

Non-Controlling Major Shareholders' Exit Threat and Corporate Financing Constraints

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Abstract: *As an essential stakeholder of enterprises, the governance effect of non-controlling major shareholders' exit threat has gradually attracted the attention of academia. Based on the data of China's A-share listed companies from 2007 to 2021, this paper empirically tests the governance effect of non-controlling major shareholders on corporate financing constraints. The research results of this paper enrich the research on corporate financing constraints and reveal the effectiveness of non-controlling large shareholders' exit threat on corporate financing constraints.*

Keywords: *Non-controlling Major Shareholders, Exit Threat, Corporate Financing Constraints*

1. Introduction

Financing is a key factor affecting the stable operation and healthy development of enterprises. However, financing constraints have become essential to technological innovation and national economic development. This means studying the influencing factors of corporate financing constraints has academic needs and practical guiding significance. Most of the research on the influencing factors of corporate financing constraints in the existing literature is based on internal factors such as corporate strategy (Hu, 2021)^[1], and external factors such as political connections (Xie et al., 2014)^[2]. Few pieces of literature start from the perspective of non-controlling major shareholders. However, the non-controlling major shareholders significantly influence the enterprise's financing activities. Therefore, it is of theoretical significance and practical need to study the role of non-controlling shareholders' participation on financial constraints.

Traditional theoretical literature believes there are two ways for major external shareholders to participate in corporate governance. The first is 'voting by hand'. Major shareholders take the initiative to participate in corporate governance in the shareholders' meeting and the board of directors by virtue of their shares (Zhu et al., 2015)^[3]. The second is 'voting with feet', that is, major shareholders reduce their shares and directly exit the company (Gao et al., 2016)^[4]. However, when non-controlling shareholders cannot intervene or the cost of intervention is too high, and direct exit is difficult or impossible to achieve, the exit threat becomes another means for non-controlling shareholders to safeguard their interests (Admati et al., 2009)^[5]. Some scholars have proved the role of the exit threat of non-controlling major shareholders in corporate governance, such as inhibiting the self-interested behavior of controlling shareholders (Jiang et al., 2015)^[6], constraining enterprises' earnings management behaviors (Chen, 2018)^[7], effectively reducing agency costs (Chen, 2019)^[8] and improving the quality of financial reports (Yu et al., 2021)^[9]. So this paper studies the relationship between the exit threat of non-controlling major shareholders and financial constraints.

The contributions of this paper are mainly reflected in the following aspects. Firstly, this paper studies the impact of non-controlling shareholders' exit threat on firms' financial constraints, expanding the research on the governance effect of non-controlling major shareholders' exit threat. Secondly, it enriches the research on the influencing factors of corporate financing constraints.

2. Theoretical analysis and research hypothesis

Enterprise financing is essential for enterprises to expand production scale and achieve sustainable development. Previous studies have shown that the exit threat of non-controlling major shareholders will have a positive impact on enterprises, including improving innovation efficiency (Wang et al., 2021)^[10] and reducing corporate agency costs (Chen, 2019)^[8].

On the one hand, the exit threat of non-controlling major shareholders can alleviate two types of

agency costs (Chen et al., 2022)^[11] and reduce the financing constraints of enterprises. Based on the hypothesis of rational economic man, the controlling shareholders and the management have the possibility to inhibit corporate performance through opportunistic behaviors (Wang et al., 2021)^[10]. When the contradiction between the subjective self-interest behavior of the controlling shareholders and the enterprise's long-term development is intensified, the non-controlling major shareholders take the governance means of exit threat. However, the exit of non-controlling major shareholders is the release of damaging information, which can easily cause negative interpretations from people outside the company. Thus, the 'herd effect' is generated to guide the exit behavior of internal minority shareholders (Yu et al., 2021)^[9]. The exit behavior leads to a sharp decline in the stock price, which is not conducive to the evaluation of the solvency of the enterprise by financial institutions. Thus, it increases the financing risk of enterprise equity pledges and hinders the adequate financing of enterprises. In order to prevent the above situation, controlling shareholders and management will reduce self-interested behaviors (Jiang et al., 2015)^[6]. Then, the enterprises will enhance investors' investment confidence and ease corporate financing constraints.

On the other hand, the exit threat of non-controlling major shareholders can improve corporate information transparency by strengthening the supervision of controlling shareholders and management (Wang et al., 2021)^[10]. Thus, the problem of information asymmetry between financing parties can be alleviated, and adequate financing can be promoted. Studies have shown that the exit threat of non-controlling major shareholders can effectively improve the quality of financial report disclosure (Dou et al., 2018)^[12], and improve the transparency of corporate information. This is conducive to financial institutions to strengthen the understanding of enterprise profitability. It is also convenient for creditors to supervise enterprises' financial status. These measures can strengthen relevant enterprise stakeholders' financing confidence and reduce financing constraints.

