

## Research Article

### The Impact of Ownership Structure on the Level of Financial Risk of SME in China

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**Abstract:** The level of financial risk has great significance to the sound operation of enterprises and the healthy development of economics. Based on the data from 2009 to 2011 of 205 small and medium manufacturing enterprises listed before 2009, this study studies the impact of ownership structure on the level of financial risk, especially the relationship between financial risk to firms on small board and one-share dominance as well as the family characteristics of family business. The empirical result shows that: the proportion of tradable shares and the degree of equity balance are negatively correlated with the financial risk level; while the ownership concentration is positively correlated with the financial risk level; and the proportion of state-owned shares or legal person shares and CEO share-holding rate have no significant effect on the financial risk level of SME (small and medium enterprises).

**Keywords:** Financial risk, ownership structure, SME

## INTRODUCTION

All along, the financial risk is the focus of attention of many scholars. The level of financial risk is of important significance for the sound operation of enterprises, the healthy and smooth development of the market order. Compared with companies listed on the Main Board, SME have some advantages such as high growth and strong profitability. However, the majority of SME are evolved from family business, with a high degree of ownership concentration, ownership structure presenting a certain affinity and the unity of ownership and management. Whether this relative concentration of equity brings about funds unreasonable occupied due to the one-share dominance or enhances the internal control to reduce financial risks? It is worthy of in-depth study and discussion that how to reduce the financial risk by optimizing the shareholding structure, which can make SME develop healthily and steadily.

## LITERATURE REVIEW

Theoretical studies about risks caused by ownership structure can be traced back to Berle's (1933) "principal-agent" theory. The theory suggests that because of the divergence of interests between shareholders and professional managers, professional managers will infringe on the interests of minority shareholders and relax on the company's regulatory in order to pursue maximizing their own interests, which

may bring crisis. But Warfield *et al.* (1995) put forward a different point of view: The level of corporate financial risk can be influenced by the number of equity held by managers or institutional investors. When those people hold more options, they will pour more power and energy to prevent enterprises into financial distress, which is more beneficial to reduce the agency cost. As the Asian Financial Crisis broke out in the end of the twentieth century, a large number of companies fell into serious financial crisis and a large number of scholars' research directions were switched to the impact of the equity structure controlled by the largest shareholder on company operating activities. Johnson *et al.* (2000) first proposed the concept of "fleeing", scilicet the behavior that controlling shareholders transfer assets and profits out of the company, which cover up the real financial data and seriously affect the healthy development of enterprises. Through an empirical analysis of 2980 companies in nine Asian countries, Claessens *et al.* (2000) pointed out that more than 60% of the companies had the absolute controlling shareholder. In a company with high degree of concentration of ownership, the controlling shareholder must be given sufficient incentive and only in this way it will proceed from the perspective of the overall company to help the company avoid a financial crisis, rather than do the "fleeing" behavior. However, Friedman *et al.* (2003) has proposed "propping" theory when a company was in financial trouble, the controlling shareholder would not transfer the assets of the company. On the contrary,

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it might use its personal resources to support the listed company out of the financial trouble, reverse the financial condition and reduce financial risks.

