A study on the impact of the threat of exit from non-controlling shareholders on audit fees

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Abstract. Taking all A-share listed companies from 2010 to 2021 as a sample, this paper examines the impact of the withdrawal threat of non-controlling shareholders on audit fees. The results demonstrate a considerable reduction in audit fees in the event of an exit threat by a non-controlling shareholder. Further analysis shows that the impact of the withdrawal threat on audit fees is particularly obvious in non-state-owned enterprises and enterprises with a high degree of marketization. Mechanism test reveals that the threat of exit can reduce the risk of stock price crash, inhibit surplus management, and thus reduce audit fees. This paper provides new ideas and empirical support for the role of non-controlling shareholders in corporate governance structure.

Keywords: The Withdrawal Threat of Non-controlling Major Shareholders, Audit Fees, Surplus Management, Stock Price Crash Risk.

1. Introduction

Within a company's governance framework, shareholder governance is not only a core corporate governance tactic but also a current topic of focus. It has been pointed out in the literature that non-controlling shareholders mainly achieve the effect of corporate governance through active supervision and intervention. In recent years, the exit threat [1], an additional avenue for non-controlling shareholders to influence corporate decisions, is gradually receiving more and more attention. Exit threats are usually used by large shareholders in corporate governance to restrain management's opportunistic behavior, increase management and supervision of the firm. Audit fees are regarded as one of the key indicators for assessing the level of corporate governance and the health of internal controls, and a sound corporate governance system helps to reduce the risk burden faced by auditors, which in turn has a significant impact on audit risk and audit fees. However, most of the existing studies on exit threats focus on the perspectives of corporate governance, corporate innovation [2], financial reporting quality [3], etc. As for audit fees, most of them focus on internal control, equity pledge, audit pricing, etc., and there is not much research linking exit threats and audit fees. Consequently, investigating the effects of the threat of exit on audit fees and elucidating this threat's function within the framework of corporate governance is necessary.

The contribution of this article may be reflected in: First, it provides more research perspectives on the impact factors of audit fees. Existing studies on audit fees are mainly limited to factors such as internal control, equity pledge, and macro environment. The absence of in-depth research on the impact of potential withdrawal threats on audit fees is evident. Second, the specific ways in which the exit threat has an impact on audit fees are revealed, this paper expands the research scope by taking surplus management and stock price crash risk into consideration, in order to in-depth analyze the impact channels of non-controlling shareholders' exit on audit fees. In addition, the paper also tests the heterogeneity of the effect of exit threat on audit fees under the property rights nature and marketization level. Third, it provides new ideas and empirical support for the effect of non-controlling shareholders in the company's internal governance, and has important reference significance for promoting the standardization and balanced development of the audit market.

2. Theoretical analysis and hypothesis formulation

Audit fee refers to a specific amount of money charged by the auditor after providing audit services to the company in order to compensate the auditor for the costs incurred in the audit process. The level of audit fees usually depends on factors such as the size of the company, audit inputs, and audit risks. When the company's governance structure is inadequate or there are opportunistic behaviors of the management, the auditor needs to invest more resources and efforts to assess the company's financial condition and risks, and therefore the audit fee will increase accordingly.

From the perspective of non-controlling shareholder governance, the threat of exit mitigates audit risk by weakening management's opportunistic tendencies. On the one hand, non-controlling major shareholder exit behavior effectively mitigates the agency conflict between shareholders and management resulting from the separation of ownership and management. When non-controlling shareholders believe that the company's management or controlling shareholders are engaged in behavior that is detrimental to their interests, they may opt for exit threats, i.e., threaten to sell their shareholdings or take other actions to defend their rights and interests. This exit threat can be used as an effective governance mechanism to exert pressure on management and controlling shareholders, prompting the company to strengthen its internal governance, improve transparency and fairness, and reduce the occurrence of agency problems. On the other hand, when non-controlling shareholders threaten to exit, the company may face the risks of falling share prices and reputational damage, Therefore, companies have the motivation to manipulate financial statements in an attempt to improve the quality of information disclosure, thereby safeguarding their reputation and interests. To some extent, the motivations for management to incur surplus management are dampened, and the transparency and quality of financial reporting of the company are improved [4], which can be a substitute for the governance effect of high-quality auditing services to a certain extent, and further reduce the audit fees [5]. When auditors perceive that the audit risk of a company is reduced, they may reduce their audit inputs and costs to the company, which in turn reduces audit fees. This is because a good corporate governance structure and decision-making process reduces the likelihood of financial statement errors and fraud and reduces the auditor's workload and risk.

