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Research Article

An Empirical Study on the Influence of Consolidated Financial Statement's Amplification Effect on Audit Fees

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As the investing enterprise brings the invested enterprise into the consolidation scope, the number of the items in the consolidated financial statements is enlarged relative to the parent company's financial statements, which is called the amplification effect of the consolidated financial statements. Using a sample of A-share listed companies in China from 2007 to 2019, this paper investigates the impact of consolidated financial statements' amplification effect on audit fees. We find that the amplification effect of consolidated financial statements is positively related to audit fees, and the audit risk plays a mediating role. More specifically, the amplification effect of consolidated financial statements increases the audit risk and then increases the audit fees. Furthermore, the effect is more significant in state-owned enterprises (SOEs). This study contributes to a comprehensive understanding of the economic consequences of accounting standards for consolidated financial statements.

1. Introduction

In China, the status of consolidated financial statements has been continuously improved and even has surpassed the individual financial statements of the parent company and has become a dominant player. For example, the consolidated financial statements are not only the primary basis for the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council to evaluate the operating performance of the heads of central enterprises but also an essential basis for the China Securities Regulatory Commission (CSRC) to supervise listed companies and the China Banking and Insurance Regulatory Commission (CBIRC) to supervise related financial enterprises. Users' emphasis on the consolidated financial statements determines that the enterprise management has a strong motivation to manipulate the consolidated financial statements. What is more, under the "control standards" of the current accounting standards, there is a lot of manipulation space in determining the scope of consolidation in the consolidated financial statements. In practice, there are cases in which an investee is included in a consolidated financial statement with a particularly low shareholding ratio and cases in which an investee is not included in a consolidated financial statement with a particularly high shareholding ratio. The determination of the consolidation scope is highly uncertain and subjective, which poses a great challenge to independent audits and affects audit quality [1, 2]. For example, Konka Group (stock code: 000016) reported a net profit of 330 million yuan in 2019, of which 146 investees included in the consolidated financial statements have an impact of 890 million yuan. Compared to 2018, consolidation scope of Konka Group in 2019 increased by 56 investees and decreased by 18 investees. If the influence of these 146 investees is excluded, it will be difficult for Konka Group to turn losses into profits.

The standard for defining the scope of consolidation has undergone a transition from the "majority interest" to the "substantial control" [3]. According to "*China Accounting Standards for Business Enterprises No. 33-Consolidated Financial Statements (2014)*" (referred to as CAS33 (2014)), the consolidation scope of consolidated financial statements should be determined based on "control." That is to say, the parent company should incorporate its controlled subsidiaries into the consolidation scope and prepare consolidated financial statements to reflect the operating results, financial status, and cash flow of the entire enterprise group consisting of the parent company and all its subsidiaries. As an investment enterprise brings an invested enterprise into the scope of consolidated financial statements, the number of assets, liabilities, incomes, expenses, profit elements, cash inflow, cash outflow, and other statement items reflected in the consolidated financial statements are magnified compared with the individual financial statements of the parent company, which is called the amplification effect of consolidated financial statements (referred to as amplification effect). The amplification effect of the consolidated financial statements includes the amplification effect of the consolidated income statement, the consolidated balance sheet, and the consolidated cash flow statement.

Audit fees include the input of audit efforts, audit risk premium, and nonaudit risk premium [4, 5]. Prior literature has studied that the increase of the input of audit efforts and audit risk contributes to improving audit fees. The amplification effect could influence audit fees from the three following aspects: First, a more significant amplification effect means more professional judgment and greater subjectivity are applied in the preparation of consolidated financial statements, increasing the risk of material misstatement [2]. In addition, enterprises with a significant amplification effect require auditors to make more professional judgments, and auditing is more complicated. This requires the auditor to have a higher professional competence, and increases inspection risk. With the increase of material misstatement risk and inspection risk related to amplification effect, audit risk and corresponding audit fee increase. Second, audit institutions will expand the audit scope, add auditing procedures and working hours, and assign more experienced auditors when facing with high-risk clients [6]. Compared with companies with minor amplification effects, companies with large amplification effects have a higher risk, which will increase the audit input and lead to higher audit fees. Third, audit institutions are likely to face a higher risk of litigation or punishment when auditing companies with a large amplification effect. Auditors will demand a higher nonaudit risk premium to compensate for this additional risk.

Controversial studies on accounting treatment rules for consolidated financial statements mainly focused on whether consolidated financial statements are useful for decision-making and whether consolidated financial statements are more useful than the parent statements. The first stream of the literature is whether consolidated financial statements are useful for decision-making. One view holds no value relevance in the consolidated financial statements [3, 7, 8]. Another view is that consolidated financial statements are useful as they are an important basis for bank loan decisions and can play an early warning role in the financial crisis [9–12]. The second stream of the literature is whether consolidated financial statements are more useful than parent statements. The first view holds that the information content of consolidated financial statements is not better than that of parent statements [13–15]. The second view is that consolidated financial statements are more value-relevant than the statements of the parent company [16–18]. The third view is that the parent statement information and consolidated financial statements complement each other and provide useful information for stakeholders [19–21]. Among the existing studies on the accounting rules of consolidated financial statements, few studies focus on the amplification effect of consolidated financial statements and the influence on audit fees. Thus, this paper investigates the impact of amplification effect on audit fees by using Chinese A-share listed companies in Shanghai and Shenzhen from 2007 to 2019 as a sample.