The research of the relationship between shareholding structure and financial risk in China started later than Western countries. Now the relevant laws and regulations do not sound as well. And considering the difference of the institution, the relationship between the corporate governance, ownership structure and the financial condition in China is very different in comparison with foreign companies. Chen and Xu (2001) took a total of 1447 listed companies (except the financial industry) in the Shenzhen Stock Exchange from 1996 to 1999 as examples and made regression analysis. They found that there were a certain relationship between the financial risk and equity structure, scilicet the controlling degree of state shares. And in Xu and Chen (2003), they studied the impact of the first major shareholder's equity nature and alteration on the effectiveness of corporate governance and performance, taking the data from 1997 to 2000 of 508 companies listed before 1997. The results found that if the largest shareholder of a company is non-national, it would get more supervision and encouragement than that is a national shareholder and it would pay more attention to corporate performance and potential risks. However, if the proportion of the major shareholding continued to rise, the reduction of the influence of external oversight and more venture behavior might lead to the corporate risk again. From the view point of the fleecing theory, Li *et al.* (2004) selected 254 A-share listed companies and got the data of their related party transactions in 2000-2003. Next, he used the regression analysis which combined single factor with multi-factor to research the relationship between ownership structure and controlling shareholder's "fleecing" behavior. The result showed that there was a non-linear relationship (increasing first and then decreasing) between the funds occupied by the controlling shareholder and its stake, but as for the other shareholders, there was a strict negative correlation. In addition, the amount of embezzled funds in the company that controlled by the state-owned enterprise was larger than that controlled by the non-state-owned enterprise and the former was more likely to generate financial crisis. Chen and Wang (2005) studied the relationship between the related party transactions and shareholding structure by analyzing the status of related party transactions of listed companies in 1998-2002. The result showed that: the scale of related party transactions is significantly positively related to the equity concentration. Besides, the stronger the checks and balances among the major shareholders is, the lower the possibility of related party transactions occurred and the amount is also smaller. Cao and Xia (2006) studied the samples of 127 industrial enterprises and led the variable of shareholding structure into the financial crisis early-warning model to analyze the reason why listed companies ran into financial trouble. They found that

the stake of the largest shareholder as well as the management stake had a certain impact on the likelihood of the listed company's financial risk.

According to the research of scholars at home and abroad, no matter it uses theoretical analysis or empirical research, the fact that there is a certain relationship between the ownership structure and corporate financial risk is affirmed, but the specific correlation doesn't have an accurate conclusion yet.

Reasons for the differences of conclusions as follows:

- The capital markets, institutional norms and industry backgrounds of those samples are very different; the differences of sample selection and age will cause a great impact on study results, too.
- Research methods and indicators are not unified. For example, as to the evaluation of the enterprise's financial risk extent, there are the financial leverage coefficient method, Z-value evaluation method and many other evaluation methods. The differences of indicators selected by different scholars and the definition that whether a company is facing financial risk can also lead to discrepancy in conclusions.

Since the conditions of our country have a larger difference with that of other countries and the ownership structure and the factors that affect the ownership structure are quite different as well, the study of China's listed companies must make adjustments on the national conditions. Now, the researches on this issue carried by many domestic scholars are based on the companies listed on the main board in Shanghai and Shenzhen and the research of SME is relatively lacking. But as a new form of economic development, SME has become an economic force that cannot be ignored in the economic development of China. Its shareholding structure has some differences with the main-board companies and also has a higher risk. To research the impact of the shareholding structure of SME on the financial risk, identify the relevant equity factors affecting the degree of financial risk and search the problems reflected behind the research results, has very practical significance for SME to improve their own structure, reduce the financial risk and promote the healthy development. Besides, it also has a good reference for supervision departments of the government.

## METHODOLOGY

**Data sources:** The study chooses the SME of manufacture listed before December 31, 2008 in Shenzhen as the research objects and analyses the data between 2009 and 2011. In order to assure the effectiveness of data, the study selects the data according to the following standards: Reject the

incomplete samples and keep the samples if the missing data could be found in the annual report. The study retains the ST companies, because these samples may increase the financial risks result from the unreasonable ownership structure and then are special treated, which is helpful to the research of study.

Though the selections, we choose 205 sample companies at last, which include 615 observations in total. The financial data in this study all come from CSMAR database and the Shenzhen stock exchange site. And we use SPSS 19.0 to make the empirical analysis.

**Formulation of hypotheses:** In the securities market of China, different classifications of ownership could result in the great differences of stockholder's profit targets. Liquid shareholders pursue the increase of stock price, because it represents the rise of corporate value, at the same time which also means the rise of their own wealth. However, the illiquid shareholders have two ways to realize the income: One is to achieve the dividends earnings, another is to tunneling the corporations by "tunneling" behaviors (Liu and He, 2004), bring the profits to themselves, such as external security, related transaction, refinancing and so on. Generally, the profits brought by the latter are far more than those by the former, but which seriously prejudice to the interests of other stockholders, have a bad effect on the corporations' sustainable development and increase the financial risks. Therefore, decreasing the proportion of illiquid shares is helpful to decrease the infringement brought by stockholders' "tunneling" behaviors. Consequently, we put forward hypothesis as following:

