insights into the complex relationship between audit firm size and audit quality in the unique context of China's evolving audit market. Furthermore, it discusses the implication of the reported non-significant results and justifies the replication.

Keywords: Audit Quality, Audit Firm Size, Deep Pocket Theory, Replication

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1. Introduction

An audit market refers to the economic environment in which audit services are bought and sold. This arena involves the request for auditing services by various entities, alongside the provision of these services by auditing firms (Causholli et al., 2010; Gerakos & Syverson, 2015; Gunn et al., 2019). The audit market in China is often seen as fundamentally distinct from that of developed nations, illustrating the traits of an emerging market with comparatively lower levels of market concentration as compared to more developed countries. While the regulatory framework of China's audit market is largely in place, the industry environment continues to present challenges. Factors such as talent and technological capabilities need improvement, and there is a limited degree of product differentiation. Furthermore, intense competition has resulted in relatively low audit fees, accompanied by the overall lower levels of audit quality and efficiency (Li, 2008; Chen et al., 2010; Huang et al., 2016).

Prior studies confirm a positive correlation between the size of audit firms and the quality of audits, emphasising the advantages derived from economies of scale. Larger audit firms are frequently linked with amplified resources, expertise, and capacities, which foster thorough and precise auditing procedures. This association emphasises how the scale can potentially enhance the overall efficiency and dependability of audit services (DeAngelo, 1981; Dye, 1993; Davidson & Neu, 1993). Based on data collected from China's emerging audit market in the early 2000s, Li (2008) explicitly concludes that larger audit firms in China were more likely to issue modified audit opinions (MAOs). However, in light of substantial reforms within the Chinese audit market in the last two decades, it becomes unclear whether it still retains its status as an emerging market and if there has been a rise in market concentration. This prompts a crucial inquiry into the ongoing applicability of empirical findings concerning the correlation between audit firm size and audit quality within the landscape of the Chinese audit market. Thus, this study aims to examine the persistency of the correlation between audit firm size and audit quality in the contemporary Chinese audit market. Notably, the market dynamics, concentration levels, developmental landscape, and regulatory autonomy have undergone substantial transformations during this period. However, there remains a noticeable gap in empirical research assessing how these shifts have influenced audit quality. Consequently, there is a pressing demand for

robust theoretical insights to inform the formulation of effective audit policies by Chinese regulatory bodies.

With careful consideration, we conducted a replication of Li's (2008) study, aiming to assess whether the impact of audit firm size on audit quality has changed within the transforming Chinese audit market, taking into account significant institutional and environmental changes, including the adoption of International Financial Reporting Standards (IFRS). Specifically, this study aims to provide up-to-date empirical insights into the association between audit firm size and audit quality, the potential impact of robust corporate governance attributes on this relationship, and the potential influence of non-audit service fees on the identified correlation. The findings revealed a diminishing influence of audit firm size on audit quality within the Chinese audit market over time. Notably, our findings differ from those of Li et al. (2008), possibly stemming from the evolving institutional landscape, heightened market competition, and decreased market concentration in the Chinese audit sector. To ensure the reliability of our findings, we conducted robustness tests, implementing controls for potential confounding factors and mitigating concerns related to endogeneity.

The implications of our findings are twofold. Firstly, they shed light on aspects that previous studies on the Chinese audit market might have overlooked or underestimated, emphasising the necessity for future research to reevaluate methodologies and statistical approaches, and encourage scientific discourse to attain a more comprehensive understanding of the phenomenon. Secondly, our findings have practical implications for regulatory bodies, accounting firms, and investors in China, underscoring the importance of considering the evolving institutional landscape and dynamic market dynamics within the Chinese audit market.

The remainder of this article is structured as follows: Part II provides a literature review and hypotheses development concerning the relationship between the size of Chinese audit firms and audit quality. Part III outlines the research methodology and the construction of the empirical model. In Part IV, we present the empirical findings and conduct robustness tests to verify the results. Finally, Part V draws conclusion that summarises the key insights and implications derived from this study.

2. Literature Review

2.1 Audit Quality

Audit quality has traditionally been associated with auditor independence and the ability to identify and report financial reporting errors (Watts and Zimmerman, 1981; DeAngelo, 1981). It emphasises the precision and compliance with auditing standards and can be measured by the probability of auditors providing non-standard audit opinions (Dopuch et al., 1987; Krishnan & Schauer, 2001, Li et al., 2008). When using output-based proxies to measure audit quality, it becomes evident that indicators demonstrating high predictability of audit deficiencies, such as material restatements, going concern issues, and earnings management, significantly increase the likelihood of non-standard audit opinions being issued (DeFond & Zhang, 2014; Rajgopal et al., 2021).

Many factors have been identified as being influential to audit quality, encompassing various aspects such as proximity to academic institutions (Lee et al., 2022), individual and partnership incentives (Lee & Levin, 2020), auditor conservatism (Hall et al., 2023), early socio-economic opportunities (Tong et al., 2022), shared auditors in banking relationships (Ton, 2023), recruitment of ex-PCAOB personnel (Krishnan et al., 2023), implementation of drones and automated counting software (Christ et al., 2021), auditor reputation (Blum et al., 2022), economic incentives (Dekeyser et al., 2021), and the hiring of former PCAOB employees (Hendricks et al., 2022). Collectively, these studies signify the evolving comprehension of the intricate dynamics influencing audit quality, underscoring its multifaceted nature within the domain of auditing.

2.2 Firm Size and Audit Quality

While audit firm size is widely accepted as an input-based proxy for audit quality, it is frequently measured as whether the company is audited by a Big N auditor (Li et al., 2008; Rajgopal et al., 2021). Nonetheless, the Big N variable serves as an indicator lacking nuanced information, as it fails to provide an engagement-specific measure, thereby potentially limiting the granularity required for a comprehensive understanding of the audit quality construct (Rajgopal et al., 2021).