This paper has three contributions. First, this paper creatively proposes the concept of amplification effect and empirically tests the relationship between the amplification effect and audit fees, which is helpful for a more comprehensive evaluation of the entity theory adopted by the accounting rules for consolidated financial statements. Second, this paper enriches the research on the influencing factors of audit pricing. The existing research on the influencing factors of audit pricing mainly focuses on the digital transformation of enterprises [22], investor sentiment [23], business and finance integration [24], customer relationship [25], and fair value measurement [2]; few studies research the impact of amplification effect on audit pricing. By investigating the impact of amplification effect on audit fees and its mechanism, this paper helps enrich the study of audit pricing influencing factors. Third, this paper provides empirical evidence for the essential role of property rights in corporate governance. Audit pricing results from negotiation between auditors and clients under specific circumstances [4]. This paper researches the differences in the impact of amplification effects on audit pricing under different property rights.

2. Literature Review and Hypothesis Development

2.1. Literature Review. Controversial studies on accounting rules for consolidated financial statements have focused on whether consolidated financial statements are helpful for decision-making and whether consolidated financial statements are more valuable than the parent company's financial statements.

There are two different views on whether the consolidated financial statements are helpful for decision-making. One view is that consolidated financial statements cannot provide helpful information for report users to make decisions [3, 7, 8]. Another view holds that consolidated financial statements are essential for bank loan decisions and can play an early warning role in a financial crisis. Therefore, they are useful [9–12].

There are three views on comparing the information value of the consolidated financial statements and that of the parent company. The first view holds that the information value of consolidated financial statements is not better than that of parent company statements [13–15]. The second view is that consolidated financial statements are more value-relevant than the statements of the parent company [16–18]. The third view is that the parent company's statement information and consolidated financial statements complement each other and provide valuable information for stakeholders [19–21].

The existing research on the economic consequences of the accounting rules of the consolidated financial statements mainly focuses on the decision-making usefulness of the consolidated financial statements [3, 12] and the comparative research on the decision-making usefulness of the consolidated financial statements and the statements of the parent company [18, 19]. Some studies suggest that defining the consolidation scope based on control standards brings greater discretion to the management. The enterprise management can determine the scope of the consolidation according to subjective intention [3, 8]. However, there is little literature on the amplification effect of the current accounting standards for consolidated financial statements in determining the consolidation scope based on the control standard.

The greater the amplification effect of the consolidated financial statements is, the more professional judgment is used to prepare the consolidated financial statements. As a result, there is more subjectivity, which will increase audit risk. In addition, accounting firms will expand the audit scope, improve audit procedures and working hours, and assign more experienced auditors when auditing high-risk customers [6]. Therefore, auditors may charge higher audit fees to make up for their risks and increased investment when they audit firms with greater amplification effect. This paper examines the impact of the amplification effect on audit fees and the mechanism of their relationship.

2.2. The Amplification Effects of Consolidated Financial Statements. The standard for determining the scope of consolidation in China's consolidated financial statements has roughly gone through the development process from "proportional standard" to "combination of proportional standard and control standard" and then to "control standard." The "*Accounting Standards for Business Enterprises No.33-Consolidated Financial Statements*" (referred to as *CAS33*) issued in 2006 stipulates that the consolidation scope of the consolidated financial statements shall be determined based on "control." *CAS33*(2014) redefines "control" as follows: the investor has power over the investee, enjoys variable returns by participating in the relevant activities of the investee, and can use its dominance over the investee to influence the number of its returns. Although the "control standard" helps the investor to determine the consolidation scope according to the economic essence [26, 27], there is no reasonable and clear judgment standard for deciding the consolidation scope based on the "control standard." In other words, the information contained in the consolidated financial statements lacks a clear boundary, so consolidated financial statements' reliability is controversial [3]. The "control standard" is featured by solid subjectivity and poor operability, making the determination of the consolidation more influenced by management's intentions, which provides the possibility for companies to adjust their financial performance [28].

There are two exceptional cases of consolidation of financial statements in accounting practice. First case, as shown in Table 1, the investor holds the lower equity of the investee but brings the investee into the scope of consolidation. Second one, as shown in Table 2, the investor has more than 50% of the investee's equity but omits the investee in the scope of consolidation.