**H1:** There is a negative correlation between the proportion of liquid shares and the financial risk.

The state-owned enterprises' objectives of operation include profit pursuing and social responsibility. It means that state-owned enterprises may undertake the obligations by sacrificing self-interests when there are conflicts between the social responsibility and corporate development. At the same time it is easy to control state-owned stock by insiders. The operation of state-owned assets is principal-agent relationship essentially and the longer principal-agent link is, the higher the agency cost is, the weaker monitoring ability of principals is. Especially for SME with small scale, which is easier to be ignored and is more likely to develop the phenomenon of internal control, then the agency problem is more serious. Therefore, we put forward the hypothesis as following:

**H2:** There is a positive correlation between the proportion of state-owned stock and the financial risk.

The corporations' foreign investment objectives are mostly related to the enterprises in their own industry chains. For example, the purpose of both raw material suppliers and sales channels is to stabilize or expand the operating performance and range. Therefore, corporate shareholders pay more attention to the stability and growth of corporations. The proportion of SME corporate shares in China is more than 15%, corporate shareholders have the ability to supervise management layer and solve the problems related to corporate governance, decrease the degree of financial risks. Therefore, we put forward the hypothesis as following:

**H3:** There is a negative correlation between the proportion of legal person shares and the financial risk.

Carrying out equity incentives for senior executives to develop a relationship with the interests of shareholders and corporate value, which not only could decrease the contradiction with shareholders' profit targets and agency cost, which also could make senior executives pay more attention to corporations' ability of sustainable development and the risks corporations may face to and take measures to help corporations decrease and avoid the risks. Especially for SME, the senior executives are most likely the family members of majority shareholder, who have the same objectives with shareholders, which could have a better effect on avoiding financial risks. Therefore, we put forward the hypothesis as following:

**H4:** There is a negative correlation between senior executives' share holding rate and the financial risk.

The ownership structure with concentration degree in a certain level or absolutely control can effectively decrease the whole agency cost, which result from the inefficient investment behaviors and decrease the possibility of financial risks. Ownership concentration can also help shareholders supervise the managers' actions in a certain degree and improve the efficiency of corporate governance. Among the SME in China, the phenomenon of majority shareholding and family control is universal, which make the controlling shareholder has a significant effect on all kinds of activities of listed company. Big shareholders pursue their own profits by sacrificing the small shareholders' interests, who tunneling the listed corporations by paying large amount of cash dividends or connected transactions. Besides that, since one or several shareholders control the ownership, the effects of internal supervision are pretty small, which increases the financial risks largely. Therefore, we put forward the hypothesis as following:

**H5:** There is a positive correlation between the degree of ownership concentration and the financial risk.

The equity restriction ratio is the index to judge other big shareholders' ability to control the influence of controlling shareholders. The higher equity restriction ratio is, the harder do controlling shareholders exist in listed corporations. It needs multiple shareholders to decide the operational decisions of enterprise, which make the controlling shareholder can't control operation of enterprise in single side. Since the restriction decreases the possibility that the controlling shareholder possess other shareholders' profits in a certain degree, it not only protects other shareholders' profits, but also has a supervised function, which is helpful to control and avoid the financial risks. Therefore, we put forward the hypothesis as following:

**H6:** There is a negative correlation between the equity restriction ratio and the financial risk.

**Methods:** Generally there are several methods to measure the financial risks: financial leverage coefficient, variance analysis, Beta analysis, value-at-risk model, Z-score model and so on. The financial leverage coefficient and variance analysis are easier to get data than others, but these two indexes are too narrow, which can not measure the financial risks corporations face to widely. The Beta analysis is applied widely in western countries, however, since our securities market mechanism is imperfect and investors' speculative factors are competitive, Beta and stock price can not measure corporations' financial risks fairly. The value-at-risk model is to measure the highest expectations of assets loss at a certain confidence level and time limit. But the method can not point out the real degree of assets loss when it exceeds expectations, which also can not measure financial situation in a better way.