Therefore, Hypothesis H1: The threat of exit by non-controlling shareholders can effectively reduce audit fees.

3. Research design

3.1. Sample selection and data sources

This paper selects all A-share listed companies from 2010 to 2021 as the initial research sample, on which (1) excludes companies in the financial industry; (2) exclude companies for which ST and *ST are subject to special treatment; (3) Eliminate those enterprises with missing values; after a series of data processing, a total of 29,060 valid observations are obtained. The research data in this paper are all from the CSMAR database. In order to eliminate the influence of extreme values, performing a Winsorize tail reduction of 1% above and below for continuous variables.

3.2. Description of variables

(1) Dependent variable

Audit Fee (Auditfee). This paper selects the annual audit fees of listed companies and measures them in natural logarithms.

(2) Independent variable

Threat of withdrawal from non-controlling shareholders (Net). Drawing on scholars such as K.C. Chen who argue that exit threat is mainly affected by the liquidity of stocks and the intensity of competition among major shareholders [6], Therefore, the cross-multiplier term of the stock liquidity SL and the intensity of competition among the major shareholders BHC as the proxy variables for the exit threat (Net).

$$NET_{it} = SL_{it} \times BHC_{it} \tag{1}$$

Where: SL is the number of shares outstanding at the turnover rate. The threat of exit rises as the liquidity of the stock increases and as competition among large shareholders becomes more intense.

$$\mathrm{BHC_{it}} = \sum_{k=1}^{N} \left(\frac{\mathrm{NCLS_{kit}}}{\mathrm{SSBH_{it}}}\right)^2 \tag{2}$$

Were. $\mathrm{BHC_{it}}$represents the intensity of competition from non-controlling shareholders of firm i at year t, and NCLSK is the proportion of shares held by non-controlling shareholders k of firm i at year t, and$\mathrm{SSBH_{it}}$ is the sum of the proportions of shares held by all major shareholders of firm i at year t. When$\mathrm{BHC_{it}}$ value is taken to increase, it means that within the firm, the intensity of competition increases [7].

(3) Control variable

Drawing on the research of Yueling Zhang and Kejing Chen et al. [6], the control variables are selected as follows: asset-liability ratio (Lev); Return on equity (Roe); Nature of Property Rights (Soe); Growth rate of operating income (Growth); whether it is a loss (Loss); Board size (Board); four major audits (Big4); Shareholding ratio of the largest shareholder (Top1). In addition, the year dummy variable (Year) and the industry dummy variable (Indu) are also added, in which the manufacturing industry adopts the second-level industry classification, and the other industries adopt the first-level classification, and the variable symbols and descriptions are shown in Table 1.

Table 1. Variable definitions

Variable	Notation	Description of variables
Dependent Variable	Auditfee	Annual audit fees for listed companies and measuring them in natural logarithms
Independent Variable	Net	Expressed using the product of the liquidity of the proxy variable stock and the intensity of competition among major shareholders, the higher the value, the greater the exit risk
Control variable	Lev	Gearing ratio, with a value equal to total liabilities/total assets
	Roe	Return on Netassets, the value of which is equal to Netprofit/shareholders' equity balance
	Soe	1 for SOEs, 0 otherwise
	Growth	(Growth in operating income / total operating income in the previous year) × 100%
	Loss	Loss or not, Netprofit for the year is less than 0 take 1, otherwise take 0
	Board	Number of board members, measured by natural logarithm
	Big4	The company has passed the four major audits as 1, otherwise it is 0
	Top1	Largest shareholder/total shares held
	Year	Year dummy variable
	Indu	Industry dummy variables

3.3. Model building

In this paper, regression models are constructed to test the hypotheses, which are constructed as follows:

$$\mathrm{Auditfee_{it}} = \alpha_0 + \alpha_1 \mathrm{Net_{it}} + \alpha_2 \mathrm{Controls_{it}} + \sum \mathrm{Year} + \sum \mathrm{Indu} + \varepsilon \tag{3}$$

Where: $\mathrm{Auditfee_{it}}$ denotes the audit fee of the ith enterprise in year t; $\mathrm{Net_{it}}$ is the exit threat of firm i in year t. Controls denotes control variables, Year denotes a year dummy variable, and Indu denotes an industry dummy variable. If the coefficient α_1 is significantly negative, indicating exit threat (Net) contributes to the reduction of audit fees.