Whether the determination of the consolidation scope is appropriate will directly affect the decision-making of the users of the consolidated financial statements and the effect of the evaluation of the regulatory authorities. According to China's current business accounting standards, the scope of consolidation should be determined based on "control." That is to say, the parent company should incorporate its controlled subsidiaries into the scope of consolidation and prepare consolidated financial statements to reflect the operating results, economic status, and cash flow of the entire enterprise group consisting of the parent company and all its subsidiaries. For example, in 2016, three real estate companies, Poly Real Estate (stock code: 600048), Binjiang Group (stock code: 002244), and Hangzhou Binlan Enterprise Management Co., Ltd. (from now on referred to as Binlan Management), respectively, held 34%, 33%, and 33% of the shares of Binbaobao Real Estate Development Co., Ltd. (from now on referred to as Binbao Company). According to Poly Real Estate's 2016 annual financial report, the Poly Real Estate holds less than half of the equity of Binbao Company. However, Poly Real Estate has the majority of seats on the board of directors of Binbao Company. Among the five board members of Binbao Company, the Poly Real Estate holds three seats. Therefore, the Poly Real Estate can control Binbao Company. As a result, Poly Real Estate incorporated Binbao Company into the consolidation scope, and the consolidated net profit of Poly Real Estate included 100% of the profit of Binbao Company. Poly Real Estate only holds 34% of Binbao's shares at the firm level, but the consolidated financial statements include 100% of Binbao's profits. The accounting treatment method of forming all the earnings of Binbao Company in the consolidated financial statements of Poly Real Estate has an amplification effect on the earnings of the consolidated financial statements of Poly Real Estate. This study defines the amplification effect of consolidated financial statements as follows. As an investment enterprise brings an invested enterprise into the scope of consolidated financial statements, the number of assets, liabilities, incomes, expenses, profit elements, cash inflow, cash outflow, and other statement items reflected in the consolidated financial statements are magnified compared with the individual financial statements of the parent company, which is called the amplification effect of consolidated financial statements.

Table 1: Statistics of the relationship between shareholding ratio and consolidation (shareholding ratio <30%).

Stock code	Company abbreviation	Year	Shareholding ratio (%)	Consolidation or not	Investees
000009	China Baoan	2019	20	Yes	Guangzhou Rixin Baoan new material industry investment center
000009	China Baoan	2019	19.80	Yes	Wuhan Tongdaohe technology partnership
600057	Xiangyu Gufen	2016	0.07	Yes	Xiamen Yushang investment partnership
600238	Hainan Yedao	2019	15.87	Yes	Hainan Yedao Investment Management Co., Ltd.
600239	Yunnan real estate	2019	0.64	Yes	Yunnan Ansheng Chuangxiang tourism industry investment partnership
600239	Yunnan real estate	2019	1	Yes	Yunnan Rongcheng investment partnership

Data source: annual report of listed companies.

Table 2: Statistics of the relationship between shareholding ratio and consolidation (shareholding ratio >50%).

Stock code	Company abbreviation	Year	Shareholding ratio (%)	Consolidation or not	Investees
000089	Shenzhen airport	2019	51	No	Asiaray media group limited
000632	Sanmu group	2019	90	No	Qingdao Senchengxin Investment Co. Ltd.
000632	Sanmu group	2019	90	No	Shanghai Yuanfu Real Estate Co., Ltd.
000753	Zhangzhou development	2019	54.17	No	Fujian Huaxing Zhangfa Venture Capital Co. Ltd.
600512	Tengda construction	2018	58.33	No	Shanghai Panshi Tengda investment partnership
603618	Hangzhou cable	2019	80	No	Zhejiang Hangdeng Graphene Technology Co. Ltd.
603618	Hangzhou cable	2019	60	No	Zhejiang Hangdian Industrial Co., Ltd.

Data source: annual report of listed companies.

2.3. Amplification Effect of Consolidated Financial Statements and Audit Fees. Audit pricing is affected by audit input and a risk premium [4, 29]. The risk premium is mainly used to compensate for reputational damage, litigation, and other risks that the accounting firm may face. Risk premium can be divided into audit risk premium and nonaudit risk premium [5]. So, how will the amplification effect of consolidated financial statements affect audit fees? First, audit risk depends on the risk of material misstatement and the detection risk. Although control standards help investors determine the scope of consolidation based on economic substance [26, 27], the control standards are highly subjective, poorly operable, and greatly influenced by management's intentions [30]. The current accounting standards for consolidated financial statements determine the scope of consolidation based on control standards, resulting in an amplification effect. On the one hand, the greater the amplification effect, the more professional judgment will be used to prepare consolidated financial statements. It will increase the risk of material misstatement [2]. On the other hand, compared with companies with small amplification effect, companies with significant amplification effect rely on more professional judgments, making auditing more complicated and having higher requirements for the professional competence of auditors, which is likely to lead to an increase in detection risks. Audit risk increases along with the increased risk of material misstatement and detection risk associated with the amplification effect. As a result, auditors will demand a higher audit risk premium. Second, auditors will expand the audit scope and increase auditing procedures and working hours when auditing high-risk clients. Auditor firms will assign more experienced auditors [6]. The efforts of auditors and auditing firms will increase audit investment and lead to higher audit fees. Third, if the auditor's portfolio risk is high, it is more likely to be the object of litigation. Thus, the auditor may purchase more litigation insurance, increasing the nonaudit risk premium [31]. A significant magnification effect may arise from management's manipulation of the consolidation scope to embellish financial statement data. Manipulation of the consolidation scope may lead to damage to the interests of investors, and audit institutions are likely to face a higher risk of litigation or penalties as a result. Auditors demand a higher nonaudit risk premium to compensate for this additional risk. Therefore, our hypothesis is as follows:

H1. Firms with a high amplification effect of consolidated financial statements are more likely to pay high audit fees.

