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Non-state shareholders' equity and audit fees

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Abstract: In order to introduce private capital and promote the development of state-owned enterprises, the Third Plenum of the Eighteenth Party Congress proposed the active development of a mixed ownership economy in 2013, accelerating the process of mixed ownership reform in state-owned enterprises. From the perspective of audit cost and audit risk, the introduction of non-state shareholders reduces the company's audit cost and risk, thus reducing the audit fees of listed companies. This paper analyzes the impact of the proportion of non-state shareholders' equity on audit fees from the perspective of equity structure, using information disclosed by listed companies on the nature and shareholding ratio of the top ten shareholders. The study found that the proportion of non-state shareholders' equity can significantly reduce audit fees.

1. Introduction

The mixed ownership reform of state-owned listed companies not only involves the introduction of non-state shareholders, causing changes in property rights structure, but also regulates the governance mechanisms and management methods of state-owned companies. Referring to the development of modern large enterprises in foreign countries, most of them are privately controlled, and the governance structure of privately controlled enterprises is relatively sound. Initially, due to China's special national system, state-owned enterprises control a large number of industries and sectors. After the reform and opening up, the market economy began to develop, and foreign trade increased. Some foreign companies entered the domestic market, gradually demonstrating the institutional advantages of a modern corporate system. Since the 1990s, except for important industries and sectors related to people's livelihood and national defense and security, the government has gradually relaxed its control over corporate equity. In 2013, the Third Plenum of the Eighteenth Party Congress proposed the active development of a mixed ownership economy. Developing a mixed ownership economy and increasing the proportion of non-state shareholders' equity have promoted the development of the market economy, private investment, industrial development, and technological progress. The participation of non-state shareholders in shareholding also increases capital mobility, promotes the development of diversified shareholder structure, increases the vitality of the equity market, and creates investment opportunities. Previously, most industries were controlled by state-owned enterprises, and in order to maintain profits, companies formed market monopolies. Before the 1990s, state-owned enterprises were

subject to less supervision, and after the formation of market monopoly, the service quality of enterprises was poor, the product quality was lack of control, the market price was high, and ordinary small and micro enterprises had no innovation and creativity. In the market economy, the development of a mixed ownership economy not only forms a benign competition externally in enterprises, but also forms an effective management system and regulatory mechanism internally. Non-state shareholders can demand the disclosure of internal operational and financial information of state-owned enterprises, and timely judge enterprise management based on relevant information, encouraging the regularization of state-owned enterprises. Mixed ownership reform is not simply a reform of the corporate ownership structure, but also establishes a development environment for a mixed ownership economy. It serves as the starting point for the repositioning of the ownership structure of state-owned enterprises, and subsequent changes will gradually be made to the management system of industrial and commercial enterprises, industrial regulation, and regulation of the financial industry.

Audit fees are a classic topic in audit research. Many scholars have conducted research on audit fees based on Simunic's audit fee model from various aspects such as audit risk borne by auditors, a company's audit costs.[1] This includes factors such as the size of the audited company, company characteristics, and audit opinions. From the perspective of corporate governance, the ownership of non-state shareholders and their participation in company operations can promote corporate governance reform through market means, theoretically reducing audit risk, reducing audit workload, and thereby reducing audit fees. [2]This paper analyzes the impact of the proportion of non-state shareholders' equity on audit fees from the perspective of equity structure, using information disclosed by listed companies on the nature and shareholding ratio of the top ten shareholders. The study found that the proportion of non-state shareholders' equity can significantly reduce audit fees.