4. Empirical analysis

4.1. Descriptive statistics

The descriptive statistics shown in Table 2 show that the mean and standard deviations of the audit fee (AuditFee) reached 13.68 and 0.665, respectively, while the maximum and minimum values were 18.14 and 11.51, respectively. The mean and standard deviations of the exit threat (Net) are 0.001 and 0.002, respectively, while its maximum and minimum values are 0.018 and 0, respectively. Clearly, exit threats are a pervasive phenomenon and exhibit significant differences between different companies.

Table 2. Descriptive statistics

Variable	N	Mean	SD	Min	p50	Max.
AuditFee	29060	13.68	0.665	11.51	13.59	18.14
Net	29060	0.001	0.002	0	0	0.018
Lev	29060	0.425	0.203	0.027	0.419	0.908
Roe	29060	0.068	0.125	-0.926	0.073	0.419
Big4	29060	0.056	0.231	0	0	1
Soe	29060	0.376	0.484	0	0	1
Growth	29060	0.182	0.414	-0.658	0.116	4.024
Loss	29060	0.099	0.299	0	0	1
Board	29060	2.127	0.196	1.609	2.197	2.708
Top1	29060	34.75	14.71	8.087	32.64	75.84

4.2. Benchmark regression analysis

Table 3 shows the results of multiple regression. The regression coefficient between AuditFee and NetFee reached -5.8692, which was confirmed at the 1% significance level. This suggests that there is a negative correlation between the audit fee (AuditFee) and the exit threat (Net), while the exit threat (Net) significantly reduces the audit fee (AuditFee). This is consistent with the expectations of this study and verifies the hypothesis.

Table 3. Baseline regression analysis

	(1)
VARIABLES	AuditFee
Net	-5.8692***
	(-3.36)
Lev	1.0408***
	(57.49)
Roe	0.4117***
	(11.63)
Big4	1.0318***
	(74.72)
Soe	-0.0340***
	(-4.53)
Growth	0.0259***
	(3.25)
Loss	0.0419***
	(2.94)
Board	0.2966***
	(17.50)
Top1	0.0013***
	(5.37)
Constant	12.0283***
	(248.46)
Observations	29,060
R-squared	0.371
Year	YES
Indu	YES

4.3. Robustness check

4.3.1. Adding control variables

In the process of controlling for other variables, considering that some variables may be ignored in this study, on the basis of the previous study, the quick ratio (Quick), two jobs (Dual), TobinQ value (TobinQ) and inventory ratio (Inv) were further controlled and re-regressed, and the results are shown in column (1) of Table 4: there is still a significant negative correlation between AuditFee and exit threat (Net), suggesting that the conclusions of this paper are robust.

4.3.2. Increasing fixed effects

In view of the significant differences in economic conditions, marketization levels, policy settings, and cultural backgrounds among provinces, these differences may have some influence in the consequence of regression analysis. The province dummy variable (Province) is added to avoid omitting important macro factors. The specific results are shown in column (2) of Table 4: the regression coefficient between the AuditFee and the Exit Threat (Net) is significantly negative in the range of 1%. In addition, in order to control for the unobservable differences at the industry level over time, the interaction fixed effect is shown in column (3) of Table 4: the exit threat (Net) coefficient is still significantly negative at the 1% level, which is in line with the previous conclusion.

4.3.3. Replace dependent variable

Drawing on the practice of Li Shihui et al. [8], this paper divides the audit fee paid by the company to the firm in the current year by the natural logarithm of the total assets to remeasure the audit fee, and the regression results of using alternative indicators to measure the audit fee are shown in column (4) of Table 4, which shows that the audit fee (Lnfee) is significantly negatively correlated with the exit threat at the 1% level, further indicating that the conclusion is still robust and reliable.

4.3.4. Replacement of samples

In view of the possible impact of extreme events such as the new crown epidemic, to confirm the reliability of the conclusions, the sample data that occurred during the 2020 new crown epidemic are excluded and the relevant robustness test is re-performed. According to the data in column (5) of Table 4, the withdrawal threat coefficient is consistent with the consequence of previous studies, further confirming the robustness of the conclusions of this study.

