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Research on the Influence of Legal Environment on the Scale of External Guarantee of the Company

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Abstract: From the perspective of legal environment, this paper takes A-share listed companies from 2013 to 2022 as the research object, and empirically studies the impact of legal environment on the scale of external guarantee. The article first summarizes and expounds the relevant theoretical research on the legal environment and external guarantees, and then draws a conclusion through empirical analysis that the legal environment has a significant restraining effect on the scale of the company's external guarantees. This paper links the influencing factors at the regional level with the external guarantee at the enterprise level, enriches the relevant research on external guarantee, and provides a theoretical basis for subsequent corporate decision-making and policy formulation.

1. Introduction

With the continuous improvement and development of China's economy and capital market, the demand for corporate financing is also increasing. As a form of credit financing, guarantee is favored by many companies. Guarantee transfers the risk of credit institutions by introducing a third party, and at the same time, it can solve the financing difficulties of some companies and provide a favorable guarantee for the development of the capital market. Therefore, guarantee behavior has gradually become a common phenomenon in the market. Guarantees are mainly divided into three forms: external guarantee, acceptance guarantee and interactive guarantee. Among them, the act of providing guarantees to the outside world often becomes a means of illegally conveying benefits within the enterprise due to inadequate supervision and information disclosure. Legitimate guarantees can ease third-party financing constraints and have positive significance for economic development. However, as the total amount of guarantees in the capital market continues to increase. Driven by the interests of the internal management of some companies, the behavior of high or even excess guarantees to the outside world has become more and more intense. According to the CSMAR database statistics, the total amount of external guarantees in the A-share market in 2022 is as high as 122107 billion yuan, an increase of 4887 billion yuan compared with 2021. Excessive guarantees not only increase business risks, but also affect the financial situation, and even seriously damage the rights and interests of shareholders.

External guarantees can be subdivided into guarantees for subsidiaries and guarantees for non-subsidiaries. The risk levels of the two are not the same. The potential risks of the former can be identified through consolidated financial statements. In December 2017, the CSRC 's response to recommendation 4147 of the Fifth Session of the Twelfth National People 's Congress clearly stated : ' Because the listed company has control over the operation and management of the holding subsidiary, the risk of providing guarantees for its subsidiaries is essentially reflected in the listed company 's own operating risks ; from the accounting point of view, the guarantee risk of the holding subsidiary has actually been reflected in the scope of the consolidated statements. Therefore, in the practice of supervision, the external guarantee of listed companies pays more attention to the risk of external guarantee of listed companies other than holding subsidiaries. Based on this, this paper mainly studies the external guarantee of non-subsidiary companies of listed companies.

In general, when companies make external guarantees, the scale of guarantees is not only affected by internal decision-making, but also the external environment plays an important role. A good external environment is the soil to ensure the healthy development of the company. Among them, the legal environment, as a part of the external environment that cannot be ignored, plays an important role in restricting the scale of excess guarantees and protecting the rights and interests of investors. Starting from the legal environment, this paper aims to explore the impact of external legal environment on the scale of corporate guarantee.

2. Theoretical Analysis and Research Hypothesis

As early as in the last world, when the credit financing industry flourished abroad, foreign economists have begun to study guarantees and gradually formed relatively rich research results. The famous American economist Akerlof (1970) [1] first proposed that the use of third-party credit mechanisms can effectively solve the problem of information asymmetry in the market, and the guarantee method is one of them. He pointed out through the ' old car market model ' that in market economic activities, the party with more information can occupy an advantage in trading activities, while the party with less information is at a disadvantage, and the intervention of financing guarantors can effectively improve the problem of information asymmetry. As a result, guarantee is gradually recognized by people.

In recent years, with the vigorous development of the global capital market, the relevant theories of external guarantee are constantly being studied and supplemented by scholars. Leng Olin et al. (2016) [2] pointed out that different guarantee motives have different economic consequences. If the purpose of the guarantor is to improve the credit value of the company, the final result will also increase the value of the company itself; on the contrary, if the guarantor aims to encroach on the interests of small shareholders and transfer value, the guarantee will reduce the value of the company. This also shows the two-way benefits of external guarantee. As a double-edged sword, on the one hand, credit guarantee plays an important role in debt contracts, which can change the risk of lenders and the incentive mechanism of borrowers, so as to make the balanced distribution of financial resources (Nucci Francesco, 2020 [3]). At the same time, the joint effect generated in the guarantee process can also improve the company valuation of the guarantor (Elisa Luciano, 2014 [4]). Reasonable external guarantee can help the guarantor to use its reputation advantage to make the guaranteed party pay less financing cost to raise funds. In order to meet its financing needs, while the guarantor's credit value has also increased, and ultimately maximize the overall interests (Eric Friedman, 2003[5]). On the other hand, many scholars have found that large external guarantees will have a negative impact on the company's operating conditions. Because the company needs to bear joint and several liability to provide guarantees, once the guaranteed party cannot repay the loan in full and on time. The guarantor is obliged to perform the corresponding responsibilities according to the contract, which easily leads the guarantor to fall into debt difficulties, aggravates the capital market oscillation, and damages the interests of investors (Shao Zhihao and Cai Guowei, 2023[6]). Moreover, due to the concealment of external guarantees and the existence of problems such as untimely and incomplete information disclosure, external guarantees are often a means for major shareholders to grab resources through ' tunnel excavation ' (Liu Haiming and Li Mingming, 2021[7]).'Tunnel mining ' refers to the transfer of resources of listed companies through covert means. The market credit of listed companies by major shareholders endorses the financing of their related parties, reducing the financing costs of related parties. In severe cases, they even conspire with internal management personnel to transfer the company's resources to the related parties of major shareholders in a guaranteed way, and transfer the risks to the small and medium shareholders of the company, which greatly damages the interests of the company. The equity balance degree of listed companies in China is relatively low, which provides an opportunity for major shareholders to transfer the resources of listed companies through guarantees, and this improper behavior undoubtedly infringes the interests of small shareholders. It will also have a negative impact on the long-term development of enterprises.