Z-score model method is created by Altman (1968), who weighted 5 effective financial indexes selected after selecting 22 financial ratios by establishing multiple linear functions in the process of researching the bankruptcy companies and non companies in US, which could value corporations' financial risks. The smaller model index means the more risks corporations face to. Our scholars have identified that the index has a high accuracy to anticipate the listed corporations' financial situations in China. Therefore, the study would use Z-score as corporate financial risks' substitution variable, whose formula is as follows:

$$Z = 1.2 \times \text{operating funds} / \text{total assets} + 1.4 \times \text{retained earnings} / \text{total assets} + 3.3 \times \text{earnings before interest and tax} / \text{total assets} + 0.6 \times \text{total value of stock} / \text{total liabilities} + 0.999 \times \text{sales income} / \text{total assets}$$

When Z is less than 1.81, it means that the corporations have greater possibilities to bankrupt; When Z is between 1.81 and 2.99, it means that financial situation of corporations are in the unstable "gray zone" with high fluctuation; When Z is greater

than 2.99, corporations show a healthy financial situation.

According to the theoretical analysis, we establish explanatory variables as follows:

**Liquid Issues Rate (LIR):** The proportion that the amounts of liquid shares in listed company account for shareholding equity:

**Governmental Shares Rate (GSR):** The proportion that the amounts of state-owned shares account for shareholding equity.

**Management Shares Rate (MSR):** The proportion that the amounts of senior executives' stock holding account for shareholding equity.

**Legal-person Shares Rate (LSR):** The proportion that the amounts of domestic corporate shares, foreign corporate shares account for shareholding equity.

#### **Ownership concentration:**

**First:** The proportion that the amounts of the first big shareholder's stock holding account for shareholding equity.

However, if we only take the first big shareholder as the index of ownership concentration, ignore the internal relationship among shareholders, which result in the inaccuracy of conclusions. Therefore, we introduce another variable as the index of ownership concentration.

**H5:** The SS of the proportion of stock holding from the first big shareholder to the top five shareholders and the higher index is, the higher ownership concentration is.

**Z5:** The ratio that the total proportion from the second major shareholder's stock holding to the fifth major shareholder's and the proportion of the first big shareholder's.

When Z5 is less than 0, it means that equity is not balanced; When Z5 is greater than or equal to 0, it means that equity is balanced; The higher Z5 is, the smaller that the degree of first big shareholder's stock holding is, the bigger that the balance degree from other shareholders is.

Beside the variables above, there are also some variables that have an effect on corporations' financial risks. If ignore these variables, we may make mistakes. To prevent it, according to the domestic and foreign research and scholars' approach, we setting the control variables as following:

**Size:** The larger enterprise scale is, the higher the concern degree from external investors is, the higher information transparency is, in other words, the information asymmetry is lower and corporations' financial degree would decrease. At the same time, for a larger corporation, its anti-risk ability is stronger and

Table 1: Variable description

Property	Name	Symbol	Definition
Explained variable	Financial risk	RISK	Z-score
Explanatory variables	Liquid issues rate	LIR	Liquid shares/General capital
	Governmental shares rate	GSR	State-owned Shares/General capital
	Management stake rate	MSR	Executives holding shares/General capital
	Legal-person shares rate	LSR	Legal shares/General capital
	The first major shareholders holding rate	FIRST	The first major shareholders holdings/General capital
	The top five shareholders' H index	H5	Square sum of the top five shareholders' stock holding ratio, Herfindahl Index
	Equity restriction rate	Z5	The sum of stock holding from the second major shareholder to the fifth major shareholder/the first major shareholders' stock holding ratio
Control variables	Corporation scale	SIZE	Ln (total assets)
	Asset-liability rate	LEV	Total liability/total assets
	Return on assets	ROA	Net income/average total assets
	Price-book rate	GROW	Market value of assets/book value of assets