Table 4. Robustness test

	(1) Adding control variables	(2) Multidimensional fixed effects	(3) Cross-fixed effects	(4) Substitution of explanatory variables	(5) Replacement of samples
VARIABLES	AuditFee	AuditFee	AuditFee	Lnfee	AuditFee
Net	-4.9005***	-5.1956***	-6.6866***	-27.9678***	-7.4476***
	(-2.80)	(-3.00)	(-3.71)	(-4.15)	(-3.93)
Constant	12.4605***	12.1415***	12.4726***	7.7584***	12.0147***
	(245.25)	(246.85)	(327.41)	(41.42)	(234.37)
Observations	28,413	28,413	28,395	23,560	25,219
R-squared	0.394	0.407	0.378	0.136	0.376
Year	YES	YES	YES	YES	YES
Indu	YES	YES	YES	YES	YES
Province	NO	YES	NO	NO	NO
Year*Indu	NO	NO	YES	NO	NO

4.3.5. Variable lagged

Drawing on the research of Wu Peng et al. [9], the exit threat may have a delay effect on their audit fees, so this paper regresses the explanatory variable exit threat with a lag of one and two stages, respectively. The regression results present in columns (1)-(2) of Table 5, and the explanatory variable coefficients are still significantly negative, further proving the robustness of the benchmark regression results.

4.3.6. PSM

In this article, when exit threat greater than the median, it is defined as a processing group, and a dummy variable is generated and assigned a value of 1. When it is less than or equal to the median, it is defined as the control group and assigned a value of 0. Select the gearing ratio (Lev); return on Netassets (Roe); nature of property rights (Soe); growth rate of revenue (Growth); and concentration of shareholding (Top1) as the matching variable, the regression was carried out based on 1:1,1:3 nearest neighbor matching and kernel matching, respectively. The matching variables all passed the balance test. From the regression results table 5 (3)-(5), it can be seen that the coefficients of the exit threat are all significantly negative, further verifying the reliability of the regression.

Table 5. Lag test and PSM

	(1) Lag 1	(2) Lag 2	(3) Nearest neighbor matching 1:1	(4) Nearest neighbor matching 1:3	(5) kernel matching
VARIABLES	AuditFee	AuditFee	AuditFee	AuditFee	AuditFee
Net	-6.9628***	-8.7265***	-6.5664***	-6.7691**	-6.7801**
	(-3.54)	(-4.02)	(-2.58)	(-2.55)	(-2.56)
Constant	12.0979***	12.1639***	12.0280***	12.0463***	12.0439***
	(227.97)	(213.15)	(173.70)	(167.38)	(167.29)
Observations	23,731	20,465	14,665	13,354	13,351
R-squared	0.359	0.344	0.412	0.416	0.416
Year	YES	YES	YES	YES	YES
Industry	YES	YES	YES	YES	YES

4.3.7. Instrumental variables approach

Considering the possible endogeneity of the model in terms of reverse causation and omitted variables, this paper proposes to use instrumental variables (IV) to further solve the endogeneity issue. One-period lagged non-controlling majority shareholder exit threat (Lnet) is selected as the instrumental variable for the explanatory variables. This paper demonstrates the second stage of regression analysis using the instrumental variable method, as can be seen in column (5) of Table 6, the coefficient of exit threat (Net) is significantly negative at the 1 per cent level, further validating the consequence of the previous test.

5. Further study

5.1. Heterogeneity analysis

5.1.1. Nature of property rights

Based on the property rights characteristics of enterprises, the samples are divided into two categories: state-owned and non-state-owned, of which the assignment of state-owned enterprises is 1, and the assignment of non-state-owned enterprises is 0. The results of grouped regression are demonstrated in columns (1)-(2) in Table 6. According to the consequence, there is no significant correlation between audit fee (AuditFee) and exit threat (Net) in SOEs, while in non-SOEs, audit fee (AuditFee) and exit threat (Net) are negative at the 1% level. This may be due to the fact that SOEs tend to be subject to more stringent regulatory and compliance requirements, and considering a variety of factors such as political costs and reputation, the management of the firms have relatively weaker incentives for surplus management and hollowing out, and thus the risk faced by auditors is relatively low. In addition, major shareholders of state-owned enterprises often use administrative means to intervene in state-owned listed companies, which to some extent weakens the possibility of non-controlling shareholders to exit. Thus, this study expects the negative correlation between audit fees (AuditFee) and exit threat (Net) to be more significant in non-SOEs [10].

5.1.2. Level of marketization

Based on the median of marketization level, the sample was divided into two groups: higher and lower marketization level. Columns (3)-(4) in Table 6 present the grouping regression results. Judging by the results, audit fee (AuditFee) and exit threat (Net) are significantly negative at 1% level in firms with high marketization level, while audit fee (AuditFee) and exit threat (Net) are not significant in firms with low marketization level. The reason for this is that in regions with higher levels of marketization, the economic and legal environments are relatively more sound and complete, and the flow of information is also stronger, Capital market can respond quickly to the situation when non-controlling major shareholders withdraw from governance, which improves the reliability of the exit threat [11], and makes the effect of exit threat governance more significant.