Since DeAngelo (1981) and Dye (1993), the deep pocket theory has been embraced by many studies to hypothesise the relationship between audit firm size and audit quality, with predominant findings consistently indicating a positive correlation, confirming larger audit firms generally provide higher-quality audit service firms than smaller ones (Palmrose,

1988; Teoh and Wong, 1993; Dopuch et al., 1987; DeFond et al., 2000; Reynolds and Francis, 2000; Craswell et al., 2002; Ireland, 2003; Li et al., 2008). According to this theory, plaintiffs are more inclined to pursue legal action against larger audit firms because they have the financial means to provide larger settlements or verdicts. As a result, auditors from large firms face a higher litigation risk compared to auditors from smaller firms (DeFong and Zhang, 2014; Zheng et al., 2020). From the perspective of economy of scale, large audit firms are better positioned to deliver superior auditing services. Leveraging a broad client base, they effectively distribute fixed costs, facilitating investments in cutting-edge technologies, specialised training, and resilient internal control systems. Furthermore, their substantial resources and expertise empower them to conduct thorough risk assessments and in-depth analyses, ultimately enhancing the efficiency and quality of the auditing process (Watts & Zimmerman, 1986; Simon & Francis, 1998; Davidson & Neu, 1993; Lenz and James, 2007). Recent studies continue to affirm the applicability of these findings in contemporary times. Notably, Bakare's (2022) research underscored the substantial positive impact of audit firm size on audit quality in the Nigerian setting. Additionally, Islam, Slof, and Albitar (2023) highlighted the significance of fortifying the audit committee and internal audit function to enhance financial reporting, especially concerning firm size. Furthermore, Wong et al. (2018) established a connection between larger CPA firms and higher audit quality when the auditor's liability is limited.

However, certain studies have presented contrasting perspectives, suggesting that the audit quality of smaller firms is either comparable to or even superior to that of larger firms (Yuniarti, 2011; Geiger et al., 2014). Francis and Wang (2008) argue that in jurisdictions with weaker investor protection standards, major audit firms may have less incentive to safeguard their business reputation, potentially affecting the quality of their accounting services. Thus, the prestige of larger firms does not necessarily guarantee superior performance compared to their smaller counterparts. Sari et al. (2019) discovered that audit quality remains unaffected by audit rotation, fee-based audits, or the size of the accounting firm. Conversely, James and Izien (2014) revealed a negative correlation between auditor independence, audit firm size, audit tenure, and audit quality.

2.3 Audit Market in China

Following China's entry into the WTO, the accounting services market progressively opened up, granting international accounting firms national treatment and eliminating discriminatory entry barriers. The Big Four international accounting firms, namely PwC Zhong Tian, EY Hua Ming, Deloitte Hua Yong, and KPMG Hua Zhen, swiftly captured substantial market share in China's auditing market, emerging as the top four accounting firms. Nevertheless, the 2020 comprehensive evaluation revealed that local firm Ruihua CPAs surpassed Deloitte and KPMG in revenue and approached EY's revenue, with four other local firms exceeding RMB 200 million in revenue. Consequently, the Big Four accounting firms encounter considerable competition in their localisation efforts within China.

To address this, the CICPA (Chinese Institute of Certified Public Accountants) reformed its evaluation mechanism, categorising the top 100 accounting firms' revenue into seven segments, including auditing, attestation, consulting, taxation, valuation, cost, and other income. Notably, in 2020, auditing and attestation businesses contributed to over 80% of the top 100 accounting firms' revenue. In contrast to other countries, the proportion of non-attestation businesses within major accounting firms in China is relatively low, indicating a relatively singular business structure. EY Hua Ming and KPMG Hua Zhen's revenue from central enterprise clients accounted for 15.31% and 13.42% of their total client revenue, respectively, underscoring the heavy reliance of the Big Four accounting firms on central enterprise clients.

Compared to developed nations, the audit market in China is characterised as relatively underdeveloped, highly competitive, and fragmented, as highlighted by Huang et al. (2015) and Chang et al. (2021). Notably, as of 2018, more than 8,000 accounting firms were operational in China, with only 40, including the Big 4, authorised to audit listed companies, as reported by the CICPA (2019). Surprisingly, the audit business of the Big 4 constitutes less than 10% of the total number of listed clients, which exceeds 3,000. Consequently, the dominance of the Big 4 in the Chinese audit market is significantly less pronounced when compared to developed nations such as the US. Rather, market share has progressively shifted towards prominent domestic audit firms, including Lixin and Tianjian (Chang et al., 2019). Furthermore, prior studies have revealed the existence of initial-year audit fee reductions solely in fiercely competitive audit

markets (Chan, 1999). In this context, a fiercely competitive audit market presents a more rigorous scenario than the low-balling practices observed in oligopolistic audit markets (Ghosh & Lustgarten, 2006). Thus, the Big 4 firms encounter substantial competitive pressures within the Chinese audit market and have yet to establish an oligopolistic dominance akin to that observed in developed nations. Therefore, this study follows Li et al. (2008) to measure audit firm size continuously rather than using the Big N.

2.4 China's Adoption of IFRS and Impact on Audit Quality

China's adoption of International Financial Reporting Standards (IFRS) has been a significant move toward global financial integration. By aligning its reporting standards with international practices, China has aimed to enhance transparency, understandability, comparability, and credibility in its financial reporting. The implementation of IFRS has facilitated better cross-border investments and improved the confidence of international investors and stakeholders in China's financial markets (Chen & Zhang, 2010; Cang et al., 2014; Sun et al., 2022).

IFRS adoption can profoundly impact the auditing process, due to its principles-based nature, which can introduce more complexity into financial reporting. Auditors may need to exercise greater professional judgment and critical thinking to ensure compliance with the principles and properly assess the fair presentation of financial information. In addition, auditors may need to enhance their knowledge of IFRS to effectively assess the compliance of financial statements with the relevant accounting standards, which may involve continuous professional development and training to adapt their practices to accommodate the specific requirements of IFRS (Khlif & Achek, 2016; Lim et al. 2016; Ball et al., 2015).

Given the complexities and challenges associated with the adoption of IFRS, bigger auditing firms will be better to handle these issues. Their extensive resources, specialised expertise, and established global networks enable them to effectively navigate the intricacies of IFRS implementation. Additionally, their robust training programs and continuous professional development initiatives ensure that their auditors remain up to date with the latest IFRS standards and guidelines. This positions larger auditing firms to provide comprehensive and meticulous auditing services, facilitating smoother transitions to IFRS and ensuring compliance with the principles-based nature of the standards.

In summary, we revisit and re-evaluate Li et al.'s (2008) original hypothesis within the new context following China's adoption of IFRS.

H1: There is a positive relationship between the size of audit firms and audit quality in China.

3. Research Design

3.1 Sample

Our study comprehensively incorporates data from all firms listed on the Shanghai and Shenzhen stock exchanges between 2017 and 2019. This 3-year span was selected to ensure the construction of a sample with consistent characteristics, aligning with the timeframe used in the original study by Li et al. (2008) which initially covered the years 2001 to 2003. Notably, the process of adopting IFRS in China began to gain new momentum with the collaboration between the IFRS foundation and the Chinese Ministry of Finance, initiating a working group on November 18, 2015. Considering the potential lag effect, we designated 2017 as the starting year for our analysis. This choice was also motivated by the intention to mitigate any potential biases stemming from the unprecedented effects of the COVID-19 pandemic.