Based on the above analysis, this paper puts forward the following assumptions.

H1: The exit threat of non-controlling major shareholders can effectively reduce the financing constraints of enterprises.

3. Research design

3.1 Sample data

Since China implemented the new Accounting Standards for Business Enterprises on January 1, 2007, the initial research samples are all A-share listed companies from 2007 to 2021. In order to eliminate the influence of missing values and outliers, the samples are processed as follows. Firstly, ST-listed companies are excluded. Secondly, the listed companies in the financial industry are excluded. Thirdly, the insolvent listed companies are excluded by calculating the asset-liability ratio. Fourthly, samples with missing or abnormal relevant data are eliminated. In order to eliminate the influence of extreme values, all continuous variables are winsorized at the level of 1%. The final sample is 22,517 annual observations. The data required for this study come from the CSMAR database and manual calculation. The data processing software is Excel and Stata17.0.

3.2 Variable definition

3.2.1 Explained variable

The quantitative measurement of financial constraints comes from Kaplan and Zingales (1997)^[13]. In the study, the samples are the 49 enterprises considered to be the most severe financing constraints. Combined with the quantitative indicators and non-quantitative text information in enterprises' financial reports, the different degrees of financing constraints of enterprises are qualitatively divided. Thus, the degree of financing constraints is described. Nevertheless, this quantitative measure is a relative measure of a sample, not an absolute measure. Given this, Lamont et al.(2001)^[14] used the method of Kaplan and Zingales (1997)^[13] to construct the *KZ* index based on a broader sample of enterprises. *KZ* index is synthesized by five financial indicators: cash holdings, operating cash flow, dividend payment level, debt level, and growth. The larger the *KZ* index is, the higher the financing constraints the company faces. Therefore, this paper refers to Hu (2021)^[1] to select the *KZ* index to measure financial constraints.

3.2.2 Explanatory variable

The threat of non-controlling major shareholders (*NET*): This paper refers to the method of Dou et al. (2018)^[12] and Chen (2019)^[8]. The cross-multiplication term of stock liquidity (*SL*) and the competition degree of major shareholders (*BHC*) are proxy variables. The stronger the stock liquidity is, the more intense the competition among major shareholders is, and the greater the exit threat of non-controlling major shareholders is.

Stock liquidity (*SL*): Tradable shares' average daily stock turnover rate is used as the proxy variable. When the stock liquidity is high, it is more convenient for non-controlling majority shareholders to exit, thus increasing their exit threat.

Degree of major shareholder competition (*BHC*): The specific measurement model follows.

$$BHC_{i,t} = \sum_{k=1}^n \left(\frac{NCLS_{k,i,t}}{SSBH_{i,t}} \right)$$

$BHC_{i,t}$ is the degree of competition among the non-controlling majority shareholders in year t of the i firm. $NCLS_{k,i,t}$ is the number of shares held by the non-controlling large shareholder in year t of the i firm, and k represents the number of non-controlling major shareholders. $SSBH_{i,t}$ is the sum of the shares held by all major shareholders in year t of the i firm. The number of shares held here refers to the outstanding shares. Secondly, according to the Company Law, shareholders holding more than 5% of listed companies are defined as major shareholders. Furthermore, in this paper, people acting in concert are regarded as the same shareholding party.

The measurement model of the exit threat of non-controlling large shareholders is as follows.

$$NET_{i,t} = SL_{i,t} \times BHC_{i,t}$$

3.2.3 Control variables

Referring to the research results of Kang et al.(2022)^[15], Yu et al. (2021)^[9], Lu et al.(2013)^[16], and Lian et al. (2010)^[17], the following variables are selected as control variables: asset-liability ratio (*Lev*), enterprise size (*Lsize*), enterprise age (*Lnage*), profitability (*Roa*), growth (*Growth*), nature of ownership (*Nsoe*), cash flow (*Fluidity*), ownership concentration (*First*).

3.3 Model setting

$$KZ_{i,t} = \alpha_0 + \alpha_1 NET_{i,t} + \Sigma Control_{k,i,t} + \Sigma Year + \Sigma Industry + \varepsilon$$

$KZ_{i,t}$ represents the degree of financing constraints in year t of the i firm. $NET_{i,t}$ represents the exit threat of non-controlling major shareholders in year t of the i firm. Moreover, year and industry effects are controlled. Suppose the regression coefficient of non-controlling major shareholders is significantly negative. In that case, the exit threat of non-controlling major shareholders can effectively reduce the degree of financial constraints on enterprises.