Table 2: Descriptive statistical result

	N	Mean value	Mid-value	Standard deviation	Range	Minimum	Maximum
Z value	615	9.702010	5.298210	17.40345	246.41204	-2.91586	243.49618
LIR	615	0.669070	0.683310	0.26396	0.8611800	0.138820	1.000000
GSR	615	0.046370	0.000000	0.13752	0.7460900	0.000000	0.746090
LSR	615	0.115630	0.000000	0.20917	0.7672700	0.000000	0.767270
MSR	615	0.098290	0.010480	0.15464	0.7537800	0.000000	0.753780
FIRST	615	0.355810	0.353000	0.13399	0.7091000	0.793000	0.788400
H5	615	0.167960	0.150580	0.10323	0.6104400	0.013990	0.624430
Z5	615	0.746730	0.621480	0.56217	3.0525400	0.032810	3.085340
SIZE	615	21.09324	21.00964	0.78205	5.1902100	18.99716	24.18736
LEV	615	0.400210	0.403200	0.17843	1.2636500	0.029100	1.292750
GROW	615	2.889590	2.390100	1.96914	11.895530	0.214190	12.10973
ROA	615	0.061880	0.057710	0.07307	1.1893200	-0.72973	0.459590

the more opportunities from external investment, so that once there exist risks, it is easy to solve. Therefore, we predict the negative correlation between corporation scale and the level of financial risks and show them by natural logarithm of corporation's total assets.

**LEV:** LEV is an aggregative indicator to evaluate the level of corporate debt and the higher LEV is, the more financial risks may occur.

**ROA:** The higher index shows stronger profitability of corporations and the high profitability means the low probability of financial risks.

**GROW:** This index could reflect corporations' development ability in future. The higher GROW indicates the more possibility of corporations' developing in future. It is easier to attract external investors' attention and the ability of controlling financial risks would be stronger.

Table 1 reflects the relevant variables and definitions:

According to the related theory analysis, the study establishes linear regression model as following:

$$RISK = \alpha_0 + \alpha_1 \times OS + \alpha_2 \times SIZE + \alpha_3 \times LEV + \alpha_4 \times ROA + \alpha_5 \times GROW + \varepsilon$$

OS represents the ownership structure variables, SIZE represents corporation scale, ROA represents the net interest rate of total assets, GROW represents price-

to-book ratio,  $\alpha$  represents the estimation parameters regressed,  $\varepsilon$  represents the residuals.

## RESULTS AND DISCUSSION

**Descriptive statistics:** Descriptive statistical results are as follows:

From the Table 2 we can see that, there is large gap between the minimum and maximum of Z value, which means huge difference of the financial risk level between different companies. The Z value is 9.70201 and mid-value is 5.29821, both of which are greater than 2.99. This result means most of SME are at well financial position and have low level financial risk.

To see from ownership structure, the LIR of different companies also have great difference, the highest of which has reached 100%, but the lowest is only 13.882%. The maximum of GSR is 74.609%, which show the exist of the state-owned holding company in SME, but the mid-value is 0% and mean value is below 5%, which means more than half of the companies don't have State-owned shares. The result indicates that SME has become real enterprise plate. The mid-value of LSR is 0%, just equal with GSR, which means more than half of the companies don't have corporate shares, but the mean value is 11.563%, which is higher than twice as much GSR. The highest MSR has reached 75%, which means the owner and operator are the same person in some companies, that is

Table 3: Z-value statistics

	Z<1.81	1.81<Z<2.99	Z>2.99	Z-value average
2009	21	40	144	10.28605
2010	13	34	158	7.288341
2011	8	24	173	11.53163