Table 6. Heterogeneity analysis

	(1) State-owned enterprises	(2) Non-state enterprises	(3) High level of marketisation	(4) Low level of marketisation	(5) Instrumental variables approach
VARIABLES	AuditFee	AuditFee	AuditFee	AuditFee	AuditFee
net (computing)	-2.2217	-6.5375***	-30.7269***	-1.1242	-13.8613***
	(-0.40)	(-2.73)	(-2.67)	(-0.48)	(3.702)
Constant	11.4581***	12.3198***	14.8727***	12.0276***	12.6785***
	(104.19)	(184.02)	(37.36)	(214.56)	(0.051)
Observations	8,839	13,364	872	22,059	23,894
R-squared	0.312	0.315	0.396	0.411	0.356
Year	YES	YES	YES	YES	YES
Industry	YES	YES	YES	YES	YES

5.2. Mechanism analysis

In order to better understand how the exit threat affects audit fees, reference is made to the studies of Shengnian Wang [10] and Lewis [12]: the exit threat can reduce the risk of corporate stock price collapse and corporate business risk by playing a governance role and inhibiting the opportunistic behaviour of the management, which makes the auditor face a reduced audit risk, and thus reduces the audit fees. This article measures the risk of corporate stock price collapse with the negative earnings skewness coefficient (Ncskew) and the company's stock return volatility ratio (Duvol), and Columns (1)-(2)in Table 7 present the results, the threat of exit is significantly negatively correlated with the negative earnings skewness coefficient (Ncskew) and the return volatility ratio (Duvol) at the 1 per cent level, indicating that the withdrawal threat can decrease the risk of share price collapse and thus decrease audit fees.

In addition, the threat of exit has an effective role in supervising and governing the self-interest behavior of the management and controlling shareholders, strengthening the management and supervision of the enterprise, thereby reducing the incentives for the management to incur surplus management, and makes it difficult for auditors to reduce the difficulty of auditing and the audit risk, and they do not need to spend extra time and effort to improve the auditing process, thus effectively reduce the audit fee. This paper will apply the nonlinear accrual model to calculate the surplus management variables into the regression analysis, the results are shown in Table 7, column (3) of the surplus management (Residual) and the exit threat (Net) regression coefficient at the 1 per cent level level is significantly negative, indicating that the threat of exit can inhibit management's incentives to manage surplus, and thus reduce the audit fee.

Table 7. Mechanism test

	(1)	(2)	(3)
VARIABLES	Ncskew	Duvol	Residual
net (computing)	-24.3492***	-15.4677***	-0.6154***
	(-9.92)	(-9.54)	(-2.81)
Constant	-0.1296*	-0.0689	-0.0009
	(-1.93)	(-1.55)	(-0.17)
Observations	28,566	28,566	22,874
R-squared	0.032	0.035	0.309
Year	YES	YES	YES
Industry	YES	YES	YES

6. Conclusion

In recent years, exit threat has become a cutting-edge topic in the field of financial accounting. Taking all A-share listed companies from 2010 to 2021 as a sample, this paper examines the impact of the withdrawal threat of non-controlling shareholders on audit fees. The results demonstrate a considerable reduction in audit fees in the event of an exit threat by a non-controlling shareholder. Further analysis shows that the impact of the withdrawal threat on audit fees is particularly obvious in non-state-owned enterprises and enterprises with a high degree of marketization. Mechanism test reveals that the withdrawal threat can reduce the risk of stock price crash, inhibit surplus management, and thus reduce audit fees. This paper provides new ideas and empirical support for the role of non-controlling shareholders in corporate governance structure.

The results of this research are instructive in deepening the understanding of the relationship between corporate governance and the auditing field. First, relevant government departments need to further strengthen the status of accounting firms as independent auditing entities and ensure that they play a third-party supervisory role in the capital market so as to regulate the auditing market and promote its healthy growth and to provide auditors with a healthy market environment and a solid platform for their professional practice. Second, non-controlling shareholders are encouraged to participate in the company's governance process, and build a more effective internal governance mechanism to regulate management's self-interested behavior so as to reduce collusion among insiders. In addition, Enterprises should give full play to the benefits of the synergistic effect between non-controlling shareholders and external auditors to ensure that the enterprise can continue to promote the sustainable development of enterprises.

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