4. Empirical results analysis

4.1 Descriptive statistics

The descriptive statistical results of relevant variables are shown in table 1. The average value of the *KZ* index of all A-share listed companies from 2007 to 2021 is 1.36. The minimum value is -5.706, and the maximum value is 6.747. This shows that the degree of financial constraints varies greatly among listed companies, which further highlights the significance of studying the impact of the exit threat of non-controlling major shareholders on the degree of corporate financial constraints. The minimum value of exit threat (*NET*) of non-controlling major shareholders is 0, and the maximum value is 0.01. This shows that there is the ownership structure characteristic of 'one dominant shareholder' in China, and there are significant differences in the exit threat of non-controlling major shareholders among different companies. The statistical results of the remaining variables are consistent with the existing literature.

Table 1: Descriptive statistics of relevant observation variables

Variable	N	Mean	SD	Min	p50	Max
KZ	22517	1.360	2.332	-5.706	1.574	6.747
NET	22517	0.001	0.002	0.000	0.000	0.010
Lev	22517	0.449	0.200	0.056	0.451	0.884
Lnsiz	22517	8.362	1.259	6.050	8.198	12.190
Lnage	22517	2.823	0.352	1.792	2.890	3.497
Roa	22517	0.051	0.063	-0.226	0.050	0.231
Growth	22517	0.191	0.420	-0.542	0.122	2.664
Nsoe	22517	0.843	0.364	0	1	1
Fluidity	22517	0.046	0.070	-0.160	0.045	0.246
First	22517	33.960	14.520	8.990	31.940	72.630

4.2 Basic regression analysis

Table 2 reports the relationship between the exit threat of non-controlling major shareholders (*NET*) and corporate financing constraints (*KZ*). Among them, column (1) only controls the year and industry effects, and the regression coefficient of *NET* is -4.261. Column (2) further controls some variables that impact corporate financing constraints, and the regression coefficient of *NET* is -37.975, significant at the level of 1%. Column (3) controls the year and industry effects based on column (2), and the regression coefficient of *NET* is -23.984, which is significant at the level of 1%. Overall, there is a significant negative correlation between the exit threat of non-controlling major shareholders (*NET*) and corporate financing constraints (*KZ*). Thus, hypothesis H1 above is verified.

From the perspective of control variables, the coefficient of *Lev* is significantly positive, which is consistent with the existing research conclusions (Hu, 2021)^[1]. This indicates that enterprises with high asset-liability ratios face stronger financing constraints. The correlation coefficient of *Nsoe* is significantly positive, indicating that non-state-owned enterprises face stronger financing constraints than state-owned enterprises, which is consistent with the existing research conclusions (Deng et al, 2014)^[18]. The coefficients of *Lnsiz*, *Roa*, *Growth*, *Fluidity*, and *First* are significantly negative, indicating that the larger the enterprise size (Si et al., 2021)^[19], the stronger the profitability, the higher the sales growth rate, the higher the cash flow, and the higher the shareholding ratio of the largest shareholder, the stronger the enterprise's ability to deal with risks and operating profits. Thus, the firm faces a weak degree of financing constraints.

Table 2: Exit threat of non-controlling large shareholders and corporate financing constraints

Variable	(1) KZ	(2) KZ	(3) KZ
<i>NET</i>	-4.261 (-0.575)	-37.975*** (-7.308)	-23.984*** (-4.909)
<i>Lev</i>		7.811*** (112.736)	7.387*** (111.219)
<i>Lnsiz</i>		-0.503*** (-39.175)	-0.422*** (-33.376)
<i>Lnage</i>		-0.098** (-2.529)	0.808*** (15.761)
<i>Roa</i>		-2.839*** (-16.687)	-3.285*** (-20.686)
<i>Growth</i>		-0.279*** (-13.744)	-0.243*** (-12.819)
<i>Nsoe</i>		-0.209*** (-7.612)	0.097*** (3.561)
<i>Fluidity</i>		-12.840*** (-92.932)	-12.986*** (-100.181)
<i>First</i>		-0.012*** (-11.862)	-0.012*** (-12.948)
Constant	2.126*** (10.247)	3.612*** (31.957)	1.531*** (8.269)
Observations	22,517	22,517	22,517
Year FE	YES	NO	YES
Industry FE	YES	NO	YES

Note: ***, ** and * are significant at the level of 1%, 5% and 10% respectively, the same below.

4.3 Robustness test

4.3.1 Controlling annual and individual effects

In order to make the research results more robust, the author chooses to control the annual and individual effects for regression. As shown in table 3, the regression coefficient is -11.581, which is significant at the level of 1%. That means the research conclusion of this paper is still valid.