To ensure the quality of our data, we excluded 21 companies listed only on the B-share market and firms in the finance sector (representing 276 company-year observations). We also excluded data from companies in their IPO year (representing 433, 97, and 97 observations in 2017, 2018, and 2019, respectively) due to differences in accounting reporting methods and the increased scrutiny of A-share IPO applications since the implementation of new regulations in 2018. Moreover, the number of A-share IPOs in 2018 was significantly lower than in 2017 due to various factors such as the economic slowdown, market volatility, and geopolitical uncertainty.

We retrieved the audit firm's name, audit fee, and auditor's opinion from the annual statements of each listed company. Our initial sample comprised 3,429 (3,509, 2,977) listed companies at the end of 2017 (2018, 2019), of which only 3,206 (3,321, 2,852) had complete data after removing incomplete or missing data for the variables included in our regression model. Accounting data for each institution was provided by CSMAR. Our

final sample consisted of 9,393 firm-years, representing 86% of listed companies and ensuring the robustness of our results.

3.2 Model and Definition of Variables

Li et al (2008)'s original regression model is used to test the hypothesis that large audit firms are more likely to provide modified opinions than smaller audit firms.

$$Prob(Opinion_{it}) = \beta_0 + \beta_1 ClientSize_{it} + \beta_2 FeeRatio_{it} + \beta_3 \Pr(ST)_{it} + \beta_4 Loss_{it} + \beta_5 EM_{it} + \beta_6 Switch_{it} + \beta_7 Joint_{it} + \beta_8 AuditSize_{it} + \gamma_1 FixedEffects_{it} + \varepsilon_{it} \quad (1)$$

The following is an explanation of the model variables.

Audit Quality – Modified Audit Opinions

In our study, the dependent variable employed is an indicator variable termed "opinion." This variable assumes a value of one when the client receives a modified opinion in the present year and zero otherwise. It is important to note that in the context of China, unmodified opinions accompanied by explanatory notes are essentially categorised as modified or quasi-modified opinions, even though they remain distinct from fully modified opinions (Chen et al., 2001). Consistent with prior research, unmodified opinions without any accompanying explanatory paragraphs are considered non-modified opinions (Chen et al., 2001; DeFond et al., 2000). For the purpose of this study, we adhere to this established classification approach.

Audit firm size

We adopt a comprehensive approach by employing three distinct measures to consistently assess the scale of each audit firm on an annual basis (Li et al., 2008). These measures encompass: 1) the cumulative value of assets across all listed companies audited by a singular audit firm (termed audited assets); 2) the aggregated sales figure across all listed companies audited by a singular audit firm (referred to as audited sales); and 3) the total audit fees

levied by a single audit firm for its services rendered to listed companies, denoted as revenue. To ensure the capture of potential non-linear relationships between these variables and the probability of a modified opinion, we employ natural logarithm transformation for continuous measurement. By adopting this approach, the coefficients in Equation (1) are interpreted as the likelihood of a modified opinion being influenced by a one percent adjustment in the respective explanatory variable.

Default risks

The issuance of a modified audit opinion is closely related to the default risk of client companies, as a high default risk suggests a going concern issue. To account for the default risk of listed firms, we include two variables in our analysis. Based on prior literature (Krishnan, 1994; Dopuch et al., 1987), recent financial losses are highly associated with modified audit opinions. Therefore, we use an indicator variable to represent the loss of listed firms as the first control variable. This indicator variable takes a value of one if the company's annual net profit is negative, and zero otherwise.

The second control variable we use is the estimated probability that the China Securities Regulatory Commission will classify a listed company as a special treatment (ST) company. In China, many listed companies are government-backed state-owned enterprises (SOEs) (Fan and Hope, 2013), which the government tends to subsidise in the event of financial distress. Therefore, there is neither a real threat of bankruptcy nor a recognised measure of default risk for SOEs. However, in 1998, the China Securities Regulatory Commission (CSRC) implemented a mechanism whereby a listed company is classified as an ST company if it suffers financial losses or functional bankruptcy for two consecutive financial years. Since ST is an officially assigned measure of financial distress, we use its predicted probability as a proxy measure of default risk.

Following the approach of Bai et al. (2001), we estimate the probability of being classified as an ST firm (i.e., Pr(ST)) using a Probit regression model that includes several explanatory variables. We present the regression models and statistics in Table 7 of the Appendix. We use the estimated Pr(ST) as a proxy for the default risk of listed firms in our audit opinion model.

In our analysis, we use three measures to continuously assess the size of each audit firm per year: audited assets, audited sales, and audit fees charged. We use the natural logarithm transformation to capture the possible non-linear relationship between these variables and the probability of a modified opinion. The coefficients in our regression model (Equation 1) represent the change in the probability of a modified opinion due to a one percent change in the size variable.

Earnings management

In interpreting a higher frequency of modified audit opinions issued by large audit firms, it is crucial to consider that the audited companies associated with these firms might be grappling with more substantial financial statement issues, complicating the assessment of the level of independence. In evaluating financial reporting quality control, we adopt earnings management as a proxy measure. While prior research has predominantly utilised diverse types of accruals as indicators of earnings management, particularly as suggested by Healy & Wahlen (1999) and Chen & Yuan (2004), the Chinese context necessitates the utilisation of industry median-adjusted abnormal accruals as a more accurate proxy for assessing earnings management (Chen and Yuan, 2004). This approach accounts for industry-specific trading trends, mitigating potential biases. Notably, the absolute value of this measure is employed as a proxy for earnings management in our study, as Ferguson et al. (2004) emphasised, given that the indicator can manifest as both positive and negative.

Control Variables

This study focuses on examining the correlation between the size of audit firms and the occurrence of modified audit opinions. Our analysis incorporates various control variables to mitigate the influence of potential confounding factors. Notably, we account for default risk by including two key variables: an indicator variable denoting annual net losses and the estimated probability of classification as a special treatment (ST) company. The utilisation of the predicted probability of ST as a proxy for default risk is motivated by the fact that ST designation serves as an official measure of financial distress.

Alongside the outlined control variables, our analysis incorporates additional controls to effectively account for various confounding factors. Notably, we integrate controls pertaining to client importance based on

Citron and Taffler's (1992), which indicate the potential for auditors to encounter pressure in issuing biased audit opinions stemming from financial reliance on crucial clients. The magnitude of client importance is indicated by both the client size of the listed company and the fee ratio. Furthermore, to enhance the robustness of our analysis, we also include controls for joint venture audit firms, auditor switching, and fixed effects utilising industry and year dummy variables. Table 1 presents the definition and measurement of all variables.