3. Research Design

3.1. Sample Selection and Data Sources. To examine the effects of amplification effect on audit fees, we use Chinese A-share listed companies to construct a sample covering 2007–2019. On February 15, 2006, the Ministry of Finance issued a new accounting standard system including 38 specific accounting standards and a basic accounting standard. Therefore, the sample period begins in 2007 when the new accounting standards are fully implemented. The variable data involved is obtained from the CSMAR database.

Table 3: Variable definition.

Variables	Definition
LNFEE	Natural logarithm of audit fees
MAGNIFICATION1	Magnification of consolidated financial statements, the ratio of minority equity to total equity in the consolidated financial statements
SIZE	Natural logarithm of sales revenue in the company's consolidated financial statements
LEV	Total liabilities to total assets in the consolidated balance sheet
TOBINQ	(Number of tradable shares × closing price at the end of the year + nontradable shares × net assets per share + total liabilities)/total assets
DUAL	The value is 1 if the same person holds the chairman and the general manager; otherwise, it is 0
INDRATIO	The ratio of the number of independent directors to the number of directors
AGE	The number of years since the company was founded
SOE	For state-owned enterprises, the value is 1; otherwise, the value is 0
TOP1	Percentage of shareholding of the largest shareholder
BIG4	If the auditor is from "big four accounting firms," the value is 1; otherwise, it is 0
DELAY	Natural logarithm of the number of days between the end of the accounting period and the issuance of the auditor's report
REC	The ratio of accounts receivable to total assets
RISK1	The volatility of ROA, calculation of the rolling standard deviation of the 3-year ROA
RISK2	The volatility of ROA, calculation of the rolling standard deviation of the 5-year ROA
SINDEX	The sum of the shareholdings of the second-largest shareholder to the tenth largest shareholder of the company

All continuous variables are winsorized at 1% and 99% percentile to eliminate the influence of extreme values.

3.2. Regression Model and Variable definition. Following the works of Simunic [4] and Hu et al. [2], we construct model (1) to test the impact of the amplification effect on audit fees:

$$\begin{aligned}\mathrm{LNFEE}_{i,t} = {} & \lambda_0 + \lambda_1 \mathrm{MAGNIFICATION1}_{i,t} + \lambda_2 \mathrm{SIZE}_{i,t} \\ & + \lambda_3 \mathrm{LEV}_{i,t} + \lambda_4 \mathrm{TOBINQ}_{i,t} + \lambda_5 \mathrm{DUAL}_{i,t} \\ & + \lambda_6 \mathrm{INDRATIO}_{i,t} + \lambda_7 \mathrm{AGE}_{i,t} + \lambda_8 \mathrm{SOE}_{i,t} \\ & + \lambda_9 \mathrm{TOP1}_{i,t} + \lambda_{10} \mathrm{BIG4}_{i,t} + \lambda_{11} \mathrm{DELAY}_{i,t} \\ & + \lambda_{12} \mathrm{REC}_{i,t} + \sum \mathrm{INDUSTRY} + \sum \mathrm{YEAR} + \phi_{i,t}. \end{aligned} \tag{1}$$

Audit fees are remuneration and compensation for audit-related resource consumption and risks [32]. Following Ettredge et al. [33] and Dong et al. [25], we measure the audit fees (*LNFEE*) by the natural logarithm of the audit fees. Following the work of Yan [34], the test variable is the magnification of the consolidated financial statements (*MAGNIFICATION1*), the ratio of minority interests to the total equity in the consolidated financial statements. The larger the magnification of the consolidated financial statements, the greater the amplification effect. The test variable can measure the amplification effect because minority interests reflect ownership interests that the parent company does not own. After the subsidiaries are included in the consolidated financial statements, their assets, liabilities, and owner's equity belonging to minority shareholders will be reflected in the consolidated balance sheet, inevitably magnifying the company's assets, liabilities, and owner's equity, creating a magnifying effect. According to Hypothesis 1, *MAGNIFICATION1* is expected to be significantly positively correlated with *LNFEE*.

Referring to prior studies (see, e.g., [35, 36]), we also control the following factors: audit workload, measured by the natural logarithm of sales revenue (*SIZE*); operating risk, measured by the asset-liability ratio (*LEV*) and Tobin Q (*TOBINQ*); corporate governance characteristics, measured by the integration or separation of chairman and general manager (*DUAL*) and proportion of independent director (*INDRATIO*); firm-level characteristics, measured by firm age (*AGE*), firm nature (*SOE*), and shareholding of the largest shareholder (TOP1); auditor size (*BIG4*); audit delay (*DELAY*); and proportion of accounts receivable ratio (*REC*). Definitions for all variables are provided in Table 3. In addition, we also include year-fixed effect (*YEAR*) and industry-fixed effect (*INDUSTRY*) in the regression model.