4.3.2 Replacement of explained variables

This paper refers to Deng et al. (2014)^[16] and Chava et al.(2009)^[20] to re-measure financial constraints using the *WW* index. It can be found from table 3 that there is a negative relationship between the exit threat of non-controlling major shareholders and financing constraints at the significance level of 10%. The *WW* index used the quarterly data of listed companies from 1975 to 2001, while this paper uses the A-share listed companies from 2007 to 2021. The number of samples is smaller, so the significance level is reduced.

4.3.3 Increasing control variables

Considering that the personal characteristics of corporate executives also affect whether enterprises can conduct adequate financing, two variables are added to the control variables: the proportion of male managers (*Male ratio*) and the average age of managers (*Average age*). As shown in table 3, the regression coefficient is -23.714, which is significant at the level of 1%.

4.3.4 The adjustment of the sample

The US financial crisis in 2008 seriously harmed the global economy, manifested as severe turbulence in the stock. Therefore, the exit threat of non-controlling major shareholders is no longer the most critical factor affecting financing constraints. This paper chooses to eliminate the samples in 2008 and use the remaining 21,582 samples for regression analysis. Table 3 shows a significance level of 1%.

4.3.5 Propensity score matching (PSM)

The variables reflecting the essential characteristics of a firm, such as *Lev* and *Lnage* will impact financing constraints, thus interfering with the results. This paper chooses the propensity score matching method to solve the problem of selection bias. Indicators such as *Lev*, *Lnsize*, *Lnage*, *Roa*, *Growth*, *Nsoe*, *Fluidity* and *First* are selected as matching variables. According to the 1:1 nearest neighbor matching principle, 11,426 samples were successfully matched. The *pstest* is passed to conduct the balance test. The original model is analyzed again, and the results are shown in table 3. There is still a significant negative relationship between the explained variable and explanatory variable.

Table 3: Robustness test results

Type	Controlling individual effects	Replacement of explained variables	Increasing control variables	The adjustment of the sample	Propensity score matching
Variable	KZ	WW	KZ	KZ	KZ
<i>NET</i>	-11.581** (-2.194)	-0.208* (-1.754)	-23.714*** (-4.855)	-23.909*** (-4.844)	-31.385*** (-3.991)
<i>Male ratio</i>			0.001 (1.340)		
<i>Average age</i>			1.010*** (5.280)		
<i>Control Variables</i>	YES	YES	YES	YES	YES
<i>Year FE</i>	YES	YES	YES	YES	YES
<i>Firm FE</i>	YES	YES	YES	YES	YES
<i>Observations</i>	22,517	22,517	22,517	21,582	11,426

4.4 Heterogeneity analysis

The different ownership nature of enterprises may affect the governance effect of non-controlling major shareholders. On the one hand, state-owned holding enterprises bear the dual attributes of government and society. They should not only consider the maximization of enterprises' interests but

also consider the economic progress of society (Wang et al., 2021)^[10]. On the other hand, the interests of state-owned enterprises' managers are driven mainly by political promotion incentives. The relationship between their interests and the stock price of enterprises is relatively weak (Wang et al., 2022)^[21]. As a result, the exit threat of non-controlling major shareholders of state-owned holding enterprises has a weak impact on financial constraints.

The regression results after grouping are shown in table 4. In non-state-owned enterprises, the regression coefficient is -26.543, which is significant at the level of 1%. However, in state-owned enterprises, the impact is no longer significant.

Table 4: Based on the analysis of the nature of enterprise property rights

Variable	state-owned enterprise	non-state-owned enterprise
NET	-14.395 (-1.249)	-26.543*** (-4.891)
Control Variables	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Observations	3,544	18,973

5. Research conclusions and policy recommendations

This paper empirically analyzes the impact of the exit threat of non-controlling shareholders on corporate financial constraints. The conclusions are as follows:

(1) The exit threat of non-controlling major shareholders is significantly negatively correlated with corporate financial constraints. This shows that the stronger the exit threat is, the weaker the financing constraints enterprises face. The conclusion is still valid after a series of robustness tests.

(2) The exit threat of non-controlling major shareholders in non-state-owned enterprises has a more significant alleviating effect on financing constraints than that in state-owned enterprises.

The conclusions of this paper have specific practical significance:

(1) For enterprises, they should build a reasonable ownership structure to avoid the situation of 'one dominant share' and optimize their internal governance structure.

(2) For the regulatory authorities, in order to decrease the exit difficulty and increase the credibility of the exit threat, the macro governance environment should be strengthened, including strengthening the reform of non-tradable shares and promoting stock liquidity.

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