We employ three distinct samples for analysis. The initial sample encompasses publicly and privately held companies audited by local and global (joint venture) audit firms. Additionally, we create a second sample exclusively focusing on state-controlled listed firms to discern whether the impact of audit firm size extends to clients affiliated with state-owned entities. Furthermore, a sub-sample comprised solely of domestic audit firms is utilised in a subsequent regression analysis to explore potential fluctuations in the relationship between audit firm size and audit opinion.

For the assessment of earnings management, we rely on industry-adjusted abnormal accruals as a more precise proxy, aligning with its established suitability for the intricacies of the Chinese context. Notably, we opt to consider the absolute value of this indicator as a proxy for earnings management, acknowledging its potential manifestation as both positive and negative.

Variable	*Definitions*
Dependent variable	
Opinion	Indicator variable which equals 1 if the listed firm received an unmodified but with explanatory notes opinion, modified opinion, disclaimer or adverse opinion. It equals 0 if the listed firm got a standard unmodified opinion in the corresponding year.
Audit firm size measures	
Assets Audited	The sum of total assets (in RMB billions) of all listed firms audited by an auditor in a given year.
Assets Audited (in Logarithm)	The natural logarithm of Assets Audited. In regression analysis, we use this variable and denote it as Assets Audited directly.
Sales Audited	The sum of total sales (in RMB billions) of all listed firms audited by an auditor in a given year.
Sales Audited (in Logarithm)	The natural logarithm of Sales Audited. In regression analysis, we use this variable and denote it as Sales Audited directly.
Revenue	The sum of audit fees that an audit firm obtained from auditing listed firms in a given year.
Revenue (in Logarithm)	The natural logarithm of Revenue. In regression analysis, we use this variable and denote it as Revenue directly.
Audit firm characteristics	
Joint	Indicator variable which equals 1 if the audit firm is a joint venture firm with Big 4. It equals 0 otherwise.
Switch	Indicator variable, equals 1 if there is an audit switching in the corresponding year for a listed firm and 0 otherwise.
Listed firm characteristics	

ST	Dummy variable, equals 1 if the firm is specially-treated at the end of the year, 0 otherwise.
EM	A proxy for earnings management. We measure earnings management as the industry median adjusted non-operating income, then take absolute value.
Fee Ratio	Audit fee paid by a client divided by the corresponding total Revenue its audit firm obtained by auditing listed firms in a corresponding year.
Client Size	The natural logarithm of total assets of a listed firm.
Loss	Indicator variable, equals 1 if the listed firm reported a negative net profit and 0 otherwise.

Table 1: Definition of Variables

Table 2: Distribution of auditors' opinions

Year	2017	2018	2019	Total
Sample size	3206	3321	2866	9393
Unmodified opinions				
Unmodified opinions without Explanatory Notes	3112	3139	2630	8881
Modified opinions				
Unmodified opinions with Explanatory Notes	56	88	94	238
Modified opinions	26	72	111	209
Disclaimer opinions	12	22	30	64
Adverse opinions	0	0	1	1
Total number of modified opinions	94	182	236	512
Percentage of modified opinions	2.93%	5.48%	8.23%	5.45%

4. Results and Discussions

4.1 Descriptive Statistics

Table 2 illustrates the distribution of various opinion types over the years. Within the scope of our research, a total of 512 modified opinions were identified, constituting 5.45% of the sample. This percentage is slightly lower than the 7% reported by DeFond et al. (2000). Notably, the observed decline does not necessarily imply a reduction in audit quality, as the proportion of modified opinions increased to 8.23% in 2019, surpassing the figure reported by DeFond et al. (2000). The breakdown of opinion types is as follows: 238 explanatory notes, 209 amended opinions, 64 disclaimers, and one adverse opinion. Over the observed period, the percentage of modified opinions experienced a notable escalation from 2.93% in 2017 to 8.23% in 2019, as detailed in Table 1. Additionally, the count of disclaimer opinions surged from 12 in 2017 to 30 in 2019, reflecting a 1.5-fold increase.

Table 3 shows the descriptive statistics of the variables. The average size of audit firms in terms of audited assets (Assets Audited) and audited sales (Sales Audited) stood at RMB 293 billion (US$424.6 billion) and RMB 163.4 billion (US$236.8 billion), respectively. Concurrently, the average audit fee (Revenue) for audits of listed companies was RMB 306 million (US$44.3 million), with the median amounting to RMB 257 million (US$37.5 million). Despite generally smaller scales compared to audit firms in developed nations like the United States and the United Kingdom, the size of audit firms in China has exhibited significant growth over the past decade. Specifically, audited sales surged from an average of RMB 53 billion between 2001 and 2003 to RMB 289 billion between 2017 and 2019, indicating the sustained expansion and maturation of the Chinese audit market. Notably, the dominance of prominent global audit firms remains limited in the Chinese market, with the Big Four servicing a mere 5.6% of listed companies, a decrease from the 7% recorded sixteen years prior. This shift underscores the intensifying local competition within the Chinese audit industry, implying an enhanced standing for local Chinese audit firms within the Chinese audit market. Moreover, the observation that approximately 8.3% of listed companies in the sample changed audit firms during the study period indicates a noteworthy yet not excessively high proportion of such transitions. Based on the average number of losses and

ST dummies, 11.4% of listed companies had negative net profits, but only 5.2% of the sample were classified as ST companies by the CSRC.

The correlation matrix of the variables are outlined in Table 3. Notably, we identify a noteworthy negative correlation between opinion and client size, implying a greater likelihood of smaller listed companies receiving modified opinions. However, the coefficient of 0.07 indicates a relatively weak association. Conversely, we observe a positive correlation between audit opinion and ST (0.39) as well as loss (0.38) dummies, underscoring the heightened likelihood of companies with a heightened risk of default receiving modified audit opinions. Additionally, a positive correlation between opinion and earnings management (EM) is noted, albeit with a modest correlation coefficient of 0.05, indicative of a relatively weak relationship.

The three indicators used to measure audit firm size are highly correlated, with a minimum correlation coefficient of 0.94 and a maximum of 0.98. This is expected given that audit firm size is assessed differently. We find a significant positive relationship between audit opinion and fee ratio, although the coefficient is close to zero (0.07). This suggests that companies with higher revenue contributions and those that are more important to the audit firm are more likely to receive unmodified opinions.

We also observe a small but statistically significant negative association between opinion and consortium, indicating that Big Four audit firms are more likely to issue modified opinions. We find a significant positive correlation between audited assets and client size, indicating that larger listed companies are more likely to be audited by larger audit firms. Additionally, audited assets negatively correlate with STs and losses, suggesting that major audit firms prefer clients with a lower risk of default. Audited assets are positively correlated with joint ventures (JVs) and negatively correlated with fee ratios. This is expected since the Big Four are major accounting firms, and large accounting firms rely less on audit fees from listed clients.