4. Analysis of Empirical Results

4.1. Descriptive Statistics. Table 4 presents the summary statistics of the variables included in our baseline regression model. All continuous variables are winsorized at the 1st and 99th percentiles to reduce the influence of outliers. As a result, the minimum of the natural logarithm of audit fees (*LNFEE*) is 12.301, the maximum of the natural logarithm of audit fees (*LNFEE*) is 15.850, the mean of the natural logarithm of audit fees (*LNFEE*) is 13.543, and the standard deviation of the natural logarithm of audit fees (*LNFEE*) is 0.651. The descriptive statistics of audit fees (*LNFEE*) demonstrate that the audit fees of listed companies in China are quite different, which is generally consistent with the estimates in the study of Yuan et al. [36]. The mean (median) of the amplification effects (*MAGNIFICATION1*) is 0.067 (0.028), which indicates that the average amplification effects of listed companies in China are 6.7%. The minimum of the amplification effects (*MAGNIFICATION1*) is −0.044, and the maximum of the amplification effects (*MAGNIFICATION1*) is 0.490, which indicates that the amplification effects of listed companies in China vary widely. The mean of

Table 4: Descriptive statistics.

Variable	Obs	Mean	Min.	Median	Max.	Std. dev.
LNFEE	25688	13.543	12.301	13.459	15.850	0.651
MAGNIFICATION1	25688	0.067	−0.044	0.028	0.490	0.097
SIZE	25688	21.346	17.188	21.241	25.349	1.464
LEV	25688	0.441	0.050	0.437	0.999	0.211
TOBINQ	25688	2.080	0.854	1.628	10.130	1.413
DUAL	25688	0.244	0.000	0.000	1.000	0.430
INDRATIO	25688	0.372	0.308	0.333	0.571	0.053
AGE	25688	15.908	3.000	16.000	31.000	5.651
SOE	25688	0.414	0.000	0.000	1.000	0.493
TOP1	25688	35.087	8.497	33.078	74.870	15.049
BIG4	25688	0.052	0.000	0.000	1.000	0.223
DELAY	25688	4.501	3.401	4.564	4.779	0.256
REC	25688	0.112	0.000	0.087	0.462	0.102

the company's property rights (*SOE*) is 0.414, which suggests that 41.4% of the sample companies are state-owned enterprises (SOEs). The mean of *BIG4*, is 0.052, indicating that about 5.2% of listed companies choose the big four accounting firms to audit their annual reports.

4.2. Empirical Regressions. In order to investigate whether firms with high amplification effects pay higher audit fees, we present OLS regression results in Table 5 according to equation (1). Column 1 investigates the association between amplification effect (*MAGNIFICATION1*) and audit fees (*LNFEE*) controlling firm characteristics. The coefficient on amplification effect (*MAGNIFICATION1*) is positive and significant at the 5% level (0.197, $t = 2.452$). We control for year-fixed effects and industry-fixed effects in column 2. The coefficient on amplification effect (*MAGNIFICATION1*) is also positive and significant (0.224, $t = 2.970$). These results indicate that firms pay higher audit fees when the firms have a higher amplification effect, which supports Hypothesis 1.

In addition, we implement a series of robust tests such as changing the measurement of the amplification effect, using Heckman's two-stage model, using the instrumental variable approach, and controlling audit fees' stickiness to ensure the validity of our main result. The results of robust tests prove that firms with high amplification effects pay more audit fees than firms with low ones.

4.3. Test of Mediating Effect: Audit Risk. Since the amplification effect will have an impact on audit risk and thus on audit fees, audit risk is used as a mediating variable. The mediating effect of audit risk is verified by referring to the methods of Sobel [37], Wen and Ye [38], and Zhang et al. [39]. The first step is to examine the effect of amplification on audit fees. It can be seen from Table 5 that the amplification effect is significantly positively correlated with audit fees, indicating that the greater the amplification effect, the higher the audit fees. The second step is to examine the impact of the amplification effect on audit risk. Following prior studies (see, e.g., [40, 41]), we measure audit risk through performance fluctuations. We measure audit risk in two ways: the standard deviation of 3-year ROA (*RISK1*) and the standard deviation of 5-year ROA (*RISK2*).

Table 5: The impact of amplification effect on audit fees.

Variables	*LNFEE*	
	(1)	(2)
MAGNIFICATION1	0.197**	0.224***
	(2.452)	(2.970)
SIZE	0.279***	0.262***
	(41.937)	(37.584)
LEV	0.022	0.146***
	(0.639)	(4.142)
TOBINQ	0.005	0.003
	(1.348)	(0.771)
DUAL	0.019	0.004
	(1.528)	(0.296)
INDRATIO	0.342***	0.154
	(3.172)	(1.501)
AGE	0.010***	−0.001
	(8.734)	(−0.975)
SOE	−0.176***	−0.133***
	(−11.191)	(−8.375)
TOP1	−0.001**	−0.001***
	(−2.206)	(−2.720)
BIG4	0.732***	0.726***
	(18.519)	(18.552)
DELAY	0.256***	0.166***
	(15.767)	(10.772)
REC	−0.198***	−0.359***
	(−3.161)	(−5.911)
Constant	6.196***	6.908***
	(39.374)	(41.184)
YEAR	No	Yes
INDUSTRY	No	Yes
N	25,688	25,688
Adj. R^2	0.552	0.596

Note. Cluster-adjusted t-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively (when $1.65 < |t| < 1.96$, $p < 0.10$; when $1.96 < |t| < 2.58$, $p < 0.05$; and when $|t| > 2.58$, $p < 0.01$).