2. Literature Review

There are three literatures related to this paper. The first is the literature on non-state shareholders. According to the spirit of the third plenary session of the 18th Central Committee, the current round of SOE reform introduces non-state capital, and non-state capital can have an impact on the company's operations and corporate governance structure depending on the shareholding proportion.[3] The introduction of non-state capital into state-owned enterprises enriches the equity structure, achieves equity diversification, and effectively balances the allocation of state-owned capital. The introduction of the policy of mixed ownership reform promotes the marketization process of state-owned enterprises and ensures the normal operation of state-owned capital through institutional safeguards. Existing studies have found that state-owned controlling shareholders have a negative impact on corporate innovation and performance.[4][5] However, non-state-owned shareholders can influence the company's operation by regulating the behavior of state-owned enterprises' shareholders.[6] On the one hand, the checks and balances between state-owned equity and non-state-owned equity restrict the allocation and operation of state-owned enterprises' resources, and enhance the corporate governance structure. Some scholars proposed that equity balance is conducive to improving the operating efficiency and performance of a company.[7][8] Some scholars believe that there are many political expenditure items in state-owned enterprises, so audit companies need to bear higher risks and greater workload.[6] Non-state-owned shareholders pay more attention to economic returns, and the increase of their proportion can reduce politically oriented enterprise expenditure in state-owned enterprises and guide enterprises to pay more attention to economic objectives. On the other hand, there is a complementary effect between non-state-owned shareholders and state-owned shareholders.[9][10] Compared with state-owned

shareholders, non-state-owned shareholders pay more attention to the company's performance, corporate governance structure, business model and business risk. Therefore, non-state-owned shareholders will improve the corporate governance structure, strengthen the supervision of senior executives, enhance the quality of internal control and improve the efficiency of corporate governance.[11]

The second is the literature on audit costs. On the one hand, this kind of literature focuses on the influencing factors of audit fees, and on the other hand, it focuses on the ways of audit fees. As for the influencing factors of audit fees, Simunic proposed the audit fee model and established a multiple regression model, believing that audit fees are mainly affected by the risk status of the audited enterprises and industries, loss sharing mechanism, audit firm production function and audit firm scale. [1] Subsequent studies have explored the influencing factors of audit fees, including client characteristics, auditor/audit firm characteristics and contract characteristics.Client characteristics mainly refer to the company characteristics of the audited company, including company size, complexity of business operations, complexity of the industry in which the company operates, inherent risks faced by the company, current profitability, leverage level, internal control structure, [12]corporate governance level, executive compensation, and ownership structure, [13][14]and enterprise credit ratings,[15] and so on. Auditor characteristics mainly include the ranking and quality of the audit firm. Contractual features include reporting lag, busy seasons, and report complexity. However, because domestic research on audit fees is mostly based on data from listed companies, contractual features are not among the main considerations.

Literature on the modalities of audit fees. Audit fees include audit cost, risk premium and normal profit, and audit profits are mainly affected by audit cost and risk premium. From the perspective of audit costs, Liu et al. proposed that non-state-owned shareholders holding state-owned enterprises achieve "ownership in place".[15] In order to maximize profits, non-state-owned shareholders have incentives to integrate existing resources of state-owned enterprises, improve corporate governance structure, perfect corporate regulatory structure, increase information transparency, and reduce information asymmetry. The improvement of the operating environment and governance structure of state-owned enterprises, from the perspective of audit costs, the improvement of the internal governance mechanism of the company has enhanced the standardization of financial information in all aspects such as income and expenditure, reduced the possibility of financial fraud by internal personnel of the company, and reduced audit costs. From the perspective of audit risk, the shareholding of non-state-owned shareholders has formed an effective supervision on the operation of state-owned enterprises, which is conducive to reducing the risks that audit companies need to bear. For example, Tang et al. found that the mixed ownership reform of state-owned enterprises increased the proportion of non-state-owned equity, improved the corporate governance structure, reduced the operational risk of the company, and then reduced the audit risk of the audit company.[2] The audit company did not need to bear additional risks for the issuance of financial statements, and the audit cost decreased.

Hypothesis: Controlling other variables, an increase in the proportion of non-state shareholders will reduce audit fees for companies.

3. Research Design and Sample Selection

3.1. Data

Chinese A-share listed companies are selected as the research subjects. The shareholding data of the top ten shareholders is obtained from the Guotai An database, and other data is obtained from the Choice data terminal. Panel data from 2003 to 2022 is used, excluding companies listed after 2003, companies in the financial industry, ST companies, and companies with missing major

research variables.

3.2. Variable Definitions

3.2.1. Dependent Variable

Audit fees (*Ln_auditfees*): The logarithm of the audit fees disclosed in the annual report of the listed company is used as a measure of audit fees.