Table 3: Variable definitions and summary statistics

Panel A: Descriptive statistics						
Variable	*Obs*	*Mean*	*Std. Err*	*Q1*	*Median*	*Q3*
Dependent variable						
Opinion	9393	0.055	0.227	0.000	0.000	0.000
Audit firm size measures						
Assets Audited (RMB billions)	9393	2929.561	2232.900	743.863	2868.913	4833.280
Assets Audited (in Logarithm)	9393	7.477	1.207	6.612	7.962	8.483
Sales Audited (RMB billions)	9393	1634.441	1324.775	381.802	1568.085	2395.570
Sales Audited (in Logarithm)	9393	6.895	1.205	5.945	7.358	7.781
Revenue (RMB millions)	9393	305.865	230.213	116.022	256.951	460.460
Revenue (in Logarithm)	9393	5.300	1.059	4.754	5.549	6.132
Audit firm characteristics						
Joint	9393	0.056	0.23	0	0	0
Switch	9393	0.083	0.275	0	0	0
Listed firm characteristics						
ST	9393	0.052	0.222	0	0	0
EM	9393	0.025	0.679	0.002	0.005	0.01
Fee Ratio	9393	0.001	0.003	0	0.001	0.002
Client Size	9393	22.301	1.363	21.365	22.158	23.056
Loss	9393	0.114	0.318	0	0	0

Table 4: Correlation

	Assets Audited	*Sales Audited*	*Revenue*	*ST*	*EM*	*Fee Ratio*	*Client Size*	*Joint*	*Switch*	*Loss*
Assets Audited										
Sales Audited	0.98*									
Revenue	0.94*	0.95*								
ST	-0.09*	-0.09*	-0.07*							
EM	-0.06*	-0.06*	-0.03*	0.06*						
Fee Ratio	-0.64*	-0.65*	-0.69*	0.06*	-0.06*					
Client Size	0.13*	0.12*	0.11*	-0.06*	-0.15*	0.39*				
Joint	0.40*	0.34*	0.37*	-0.04*	-0.06*	0.03*	0.26*			
Switch	-0.02*	-0.03*	-0.03*	-0.06*	-0.04*	0.02	0.03*	0.03*		
Loss	-0.07*	-0.07*	-0.06*	0.25*	0.01	0.05*	-0.09*	-0.05*	0.01	
Opinion	-0.07*	-0.07*	-0.06*	0.39*	0.05*	0.07*	-0.07*	-0.03*	-0.01	0.38*

*Indicates a significance level of at least 5%.

4.2 Baseline Results

The findings from the Probit regression for the baseline model, utilising the entire sample, are illustrated in Table 5, incorporating three different models for assessing audit firm size. Unexpected, the insignificance of the coefficient on client size contradicts prior research (DeFond et al., 2000; Creswell et al., 2002; Li et al., 2008). This lack of significance implies a dearth of evidence supporting the hypothesis that large listed firms wield greater influence over their auditors in the Chinese audit market in the timespan of 2017 to 2019. One plausible explanation for this unexpected outcome could be the heightened scrutiny from Chinese regulatory authorities concerning auditing practices, potentially curbing the bargaining power of large firms within the context of the Chinese audit market.

The coefficient on Fee Ratio is significantly positive at the 1% confidence level, which is consistent with the observations from earlier research conducted (Reynolds and Francis, 2001). This outcome, however, contradicts our initial expectations, implying that audit firms are inclined to issue a greater number of modified opinions to clients with more substantial revenue contributions. We posit that this finding might be attributed to the necessity for listed companies with a heightened risk of fraudulent activities to offer augmented audit fees, potentially as a compensatory measure for the amplified litigation risk imposed on the audit firm. Consequently, those listed companies contributing the most significant proportion of auditor revenue are more prone to increased litigation risk or even elevated fraudulent activity, thereby engaging in more pronounced earnings management practices and material misstatements. As a result, this dynamic translates into a higher frequency of modified audit opinions for these specific clients.

The significant positive coefficients on the Pr (ST) and Loss variables indicate that audit firms are more likely to issue modified audit opinions to clients with high default risk and loss-making clients. These companies are more likely to engage in financial statement whitewashing and fraud, leading to higher chances of receiving modified opinions. Additionally, earnings management is positively associated with modified audit opinions. Audit firms are more likely to issue modified opinions to listed companies with earnings management because it is the act of maximising firm value by manipulating financial statements to achieve higher share prices. Furthermore, the coefficient on the dummy variable Switch is also

significantly positive, indicating that listed companies that switch auditors are more likely to receive a modified opinion from the auditor. The reason for the switch could be that the previous auditor refused to continue with the client's audit project due to perceived excessive audit risk, but the client rejected the result and attempted to change auditors. However, the significant positive coefficient indicates that switching auditors did not result in a more favourable audit opinion.

We expected audit firms with foreign equity participation to issue more modified audit opinions than local audit firms. However, after controlling for factors such as the size of the audit firm, the coefficient on the indicator variable of joint ventures is significantly negative, suggesting that joint venture audit firms instead issue more unqualified audit opinions compared to local audit firms, which is contrary to our expectation. We believe that self-selection in both directions could explain this result. Listed companies with higher quality financial statements are more likely to choose a joint venture audit firm because joint venture audit firms (such as the Big Four) have an international perspective, more seniority, more experience, more audit skills for large audit projects, and more industry audit specialists. Joint venture audit firms also have a broader scope of business, operate in many countries around the world, and are more focused on reputation, and have a greater incentive to select high-quality clients.

Our study focuses on three distinct metrics evaluating audit firm size. Despite this emphasis, Table 5 reveals that the coefficients for these variables do not exhibit significance, an unexpected divergence from the outcomes observed in Li et al.'s (2008) study. We propose that the disparity between the audit quality provided by large and small firms within the Chinese audit market has notably diminished over time after IFRS adoption. In contrast to prior research that employed indicator variables to investigate the correlation between audit firm size and audit opinion, our study leveraged continuous variables for assessing audit firm size, ultimately failing to discover any conclusive evidence supporting such a relationship. This outcome stands in contrast to the findings of DeAngelo (1981) and Dye (1993), suggesting substantial shifts within the conditions of the Chinese audit market.