Table 4: Correlation analysis

		RISK	LIR	GSR	LSR	MSR	FIRST
RISK	Pearson correlation	1					
LIR	Pearson correlation	-0.040	1				
GSR	Pearson correlation	-0.017	-0.26**	1			
LSR	Pearson correlation	0.010	-0.564**	-0.108**	1		
MSR	Pearson correlation	0.020	-0.224**	-0.163**	-0.23**	1	
FIRST	Pearson correlation	-0.064	-0.199**	0.210**	0.307**	-0.258**	1
H5	Pearson correlation	-0.011	-0.26**	0.200**	0.347**	-0.229**	0.954**
Z5	Pearson correlation	0.142**	-0.096**	-0.156**	-0.116**	0.334**	-0.728**
SIZE	Pearson correlation	-0.209**	0.0290	0.041	0.085**	-0.038	0.081*
LEV	Pearson correlation	-0.518**	0.092*	0.010	-0.039	-0.029	0.011
GROW	Pearson correlation	0.682**	-0.146**	-0.024	0.015	0.067*	-0.01
ROA	Pearson correlation	0.437**	-0.057	-0.079*	0.023	0.088*	0.002
		H5	Z5	SIZE	LEV	GROW	ROA
RISK	Pearson correlation						
LIR	Pearson correlation						
GSR	Pearson correlation						
LSR	Pearson correlation						
MSR	Pearson correlation						
FIRST	Pearson correlation						
H5	Pearson correlation	1					
Z5	Pearson correlation	-0.533**	1				
SIZE	Pearson correlation	0.118**	-0.007	1			
LEV	Pearson correlation	-0.017	-0.095*	0.348**	1		
GROW	Pearson correlation	0.027	0.107**	-0.433**	-0.545**	1	
ROA	Pearson correlation	0.049	0.127**	0.108**	-0.498**	0.459**	1

\*\* : Significant at the levels of 0.01 (bilateral); \* : Significant at the levels of 0.05 (bilateral); (RISK: Z value, LIR: liquid stock ratio, GSR: governmental shares ratio, LSR: legal shares ratio, MSR: management shares ratio, FIRST: first major shareholders holding ratio, H5: the top five shareholders' Herfindahl index, Z5: The sum of stock holding from the second major shareholder to the fifth major shareholder/the first major shareholders' stock holding ratio, SIZE: enterprise scale, LEV: asset-liability ratio, GROW: price-book ratio, ROA: return on assets)

to say the senior executives are also one of big shareholders.

From the ownership concentration we could know that the average of FIRST is 35.581% and the international standard provide shareholding ratio of controlling shareholder should between 20 and 25%, which means the first majority shareholder of our companies is too high and public companies may be tunneling. To see from the ownership balance degree, the ratio of H5 and FIRST is between 0.033 and 3.085, in which the difference is great. The average is 0.74673, which means the second to the fifth shareholders can restrict the first majority shareholder, but the average and mid-value are both observably lower than 1, which means restriction don't have enough effect, in other words the second to the fifth shareholders don't have ability to withstand the first majority shareholder.

Table 3 describes the distribution of Z-value between 2009 and 2011. According to Atman Z-value Integral Models, there are 21 companies with bankrupt risk; 40 with great financial risk, which is fewer with time; 47 with Z-value lower than 2.99 in 2010 and 32 in 2011. Although the Z-value average is decrease in 2010, as a whole, the financial situation of SME is improving and the companies with healthy financial situation is increasing, which may be related to the global economy picking up in 2009-2010.

**Correlation analysis:** In the multiple linear regressions, if there are multiple linear relations among too many variables, it would influence the accuracy of models, so we need change regression model and or regression mode. In order to test the correlation degree between equity structure's alternative variables and financial risks, the study conducts Pearson correlation test for all the explanatory variables, explained variables and control variables. Table 4 shows the results.

From the test results we could know that control variables---SIZE, LEV, GROW, ROA have a significant correlation with Z value. Among the alternative variables of equity structure only the equity restriction ratio has a significant correlation with Z value; since coefficient is 0.142, equity restriction ratio has a positive correlation with Z value. As we know, the higher Z value is, the lower the financial risk faced by the corporation is. Therefore, the equity restriction ratio has a negative correlation with the financial risk. However, other variables of equity structure and Z value don't pass the significant test at the levels of 5%. That is to say, it doesn't show strong correlation. But there is a strong correlation among the explanatory variables, whether which could have effect on the relevant research of explanatory variables and

Table 5: Summary sheet of regression results

Variables	Model one			Model two		
	Coefficient	T	sig.	Coefficient	T	sig.
(constants)	-58.697	-3.503	0	-53.51	-3.201	0.001
LIR	4.4210	2.348	0.019			
GSR				-0.240	-0.067	0.947
LSR						
MSR						
FIRST						
H5						
Z5						
SIZE	2.73500	3.437	0.001	2.6360	3.291	0.001
LEV	-20.976	-5.715	0.000	-20.674	-5.602	0.000
GROW	5.37900	15.576	0.000	5.2770	15.325	0.000
ROA	9.75100	1.077	0.282	10.551	1.154	0.249
Adjusted R <sup>2</sup>	0.51200			0.5070		
F	129.711			127.456		
Maxed VIF	1.92000			1.8910		