3.2.2. Independent Variable

Proportion of non-state shareholders (*Share_per*): The total proportion of the top ten shareholders' holdings and the proportion of non-state shareholders among the top ten shareholders are calculated based on the Guotai An database.

3.2.3. Mediating Variables

The selection of information disclosure evaluation and accounting information transparency as mediation variables is used to test whether non-state shareholders' holdings affect the logarithm of company audit fees by influencing the company's information disclosure and accounting transparency. The information disclosure evaluation data is derived from Choice Financial Terminal. The calculation of accounting information transparency includes two parts: earnings aggressive and earnings smooth. Among them, earnings aggressive is calculated based on the formula provided by Utpal Bhattacharya et al. (2003):

$$EA_{i.t} = (\Delta CA_{i.t} - \Delta CL_{i.t} - \Delta CASH_{i.t} + \Delta STD_{i.t} - DEP_{i.t} + \Delta TP_{i.t})/TA_{i.t-1}$$

In the formula, $\Delta CA_{i.t}$ represents the change in current assets of the company, $\Delta CL_{i.t}$ represents the change in current liabilities of the company, $\Delta CASH_{i.t}$ represents the change in cash and cash equivalents of the company, $\Delta STD_{i.t}$ represents the change in the proportion of short-term borrowings to total liabilities of the company, $DEP_{i.t}$ represents the depreciation and amortization of the company during the current period, $\Delta TP_{i.t}$ represents the change in revenue of the company, and $TA_{i.t-1}$ represents the total assets of the company in the previous period. The earnings smooth part is obtained based on the correlation coefficient between changes in accruals and changes in cash flows, as suggested by Utpal Bhattacharya et al.[16] Accounting information transparency (*Earnings opacity*) is the sum of earnings aggressive and earnings smooth.

3.2.4. Control variables

Table 1: Variable definition.

Variable Name	Definitions
Ln_auditfees	Logarithm of audit firm compensation disclosed in the annual report of a listed company
Share_per	Share of non-state shareholders in the top 10 shareholders
Information_test	Information disclosure evaluation
Earnings opacity	The sum of earnings aggressive and earnings smooth
Lnassets	Logarithm of total assets
Roa	Net profit/total assets
Assets_turnover	Operating income/Total assets
Growth	(Current year income - last year income)/Last year income
Liquidity	Current assets/current liabilities

The audit fees of the audit firm are mainly influenced by audit costs, audit risks, and audit profits. Among them, audit costs and audit profits are greatly influenced by the operating conditions and internal mechanisms of listed companies. Therefore, the following control variables are selected: logarithm of listed company assets (*Lnassets*), total asset turnover ratio (*Roa*), return on total assets (*Assets_turnover*), the growth of enterprises (*Growth*), and liquidity of assets (*Liquidity*). The variable definition table is shown in Table 1.

3.2.5. Model specification

The main regression model used in this study is the mediation effect model.

$$Ln\_auditfees_{i,t} = \alpha_0 + \alpha_1 Share\_per_{i,t} + \alpha_2 Lnassets_{i,t} + \alpha_3 Roa_{i,t} + \alpha_4 Assets\_turnover_{i,t} + \alpha_5 Growth_{i,t} + \alpha_6 Liquidity_{i,t} + \rho_i + \theta_t + \gamma_i + \varepsilon$$

Among them, ρ_i is the fixed effect of the enterprise; θ_t is a year fixed effect; γ_i is the fixed effect in the industry, ε is a random perturbation term, and the model standard misaggregates to the enterprise level. The mediation effect model is tested using stepwise regression method.

4. Empirical Results Analysis

4.1. Descriptive Statistics

Table 2 shows the descriptive statistical results of the variables in this study. The descriptive statistics reveal that the standard deviation of the logarithm of audit fees variable is 0.7102, indicating that there are differences in the audit fees paid by different companies, and there are significant variations in the company's return rate, growth, and liquidity. The maximum percentage of non-state-owned shareholder equity is 1, and the minimum is 0. This implies that some companies have state-owned shareholders among their top ten shareholders, while others have non-state-owned shareholders.

Table 2: Summary statistics.