Table 5: Probit regression of auditor's opinion, earnings management proxied by industry median adjusted total accruals

$$Prob(Opinion_{it}) = \beta_0 + \beta_1 ClientSize_{it} + \beta_2 FeeRatio_{it} + \beta_3 \Pr(ST)_{it} + \beta_4 Loss_{it} + \beta_5 + \beta_6 Switch_{it} + \beta_7 Joint_{it} + \beta_8 AuiditSize_{it} + \gamma_1 FixedEffects_{it} + \varepsilon_{it}$$

This table reports the probit regression models where earnings management is proxied by industry median adjusted total accruals. For listed firm i, Opinion equals 1 when the firm received a standard opinion (unmodified opinion without explanatory notes). It equals 0 if the corresponding opinion is a modified, unmodified but with explanatory notes, disclaimer or adverse opinion; ClientSize is the natural logarithm of listed firms' total assets in year t; FeeRatio is defined as the ratio between the listed firm's annual audit fee in year t and its audit firm's total revenue by auditing listed firms in the same year; ST is a dummy variable which takes a value of 1 if the firm is specially-treated by the CSRC and 0 otherwise; Pr(ST) is the forecast probability of Special Treatment as reported in the Appendix; Loss indicates whether the listed firm has reported a negative profit in year t; EM is the industrial median adjusted non-operating income, then take absolute value; Switch is an indicator variable which equals 1 if there is an audit switch and 0 otherwise; Joint is another indicator variable. It equals 1 if the audit firm is a joint venture with one of the Big 4. We use three different measures for Audit Size: Assets Audited (Sales Auditedit) is the natural logarithm of the total assets (sales) of all listed firms audited by firm i's auditor in year t; Revenue is the natural logarithm of the sum of audit fees that firm i's auditor obtained by auditing listed firms in year t. Year and industry effects are also controlled.

	(1) ***Opinion***	***(2)*** ***Opinion***	***(3)*** ***Opinion***
Client Size	-0.063	-0.063	-0.062
	(1.36)	(1.36)	(1.34)
Fee Ratio	6.491***	6.495***	6.367***

	(3.46)	(3.40)	(3.30)
Pr(ST)	0.229***	0.229***	0.229***
	(8.87)	(8.87)	(8.87)
Loss	1.612***	1.612***	1.612***
	(16.47)	(16.46)	(16.47)
EM	0.729***	0.730***	0.729***
	(4.56)	(4.56)	(4.56)
Switch	-0.078	-0.078	-0.079
	(0.53)	(0.53)	(0.54)
Joint	-0.180	-0.183	-0.169
	(0.68)	(0.68)	(0.65)
Assets Audited	0.011		
	(0.25)		
Sales Audited		0.011	
		(0.24)	
Revenue			0.006
			(0.11)
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Constant	-2.200**	-2.189**	-2.165**
	(2.06)	(2.06)	(2.05)
Observations	9393	9393	9,393
Pseudo R2	31.66%	31.66%	32.47%

Absolute value of z statistics in parentheses.
*, **, and ***indicate statistical significance at 10%, 5%, and 1%, respectively. Standard errors are reported in parentheses.

We believe that the heterogeneity in the institutional characteristics of the Chinese audit market that has emerged over time is the primary reason for the inconsistency between our results and previous studies. Li et al. (2008) used data from 2001 to 2003, when the Chinese audit market was still in its infancy and China was transitioning from a planned to a market economy. During this period, larger audit firms tended to comply with the system to avoid the unknown costs of non-compliance in an unfamiliar and insecure environment. The Big Four accounting firms, in particular, were more cautious about protecting their reputation as they had recently entered the Chinese market.

Smaller audit firms, on the other hand, have a lower risk of trial and error, and it is less costly to reduce audit quality than larger audit firms. Therefore, small audit firms are more likely to take risks to capture clients. In the early 2000s, large audit firms issued more modified audit opinions than smaller firms and demonstrated higher audit quality. However, over time, audit firms of all sizes have become more familiar with the Chinese audit environment and have adapted to its systems and policies. Large joint venture accounting firms such as the Big Four have completed the localisation process in China and gained more local audit experience. Thus, the size of the audit firm no longer has a significant impact on the audit opinion.

Furthermore, despite multiple regulators working together to regulate Chinese CPAs, enforcement is often weak due to political interference, as reported by Ke et al. (2015). Thus, audit firms have found that compliance with audit regulations in China is less stringent than in other countries, resulting in a decrease in the distinction between the audit quality of large and small firms.

The second reason for the decline in the impact of audit firm size on audit quality in China is the increased competition and reduced market concentration in the Chinese audit market. Studies have shown that the audit market in China is more competitive and fragmented than in developed countries (Huang et al., 2015; Chang et al., 2021). The intense competition faced by accounting firms in the Chinese audit market has prevented the creation of an oligopoly similar to that of developed countries (Chang et al., 2019). Between 2001 and 2003, the Chinese government strongly supported the development of the real economy and foreign trade, which provided audit firms with greater market opportunities and reduced competition (Li et al., 2008). Consequently, audit firms did not have to worry about losing clients by issuing modified opinions, as they had a wide range of clients to serve.

However, since 2017, China's economy has been slowing down and facing challenges such as supply-side structural reform, an economic bubble, and increased market competition. As a result, both large and small audit firms are facing a buyer's market, with reduced bargaining power for larger firms. This explanation is supported by a comparison of the number of IPOs. In 2001, 2002, and 2003, there were 1,136, 1,200, and 1,263 firms listed respectively, while only 438, 105, and 203 firms were listed at the end of

2017, 2018, and 2019, respectively. This sharp decline in the number of IPO clients has exposed audit firms, which had an abundance of clients in the early 21st century, to intense competition in the market from 2017 to 2019. With reduced market concentration and high competition, the effect of audit firm size on audit opinions is no longer significant, and the incentive to increase market share may lead to a reduction in audit quality.

The diminished influence of audit firm size on audit quality in China can be attributed to a third factor: the potential presence of large sample bias in Li et al.'s (2008) research. Presently, China boasts a market with over 8,000 accounting firms, of which 40, including the Big 4, are authorized to conduct audits for listed companies (CICPA, 2019). This stands in stark contrast to the situation in 2004, when merely 16 accounting firms held such qualifications (CICPA, 2004). Consequently, assessing the impact of audit firm size on audit opinion within such a limited sample size is susceptible to substantial sample selection bias, potentially skewing the empirical findings.