  

Variables	Model three			Model four		
	Coefficient	t	sig.	Coefficient	t	sig.
(constants)	-54.521	-3.253	0.001	-52.501	-3.143	0.002
LIR						
GSR						
LSR	-1.5560	-0.655	0.513			
MSR				-2.858	-0.892	0.373
FIRST						
H5						
Z5						
SIZE	2.6940	3.352	0.001	2.5950	3.249	0.001
LEV	-20.827	-5.641	0.000	-20.505	-5.562	0.000
GROW	5.2860	15.352	0.000	5.2800	15.354	0.000
ROA	10.3240	1.1350	0.257	11.332	1.2430	0.214
Adjusted R <sup>2</sup>	0.508			0.5080		
F	127.63			127.78		
Maxed VIF	1.8930			1.8890		

Table 6: Summary sheet of regression results (cont'd)

Variables	Model five			Model six			Model seven		
	Coefficient	T	sig.	Coefficient	T	sig.	Coefficient	t	sig.
(constants)	-53.929	-3.247	0.001	-56.148	-3.358	0.001	-54.034	-3.248	0.001
LIR									
GSR									
LSR									
MSR									
FIRST	-0.086	-2.343	0.019						
H5				-8.0850	-1.678	0.094			
Z5							1.66900	1.8900	0.059
SIZE	2.802000	3.5110	0.000	2.82400	3.5100	0.000	2.60500	3.2730	0.001
LEV	-20.8350	-5.679	0.000	-20.869	-5.674	0.000	-20.519	-5.5840	0.000
GROW	5.30300	15.472	0.000	5.31800	15.449	0.000	5.24500	15.272	0.000
ROA	9.90900	1.0940	0.274	10.1860	1.1230	0.262	9.57300	1.0540	0.292
Adjusted R <sup>2</sup>	0.51200			0.51000			0.51000		
F	129.701			128.606			128.916		
Maxed VIF	1.89100			1.89900			1.89300		

(LIR: liquid stock ratio, GSR: governmental shares ratio, LSR: legal shares ratio, MSR: management shares ratio, FIRST: first major shareholders holding ratio, H5: the top five shareholders' Herfindahl index, Z5: The sum of stock holding from the second major shareholder to the fifth major shareholder/the first major shareholders' stock holding ratio)

explained variables, we need apply regression analysis for further verification.

At the same time, the explanatory variables and explained variables do show a strong correlation. But in the multiple correlation analysis, Pearson Correlation Coefficient only reflect correlation degree and directions between interrelated variables superficially,

which can not reflect real situation of variable correlation degree and show the false appearance of correlation. Therefore, for the correlation between interrelated variables, the author thinks that we could put it into linear regression equation first and take the mutual linear diagnosis by variance inflation factor in regression analysis.

**Regression analysis:** From the correlation test above we could know that there exist significant correlation among explanatory variables, if we put two or more than two variables of equity structure into regression equation, which may have the problems of multiple mutual linear problem. In order to avoid occurring this kind of problems, the study refers to the domestic and foreign scholars' research methods, puts 7 explanatory variables of equity structure into models, so that it could form 7 multiple linear regression models for regression analysis.

The regression results are as follows (Table 5 and 6):

From Table 5 we could know that F of 7 models are all greater than 127, which means the regression models are significant as a whole, the regression effect is better. The adjusted  $R^2$  of all the models are greater than 0.5, which means fitting degree of models is higher. The maxed variance inflation factors in every model are all at around 1.9 and far less than 10, so that we could judge that variables in regression models don't have multiple linear problems.