To test the effect of amplification effect on the audit risk, we use audit risk as the dependent variable. We model audit risk as a function of amplification effect and other firm characteristics.

Table 6: The impact of amplification effect on audit risk.

Variables	*RISK1* (1)	*RISK1* (2)	*RISK2* (3)	*RISK2* (4)
MAGNIFICATION1	0.029***	0.026***	0.046***	0.040***
	(4.994)	(4.424)	(5.388)	(4.707)
SIZE	−0.005***	−0.005***	−0.006***	−0.005***
	(−11.503)	(−9.387)	(−10.217)	(−7.952)
TOBINQ	0.006***	0.007***	0.008***	0.009***
	(8.753)	(9.144)	(7.450)	(7.759)
INDRATIO	0.015*	0.018**	0.022**	0.026**
	(1.893)	(2.233)	(2.014)	(2.430)
AGE	0.000***	0.001***	0.001***	0.001***
	(4.952)	(5.830)	(6.045)	(7.126)
SOE	−0.000	−0.002	0.000	−0.002
	(−0.206)	(−1.544)	(0.234)	(−1.395)
BIG4	0.003*	0.002	0.002	0.001
	(1.700)	(1.348)	(1.158)	(0.484)
SINDEX	−0.000	−0.000	−0.000	0.000
	(−1.049)	(−0.381)	(−0.690)	(0.235)
Constant	0.120***	0.117***	0.130***	0.115***
	(11.712)	(9.343)	(10.276)	(7.420)
YEAR	No	Yes	No	Yes
INDUSTRY	No	Yes	No	Yes
N	26,311	26,311	26,311	26,311
Adj. R^2	0.071	0.089	0.082	0.101

Note. Cluster-adjusted *t*-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

$$\begin{aligned}\mathrm{RISK}_{i,t} = {} & \gamma_0 + \gamma_1 \mathrm{MAGNIFICATION1}_{i,t} + \gamma_2 \mathrm{SIZE}_{i,t} \\ & + \gamma_3 \mathrm{TOBINQ}_{i,t} + \gamma_4 \mathrm{INDRATIO}_{i,t} + \gamma_5 \mathrm{AGE}_{i,t} \\ & + \gamma_6 \mathrm{SOE}_{i,t} + \gamma_7 \mathrm{BIG4}_{i,t} + \gamma_8 \mathrm{SINDEX}_{i,t} \\ & + \sum \mathrm{INDUSTRY} + \sum \mathrm{YEAR} + \varphi_{i,t}.\end{aligned} \tag{2}$$

Table 6 shows the OLS regression analysis of the impact of amplification effect (*MAGNIFICATION1*) on audit risk (*RISK*) according to equation (2). The dependent variables in column 1 and column 2 are the standard deviation of 3-year ROA (*RISK1*). The dependent variables in column 3 and column 4 are the standard deviation of 5-year ROA (*RISK2*). Columns 1 and 3 investigate the association between amplification effect (*MAGNIFICATION1*) and audit risk controlling firm characteristics. The coefficients of the variable amplification effect (*MAGNIFICATION1*) in columns 1 and 3 are 0.029 and 0.046, respectively, and both are statistically significant at the 1% level ($t = 4.994$; $t = 5.388$), indicating that firms with higher amplification effects have high audit risk. We control for year-fixed and industry-fixed effects in columns 2 and 4. The coefficients on amplification effect (*MAGNIFICATION1*) continue to be positive and statistically significant at the 1% level (0.026, $t = 4.424$; 0.040, $t = 4.707$). Our results suggest that the firms with higher amplification effects are associated with higher audit risk.

The third step examines the relationship between amplification effect, audit risk, and audit fees. To explore the relationship between amplification effect, audit risk, and audit fees, we constructed the following model:

$$\begin{aligned}\mathrm{LNFEE}_{i,t} = {} & \eta_0 + \eta_1 \mathrm{MAGNIFICATION1}_{i,t} + \eta_2 \mathrm{RISK}_{i,t} \\ & + \eta_3 \mathrm{SIZE}_{i,t} + \eta_4 \mathrm{LEV}_{i,t} + \eta_5 \mathrm{TOBINQ}_{i,t} \\ & + \eta_6 \mathrm{DUAL}_{i,t} + \eta_7 \mathrm{INDRATIO}_{i,t} + \eta_8 \mathrm{AGE}_{i,t} \\ & + \eta_9 \mathrm{SOE}_{i,t} + \eta_{10} \mathrm{TOP1}_{i,t} + \eta_{11} \mathrm{BIG4}_{i,t} \\ & + \eta_{12} \mathrm{DELAY}_{i,t} + \eta_{13} \mathrm{REC}_{i,t} + \sum \mathrm{INDUSTRY} \\ & + \sum \mathrm{YEAR} + \varphi_{i,t}.\end{aligned} \tag{3}$$