Our sample consists of both privately controlled and government-controlled firms. During the period of 2017 to 2019, the majority of listed firms were privately controlled. We would like to emphasize that the insignificant relationship between audit firm size and audit quality is not solely due to privately controlled listed firms. Thus, we removed a total of 6,531 observations for privately controlled listed firms, including privately controlled, foreign-owned, and family-owned firms, leaving us with a sample of 2,862 sub-samples controlled (directly or indirectly) by the government. We repeated the previous regression analysis for this reduced sample and found that the three audited firm size variables remained insignificant. This suggests that the insignificance is not due to the selection of the sample of private firms. However, it is worth noting that the ClientSize variable changed from insignificant to significant at the 5% level after excluding privately controlled client firms. This finding indicates that the size of listed firms whose controlling shareholder is a private entity has little impact on audit quality. However, if the government directly or indirectly controls the listed firm, its size significantly impacts the audit opinion. Large state-owned enterprise (SOE)-listed companies have greater bargaining power over their audits, most likely due to political rights. Due to the peculiarities of China's political and economic system, it is more difficult for audit firms to maintain auditor independence against the

government's wishes. After excluding privately controlled client firms, the coefficient on the Fee Ratio changed from significant to insignificant. This implies that there is no evidence of audit firms issuing modified opinions for listed state-owned enterprises that contribute significantly to their revenue. In other words, Fee Ratio effects are specific to audit markets with privately controlled client firms.

To investigate whether the insignificant relationship between audit firms and audit quality is driven by joint venture audit firms represented by the Big Four, we removed the joint venture component from our sample. The new subsample consisted of 8,865 firm-year observations representing only domestic firms. After regressing this subsample, results shown in Table 6 reveal that the coefficients of the three proxy variables representing audit firm size remained insignificant. This suggests that audit quality is not affected by audit firm size in China's emerging audit market, regardless of audit firm characteristics.

4.3 Additional Analysis, Robustness Tests and Endogeneity

Impact of Board Independence on Audit Opinion

Good corporate governance plays a crucial role in improving the reliability and accuracy of a firm's financial reporting. Consequently, it increases the likelihood of obtaining a favourable external audit opinion (Agrawal and Chadha, 2005; Saaydah, 2019). Hence, we expect that effective corporate governance attributes would be negatively associated with a modified audit opinion. A number of studies have found that the higher the proportion of independent directors on the board, the more effective control over the firm, and the greater their board independence (Ishak and Yosof, 2015). As a result, we added the variable Bindept (Board Independence) as a proxy for the independence of the board, which is measured as the number of non-executive members as a percentage of the number of directors.

Table 6: Probit regression of auditor's opinion, earnings management proxied by industry median adjusted total accruals

$$Prob(Opinion_{it}) = \beta_0 + \beta_1 ClientSize_{it} + \beta_2 FeeRatio_{it} + \beta_3 \Pr(ST)_{it} + \beta_4 Loss_{it} + \beta_5 EM_{it} + \beta_6 Switch_{it} + \beta_7 Joint_{it} + \beta_8 AuiditSize_{it} + \beta_9 Bindep_{it} + \beta_{10} NAF_{it} + \beta_{11} PAO_{it} + \gamma_1 FixedEffects_{it} + \varepsilon_{it}$$

This table reports the probit regression models where earnings management is proxied by industry median adjusted total accruals. For listed firm i, Opinion equals 1 when the firm received a standard opinion (unmodified opinion without explanatory notes). It equals 0 if the corresponding opinion is a modified, unmodified but with explanatory notes, disclaimer or adverse opinion; ClientSize is the natural logarithm of listed firms' total assets in year t; FeeRatio is defined as the ratio between the listed firm's annual audit fee in year t and its audit firm's total revenue by auditing listed firms in the same year; ST is a dummy variable which takes a value of 1 if the firm is specially-treated by the CSRC and 0 otherwise; Pr(ST) is the forecast probability of Special Treatment as reported in the Appendix; Loss indicates whether the listed firm has reported a negative profit in year t; EM is the industrial median adjusted non-operating income, then take absolute value; Switch is an indicator variable which equals 1 if there is an audit switch and 0 otherwise; Joint is another indicator variable. It equals 1 if the audit firm is a joint venture with one of the Big 4. We use three different measures for Audit Size: Assets Audited (Sales Auditedit) is the natural logarithm of the total assets (sales) of all listed firms audited by firm i's auditor in year t; Revenue is the natural logarithm of the sum of audit fees that firm i's auditor obtained by auditing listed firms in year t. Bindep represents board independence, measured by the number of non-executive members as a percentage of the number of directors. NAF is the natural logarithm of non-audit fees of clients. PAO is a dummy variable. it equals 1 if a modified opinion was received in the previous year, and 0 otherwise. Year and industry effects are also controlled.

	(1) ***Opinion***	*(2)* ***Opinion***	*(3)* ***Opinion***
Client Size	0.0374	0.0357	0.0359
	-0.0293	(0.0294)	(0.0293)

Fee Ratio	1.849	2.233	2.195
	-1.41	(1.408)	(1.426)
Pr(ST)	0.116***	0.117***	0.117***
	-0.0165	(0.0165)	(0.0165)
Loss	1.196***	1.196***	1.196***
	-0.0637	(0.0637)	(0.0637)
EM	0.203	0.205	0.205
	-0.136	(0.136)	(0.136)
Switch	-0.0923	-0.0896	-0.0898
	-0.108	(0.108)	(0.108)
Joint	-0.00237	-0.0189	-0.00607
	-0.154	(0.156)	(0.151)
Bindep	-0.0896	-0.0820	-0.0847
	-0.509	(0.509)	(0.509)
NAF	-2.02E-08	-2.64e-08	-2.55e-08
	-7.60E-08	(7.85e-08)	(7.79e-08)
PAO	1.970***	1.971***	1.971***
	-0.0863	(0.0863)	(0.0864)
Assets Audited	0.000413		
	(0.0299)		
Sales Audited		0.0139	
		(0.0306)	
Revenue			0.0136
			(0.0340)
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Constant	-3.143***	-3.202***	-3.183***
	(0.712)	(0.711)	(0.705)
Observations	8,728	8,728	8,728
Pseudo R2	42.84%	42.87%	42.84%

Absolute value of z statistics in parentheses.
*, **, and ***indicate statistical significance at 10%, 5%, and 1%, respectively. Standard errors are reported in parentheses.

Table 6 shows that the significance and coefficients of the variables did not change significantly after including the variable Bindep, except for the variable ClientSize, which changed from insignificant to significantly negative at the 10% level. Furthermore, the Pseudo R^2 did not change significantly. This indicates that the effect of ClientSize on Audit Opinion increases significantly after controlling for the board independence variable. As board independence increases, larger firms are more likely to receive an unmodified audit opinion. This result is not surprising, as larger firms have higher monitoring requirements, and increased independence of the board means greater oversight of the accuracy and reliability of the financial statements, leading to a greater likelihood of obtaining an unmodified audit opinion. In contrast, smaller firms have lower demands on the monitoring function of the board and higher demands on the advisory function, compared to larger firms.