Variable	observation	Mean	Std. Dev.	Min	Max
Ln_auditfees	39482	13.5359	0.7102	8.2940	18.5946
Share_per	39482	0.1349	0.2987	0.0000	1.0000
Lnassets	39482	21.9361	1.3544	10.8422	28.5200
Roa	39482	4.4413	6.2927	-12.7506	31.4319
Assets_turnover	39482	0.6240	0.4124	0.1094	2.0293
Growth	39482	0.0800	0.2457	-0.6807	0.5770
Liquidity	39482	2.2602	2.0248	0.3789	9.5359

4.2. Full Sample Regression

The results of full sample regression are reported in the table 3. According to the results of the full sample regression, without controlling for individual, industry, and year fixed effects, the coefficient of non-state-owned shareholder equity percentage is -0.17, significant at the 1% level. After controlling the fixed effects of individual firms, the estimated coefficient of the regression model is -0.0478, which is also significant at the 1% significance level. After controlling the fixed effects of individual firm, year and industry, the estimated coefficient of the regression model is -0.0995 and significant at 1% significance level. To sum up, the higher the proportion of non-state-owned shareholders in the top 10 shareholders, the lower the value of audit fees.

Table 3: Full sample regression.

	Ln_auditfees		
Share_per	-0.1707***	-0.0478***	-0.0995***
	(-18.65)	(-6.47)	(-9.99)
Lnassets	0.3931***	0.4169***	0.3786***
	-195.67	-168.92	-172.99
Roa	-0.0007***	-0.0004***	-0.0005***
	(-5.23)	(-5.34)	(-3.95)
Assets_turnover	0.0870***	0.0703***	0.0870***
	(-19.65)	(-14.83)	(-18.87)
Growth	0.0000	0.0000	0.0000
	(-0.36)	(-1.17)	(-0.03)
Liquidity	-0.0039***	-0.0041***	-0.0037***
	(-5.82)	(-7.37)	(-5.58)
Firm FE	-	Yes	Yes
Industry FE	-	-	Yes
Year FE	-	-	Yes
N	39482	39482	39482
R^2	0.553	0.459	0.572

4.3. Mediation Model

Table 4: Intermediary effect.

	information disclosure test			*Accounting information transparency*		
	Ln_auditfees	*Information_test*	*Ln_auditfees*	*Ln_auditfees*	*Earnings opacity*	*Ln_auditfees*
Share_per	-0.1044***	0.1293***	-0.1008***	-0.1044***	-0.0403*	-0.0653***
	(-10.52)	(7.80)	(-10.16)	(-10.52)	(-1.67)	(-3.11)
Information_test			-0.0253***			
			(-8.64)			
Earnings opacity						0.0319***
						(3.44)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	39482	39316	39316	39482	39321	39321
R^2	0.541	0.422	0.508	0.511	0.469	0.534

Table 4 reports the regression results of the intermediary effect. The results of stepwise testing regression method show that the total effect of non-state-owned shareholder holdings among the top ten shareholders on the logarithm of audit fees is -0.1044, significant at the 1% level. The direct effect excluding the information disclosure test is -0.1008, which, although significant, has a minimal impact. The indirect effect of non-state-owned shareholder holdings on the logarithm of audit fees is calculated to be -0.0033, indicating a small value. The mediation effect of the information disclosure test accounts for 3.13% of the total effect, but also has a small numerical value. The information disclosure test can only explain a small portion of the influence of non-state-owned shareholder holdings on the logarithm of audit fees. The direct effect excluding accounting information transparency is -0.0653, and the indirect effect of non-state-owned shareholder

holdings on the logarithm of audit fees is calculated to be -0.0013. The mediation effect of accounting information transparency accounts for 1.23% of the total effect, but also has a small numerical value. Although the increase in non-state-owned shareholder equity in listed companies affects information disclosure evaluation and accounting information transparency, its impact on the logarithm of audit fees through these two factors is limited.

5. Conclusion and Recommendations

Based on the nature and shareholding ratio of the top ten shareholders in the disclosure information of listed companies, this paper analyzes the influence of the shareholding ratio of non-state-owned shareholders on the audit fees of companies from the perspective of shareholding structure. It is found that the proportion of non-state-owned shareholders can significantly reduce the audit cost of the company, so we should actively develop the mixed ownership economy and speed up the mixed ownership reform process of state-owned enterprises.

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