Table 7 presents the regression results of the relationship among amplification effect, audit risk, and audit fees. Columns 1 and 3 investigate the association between amplification effect, audit risk, and audit fees controlling firm characteristics. The coefficient on audit risk (*RISK1*) is positive and significant at the1% level in column 1 (0.654, $t = 6.841$), the coefficient on audit risk (*RISK2*) is positive and significant at the 1%level in column 3 (0.468, $t = 4.784$), and the coefficients on amplification effect (*MAGNIFICATION1*) are positive and significant at the 5% level in columns 1 and 3 (0.185, $t = 2.300$; 0.179, $t = 2.234$). It is indicated that the audit risk is an incomplete intermediary effect. That is, the effect of amplification effect on audit fees is not entirely realized through audit risk. Next, we head for year-fixed and industry-fixed results in columns 2 and 4. The coefficient on audit risk (*RISK1*) is positive and significant at the 1% level in column 2 (0.608, $t = 6.849$), the coefficient on audit risk (*RISK2*) is positive and significant at the 1% level in column 4 (0.462, $t = 5.076$), and the coefficients on amplification effect (*MAGNIFICATION1*) are positive and

Table 7: The impact of amplification effect and audit risk on audit fees.

Variables	*LNFEE*			
	(1)	(2)	(3)	(4)
MAGNIFICATION1	0.185**	0.214***	0.179**	0.209***
	(2.300)	(2.841)	(2.234)	(2.778)
RISK1	0.654***	0.608***		
	(6.841)	(6.849)		
RISK2			0.468***	0.462***
			(4.784)	(5.076)
SIZE	0.282***	0.266***	0.282***	0.265***
	(41.249)	(37.191)	(40.967)	(37.026)
LEV	0.001	0.129***	0.007	0.134***
	(0.039)	(3.573)	(0.193)	(3.720)
TOBINQ	0.000	−0.001	0.001	−0.001
	(0.074)	(−0.265)	(0.171)	(−0.217)
DUAL	0.019	0.002	0.019	0.002
	(1.468)	(0.173)	(1.451)	(0.148)
INDRATIO	0.332***	0.141	0.332***	0.140
	(3.033)	(1.352)	(3.032)	(1.346)
AGE	0.011***	−0.002	0.010***	−0.002
	(8.595)	(−1.036)	(8.483)	(−1.149)
SOE	−0.179***	−0.134***	−0.180***	−0.134***
	(−11.280)	(−8.365)	(−11.300)	(−8.359)
TOP1	−0.001**	−0.001***	−0.001**	−0.001***
	(−2.244)	(−2.822)	(−2.387)	(−2.941)
BIG4	0.732***	0.728***	0.733***	0.729***
	(18.019)	(18.148)	(18.054)	(18.180)
DELAY	0.253***	0.166***	0.255***	0.167***
	(15.245)	(10.477)	(15.366)	(10.552)
REC	−0.176***	−0.334***	−0.179***	−0.339***
	(−2.753)	(−5.373)	(−2.802)	(−5.449)
Constant	6.142***	6.844***	6.154***	6.860***
	(37.993)	(39.698)	(37.923)	(39.751)
YEAR	No	Yes	No	Yes
INDUSTRY	No	Yes	No	Yes
N	24,497	24,497	24,497	24,497
Adj. R^2	0.553	0.597	0.552	0.597

Note. Cluster-adjusted *t*-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

significant at the 1% level in columns 2 and 4 (0.214, $t = 2.841$; 0.209, $t = 2.778$). The results in Table 7 indicate that audit risk plays an incomplete intermediary role in the relation between the amplification effect and audit fees.

The fourth step is the Sobel test. This method mainly tests whether the coefficients of the cross terms of γ_1 and η_2 are significant, and the test statistic $Z = \gamma_1\eta_2/S$ (where $S = (\gamma_1{}^2 s_\eta{}^2 + \eta_2{}^2 s_\gamma{}^2)\ \sqrt{\gamma_1^2 S_\eta^2 + \eta_2^2 S_\gamma^2}\ ½$; s_γ and s_η represent the standard errors of γ_1 and η_2, respectively). If the absolute value of Z is greater than 0.97, the mediating effect is significant; otherwise, the mediating impact is not substantial. Based on the results of the previous three steps, it can be derived that $\gamma_1 = 0.026$, $\eta_2 = 0.608$, $s_\gamma = 0.006$, and $s_\eta = 0.089$ for *RISK1*. Thus, the statistic Z is calculated to be equal to 3.65, the absolute value of which is greater than 0.97, proving that the amplification effect affects audit fees through audit risk. It can be derived that $\gamma_1 = 0.040$, $\eta_2 = 0.462$, $s_\gamma = 0.009$, and $s_\eta = 0.091$ for *RISK2*. Thus, the statistic Z is calculated to be equal to 3.34, the absolute value of which is greater than 0.97, proving that audit risk is a mediating variable in the relationship between the amplification effect and audit fees.