Impact of Non-Audit Service (NAS) on Audit Opinion

According to Ireland (2003), the motivation to preserve high non-audit fees can undermine auditor independence, implying a negative link between non-audit fees and audit modifications. To scrutinise this supposition, we incorporate the NAF (non-audit fee) variable into the model, thereby examining its potential impact on the research hypothesis.

Table 6 shows that the coefficient remains statistically insignificant with the inclusion of the variable of non-audit fees, and the pseudo-R^2 barely changes. This suggests that there is no evidence that the independence of Chinese auditors is affected by high non-audit fees. The reason for this is that the audit market in China is highly homogeneous in terms of the types of businesses. According to the Comprehensive Evaluation and Analysis Report on Audit Firms by the CICPA (2021), accounting firms' revenue is divided into seven categories, including audit, assurance, consulting, taxation, valuation, costing, and other revenue. The top 100 audit firms (which includes 44 audit firms qualified to audit listed companies as of 2020) receive an average of 85.2% of their revenue from audit and assurance engagements. This means that non-audit services account for less than 15% of their revenue. Compared to developed countries, the importance of non-audit services in the Chinese audit market is relatively low. Therefore, most audit firms do not adjust their audit services, either in terms of pricing or opinion, due to non-audit services.

Impact of prior-year audit opinion on Audit Opinion

According to prior research, the audit opinion exhibits a degree of temporal continuity (Monroe and Teh, 1993; Krishnan et al., 1996). Firms that received a modified audit opinion in the previous year were more likely to receive a modified opinion in the following year (Citron and Taffler, 2000), so including the previous year's audit opinion as a control variable in the model is relevant. Thus, we introduce PAO, a new variable that is a dummy variable equal to one if a modified opinion was received in the previous year, and zero otherwise.

Upon including the new dummy variable PAO, the Pseudo R^2 in Table 6 increases, and the coefficient becomes significant at the 1% level. However, the Client Size, Fee Ratio, and EM variables are no longer significant. We speculate that this is primarily due to the expected severe multicollinearity between the dummy variable PAO and the above variables. The problem of multicollinearity renders the original variables insignificant and, therefore, they should not be added to the model.

Endogeneity Issue

To address the issue of endogeneity due to sample selection bias, we use the Heckman two-stage selection model for further testing, the result of which is shown in Table 7.

As presented in Table 7, none of the coefficients associated with the independent variables exhibit statistical significance. This outcome implies that even when we account for endogeneity concerns using the Heckman two-stage model, the independent variables fail to exert a significant influence on the dependent variable, Opinion. In essence, our findings maintain their robustness under these considerations.

4.4 Additional Discussion on the Non-Significant Results

When considering the implications of the non-significant results obtained in this study, it is important to note that such outcomes should not be perceived as entirely negative. Rather, they prompt researchers to engage in a critical evaluation of their research methodologies, thereby fostering a culture of continuous improvement within the scientific community. By reassessing the experimental design, data collection methods, and statistical analyses, researchers can refine their approaches, ensuring greater

robustness and reliability in subsequent studies. This iterative process can ultimately lead to more comprehensive and reliable insights into the phenomenon under investigation, as emphasised by Cunningham et al. (2019), who advocate for the replication of studies to address concerns about statistical power and to facilitate the convergence of findings toward more accurate and dependable conclusions.

Table 7: Probit regression of auditor's opinion, earnings management proxied by industry median adjusted total accruals

	(1)	*(2)*	*(3)*
	Opinion	***Opinion***	***Opinion***
Client Size	-0.049	-0.050	-0.054
	-0.047	-0.047	-0.047
Fee Ratio	0.432	0.568	1.067
	-2.152	-2.165	-2.130
Pr(ST)	0.017	0.017	0.017
	-0.042	-0.042	-0.042
Loss	-0.550	-0.550	-0.544
	-0.386	-0.387	-0.388
EM	0.004	0.004	0.005
	-0.065	-0.065	-0.066
Switch	0.065	0.067	0.072
	-0.150	-0.150	-0.151
Joint	-0.103	-0.118	-0.153
	-0.270	-0.273	-0.273
Assets Audited	0.025		
	-0.045		
Sales Audited		0.030	
		-0.046	
Revenue			0.052
			-0.047
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Constant	2.373*	2.378*	2.293*
	-1.292	-1.287	-1.282

Observations	9393	9393	9,393

Absolute value of z statistics in parentheses.
*, **, and ***indicate statistical significance at 10%, 5%, and 1%, respectively. Standard errors are reported in parentheses.

Moreover, the absence of statistically significant results often prompts researchers to emphasise the importance of transparency in their methodologies, data selection, and analytical approaches. This emphasis on transparency not only fosters a culture of scientific rigor within the research community but also encourages the replication of studies, ultimately contributing to a more nuanced and comprehensive understanding of the phenomena. Notably, the study conducted by Li et al. (2008) did not report the robustness results due to brevity constraints, whereas our study has striven to ensure thoroughness and objectivity in reporting the findings.

Even when results are insignificant, they can offer insights that are valuable for policymakers and decision-makers in the field of auditing (see: Elewa & El-Haddad, 2019). Understanding what doesn't work is often as important as understanding what does work, especially when it comes to making informed decisions. Our findings hence have practical implications for the audit market in China. Strengthening audit policies in China could significantly bolster the development of smaller audit firms by enhancing market competition, promoting regulatory compliance, and ensuring a level playing field for all market participants. Robust audit policies would help instil confidence among investors and stakeholders, encouraging greater investment in smaller firms. Moreover, an emphasis on stringent audit regulations would foster a culture of accountability and transparency, thereby enhancing the overall integrity of financial reporting. By leveling the regulatory landscape and ensuring a more conducive environment for smaller firms, China can encourage a healthy and competitive audit market, thereby promoting sustainable growth and development within the industry.

5. Conclusions

The dynamic shifts in the Chinese audit market over the past two decades have underscored the need for a fresh examination of the relationship between audit firm size and audit quality. As China continues to play an increasingly vital role in the global economy, understanding the nuances of

its evolving market conditions has become pivotal. Previous research has pointed to a positive correlation between audit firm size and audit quality. This study seeks to contribute new empirical evidence to the existing literature, shedding light on the intricacies of the Chinese audit market and its unique regulatory landscape.

Our findings indicate a noticeable decline in the impact of audit firm size on audit quality, deviating from the earlier results reported by Li et al. (2008). This shift can be linked to various factors, including the evolving institutional characteristics, heightened market competition, and the reduced concentration within the Chinese audit market. The nuanced understanding provided by our study holds implications for stakeholders such as audit regulators, accounting firms, and investors in China. To advance the understanding further, future research endeavours should continue to account for the evolving dynamics and institutional characteristics that shape the landscape of the Chinese audit market.

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