From the regression results of explanatory variables in models: In model one, since the coefficient of LIR is 4.421 and which is significant at 5 percent level, it means the higher LIR is, the Z value is higher, the financial risks are lower, so H1 is right. In model two, since the coefficient of GSR is -0.24, but the sig is 0.947, which means that there aren't exist significant correlation between GSR and financial risks, the result can not support H2. In model three and model four, contrary to H3 and H4, the coefficients of LSR and MSR are negative numbers, which means that both of them have positive effect on financial risks of listed corporations. But both of them are failed to pass the significant test at 0.1 levels, so they don't have statistical significance. In model five, since the coefficient of FIRST is -0.086 and P is 0.019, it passes the significant test at 0.05 level, which means that the higher FIRST is, the smaller Z value is, there exist negative correlation between FIRST and financial risks. In model six, since the coefficient of H5 is negative number and P is 0.094, it passes the significant test at 0.1 levels, which means the coefficient of H5 has a significant negative correlation with financial risks. Therefore, we could know that ownership concentration shows negative correlation with financial risks, H5 is right. In model six, the coefficient of ownership concentration is 1.669, which has a negative correlation at 0.01 significant level, H6 is right.

## CONCLUSION

We can get some conclusions through the research as following:

There is a negative correlation between LIR and the level of financial risks. Due to the classification of the circulation of the stock, there is a difference

between liquid shareholders' profit targets and illiquid shareholders', in which the paradox may lie at this situation. The illiquid shareholders could achieve more profits than those in normal way by "tunneling" behaviors, such as external security, connected transaction and so on, which seriously prejudice to the interest of other shareholders and increase the financial risks for corporations' continuous operation and healthy development. While the increase of liquid shares could restrain the behaviors that harm listed corporations' interests efficiently, unify shareholders' value orientation and decrease the possibility of financial risks. It also indirectly demonstrates the accuracy of share division reform and circulation of stock promotion. GSR has little effect on financial risks' back action, which could achieve the irrelevance between them. For example, corporations with high GSR could get favorable government policy more easily achieve the support from banking facility in external financing and then decrease financial risks. Then the positive and negative aspects could offset each other, which make GSR have little effect on financial risks. SME are generally private enterprises and the listed corporations which have state-owned stock are less than 20 percent, more than half of which is equity participation. Since that state-owned shareholders have little effect on corporate governance because of the low range and proportion of share holding.

The LSR play a positive role on the level of financial risks, contrary to the hypothesis, the correlation is not significant. Therefore, they don't have significant correlation. Through the research, we could know that, on the one hand, though the average LSR in SME has reached 15%, which is still lower than the average ratio of big shareholders' stock ownership. Therefore, it restrains the corporate shareholders' ability of supervising corporate governance and controlling financial risks. On the other hand, corporate shareholders may have strong correlation with big shareholders, which is not only against with supervising and improving the efficiency about corporate governance, but also "tunneling" corporation in collusion. These problems decrease even offset the positive effect of corporate shareholders in the aspects of corporate governance and risk control. The proportion of senior executives' share holding has positive effect on the level of financial risks. This may because some of the senior executives in SME are family members of controlling shareholders, who have the same objectives with controlling shareholders. Therefore, regardless of ownership level, they would not have great differences with dominant shareholders and there would not be significant differences in the function and effects of corporate governance. Beside the correlative relationship between senior executives and big shareholders, at the present stage, share motivation measures of listed companies in China don't



offset the differences of profit targets within the relationship of principal-agency as expected. From tendency of senior executives' share holding reduction in SME, we could know that, with the rising tendency of SME and cancellation of limiting stock sales, senior executives exchange the stock to cash after time limit in the incentive measures. Therefore, measures of equity incentive have been welfare, which don't play an incentive role.

There is a significant positive correlation between ownership concentration and the level of financial risks. Both the share holding ratio of the first big shareholder and Herfindahl index of the top five shareholders have significant positive correlation with financial risks. It means that SME always have the problems, such as majority shareholding and family control which result in low governance efficiency and financial risks. There is a significant negative correlation between the equity restriction ratio and the level of financial risks. Therefore, the balance pattern of big shareholders could improve the efficiency of corporate governance, decrease the possibility of financial risks and restrain dominant shareholders' "tunneling" actions, especially for the negative effect result from the pattern of majority shareholding in SME, which would have a better function of restriction and contribute to corporations' healthy development.

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