4.4. Effect of the Nature of Property Rights. The manager incentive contract of state-owned enterprises pays more attention to the company's performance compared to that of non-state-owned enterprises due to the explicit performance requirements of state-owned enterprises for managers, more substantial social supervision, and weaker tunneling motivation for SOEs [42]. In economic practice, the State-owned Assets Supervision and Administration Commission (SASAC) issued the *Measures for Business Performance Appraisal of the Heads of Central Enterprises*, which link the business performance appraisal of the heads of central enterprises to the total profit or net profit of the consolidated financial statements. That makes the management of SOEs more likely to engage in opportunistic behavior such as earnings management. In this case, the amplification effect of SOEs implies higher risk. Therefore, auditors will demand a higher audit risk premium when faced with the amplification effects of SOEs than when faced with the amplification effects of non-SOEs. [43]. SOEs are subject to more substantial social supervision [42], which makes auditors face higher violation costs when auditing SOEs. Compared with the amplification

Table 8: Amplification effect and audit fees: effect of the nature of property rights.

Variables	*LNFEE*	
	(1)	(2)
MAGNIFICATION1	−0.007	0.093
	(−0.071)	(0.939)
MAGNIFICATION1 × SOE	0.362**	0.232*
	(2.468)	(1.659)
SOE	−0.202***	−0.150***
	(−10.965)	(−8.052)
SIZE	0.279***	0.262***
	(41.946)	(37.564)
LEV	0.029	0.149***
	(0.816)	(4.240)
TOBINQ	0.005	0.003
	(1.439)	(0.846)
DUAL	0.018	0.003
	(1.432)	(0.243)
INDRATIO	0.332***	0.149
	(3.087)	(1.455)
AGE	0.011***	−0.001
	(8.878)	(−0.852)
TOP1	−0.001**	−0.001***
	(−2.183)	(−2.710)
BIG4	0.731***	0.725***
	(18.572)	(18.586)
DELAY	0.256***	0.167***
	(15.749)	(10.788)
REC	−0.208***	−0.363***
	(−3.319)	(−5.991)
Constant	6.210***	6.913***
	(39.489)	(41.231)
YEAR	No	Yes
INDUSTRY	No	Yes
N	25,688	25,688
Adj. R^2	0.552	0.596

Note. Cluster-adjusted *t*-values are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

effect of non-SOEs, auditors will demand a higher nonaudit risk premium when facing the amplification effect of SOEs. In summary, we expect that the amplification effect of SOEs will have a more significant impact on audit fees than non-SOEs.

As shown in Table 8, the coefficients on the interaction terms of amplification effect (*MAGNIFICATION1*) and the indicator of state-owned enterprises (*SOE*) are both positive and statistically significant in columns 1 and 2 (0.362, $t = 2.468$; 0.232, $t = 1.659$), suggesting that the amplification effect of SOEs has a more significant impact on audit fees compared to non-SOEs. The results in Table 8 show that, auditors will charge higher audit fees when facing the amplification effect of SOEs.

5. Discussion

This paper investigates the influence of consolidated financial statements' amplification effect on audit fees and the mechanism of their relationship. We found the following: (1) Audit fees are positively related to the amplification effect of consolidated financial statements. (2) Audit risk plays an intermediary role among the relationship between the amplification effect and audit fees. (3) In state-owned enterprises (SOEs), the positive correlation between amplification effect and audit fees is more significant. Compared with prior studies, this paper creatively proposes the concept of amplification effect and studies its impact on audit fees which can help us better understand the economic consequences of accounting standards. What is more, we enrich the literature on influencing factors of audit fees, while previous research mainly focused on the digital transformation of enterprises, investor sentiment, business and finance integration, customer relationship, and fair value measurement. Furthermore, we provide empirical evidence for the vital role of property rights in corporate governance.

Our results have significant practical consequences. First, this paper emphasizes the importance of perfecting accounting standards for consolidated financial statements and supervision of consolidation scope. Second, it provides enlightenment to auditing. Auditors should pay more attention to the application of control standards in determining the scope of consolidated financial statements and increase audit input to ensure the reliability of accounting information. Third, it enriches the standard of management compensation. The evaluation of management performance and the supervision of enterprises should avoid relying too much on the consolidated financial statement, and it can be considered to rely on both the consolidated financial statement and the parent company's statement.

There are still some limitations suggesting further research. First, we study the effect of consolidated financial statements' amplification effect on audit fees by using the empirical method. Thus, further analysis can adopt case studies and add interviews with executives and auditors to enhance the conclusions of this paper. Second, other firm-level characteristics may also affect the relationship between the amplification effect and audit fees in addition to property rights. For example, the audit period of the institution on the company may lead to different levels of the audit fees. Thus, other characteristics can also be considered in the future. Finally, the consolidated financial statements' amplification effect may impact the decisions of other agents. Existing literature finds that the aggregate data of enterprise statement information is helpful to predict GDP changes [44]. Therefore, whether the amplification effect of consolidated statements will affect the forecasting ability of aggregate information of enterprise accounting data to GDP can be further studied.

Data Availability

All relevant variable data come from the China Stock Market & Accounting Research Database.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

The first two authors contributed equally to this work.

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