In the face of more and more guarantee behaviors in the market, how to effectively restrain the scale of guarantee and avoid large or even excessive guarantee is also the focus of many scholars ' research. According to the existing research, it is found that the external environmental factors, mainly the legal department and the regulatory department, have effective supervision and restriction on the guarantee, and the guarantee law and review intensity in the external factors will affect the enterprise guarantee behavior. There are two main ways of external supervision. One is based on bank supervision, through the bank 's strong supervision of the company's capital flow, so as to protect the rights and interests of the company ; one is based on the law, through the improvement of the corresponding laws and regulations, to create a good legal environment, and then promote the healthy operation of the capital market (He Rong and Liu Shaobo, 2018[8]).The role of the legal environment in the capital market is mainly reflected in ensuring the implementation and supervision of the law. Due to the different levels of economic development and cultural differences in different regions, there are differences in the degree of implementation and supervision of laws. Different legal environments lead to differences in their impact on enterprises. In areas with a good legal environment, the law can play a role in restraining and supervising companies. On the contrary, in areas with a general legal environment, the external environment cannot effectively supervise and restrict the company's production and operation behavior, which can easily lead to the breeding of internal irregularities (Li, 2020[9]).

At present, China's economy has changed from high-speed development to high-quality development, which undoubtedly puts forward requirements for China's legal environment. A good and efficient legal environment is the basis of market mutual trust (Yao Mengge and Yao Xi, 2021[10]). Existing research has shown that a good legal environment has information governance effects and helps to establish a more standardized information disclosure system. Correspondingly, the cost of corporate information disclosure violations will also increase accordingly, which not only forces companies to strictly follow the rules and regulations of information disclosure, but also limits the company's illegal manipulation and concealment of financial information, and reduces the information asymmetry between investors and investees in the market (Huang Bo, 2020[11]).From the perspective of creditors, a good legal environment also means a more efficient case processing speed and a more fair judicial system, thereby improving the protection of creditors. Usually, when the guarantor fails to perform its obligations as required by the contract, the creditor has the right to request the guarantor to repay the debt. Due to the manpower and time required for litigation, creditors often need to bear higher rights protection costs when facing debt default. Efficient law enforcement efficiency can not only reduce the cost of creditor rights protection, but also promote the willingness and enthusiasm of creditors to use legal weapons to safeguard their rights and interests. To minimize the probability of creditors suffering unfair treatment (Pan Yue, Xie Yuxiang and Ning Bo et al., 2021[12]); from the perspective of the guarantor, a good legal environment is more binding on the guarantor, and the supervision and punishment of the illegal behavior of the major shareholders are more severe, which virtually increases the cost of the major shareholders ' encroachment on the interests of listed companies and inhibits the capital encroachment in the market.

Based on this, this paper proposes the following hypothesis:

In the case of other factors fixed, a good legal environment can effectively restrict the scale of external guarantees of listed companies.

3. Research Design

3.1. Sample Selection and Data Sources

In order to verify the hypothesis proposed above, this paper selects the initial sample of China's A-share listed companies from 2013 to 2022, and screens the data according to the following criteria. (1) Excluding company data with abnormal state such as ST and * ST; (2) Excluding the data of financial and insurance companies; (3) Eliminate data missing company data. The data source of this article is the CSMAR database of Cathay Pacific, and a total of 12,347 samples were obtained after manual screening and verification.

3.2. Variable Definition

a: Explained variables. This paper draws on the methods of Wang Chuxuan, Tao Baoshan and Wu Chen (2018) [13], and uses the total amount of external guarantees of listed companies to measure the scale of external guarantees of enterprises. Since this paper mainly studies the external guarantees of listed companies to companies other than holding subsidiaries, the amount of guarantees to subsidiaries is deducted from the total amount of external guarantees.

b: Explanatory variables : By referring to the research of Li Zhibin, Li Minfang and Li Zongze (2022) [14], this paper uses the index of " market intermediary development and legal system environment " in the " China Marketization Index Report " compiled by Fan Gang to measure.

c: Control variables : Since the explained variables and explanatory variables in this paper involve variables at the regional level and variables at the enterprise level, in order to avoid the estimation bias caused by missing variables, this paper also selects the control variables from the regional level and the enterprise level. In the selection of variables at the regional level, based on the research of Chen Tianyi, Zhao Beibei and Hong Zhuorui (2023 [15]), the four variables of regional economic development level, regional education level, business relationship and market environment are used as control variables at the regional level. Among them, the level of regional economic development is measured by the natural logarithm of per capita GDP, the level of regional education is measured by the proportion of people with higher education (Wang Haihong and Lu Zhenghui, 2017[16]), and the business relationship is measured by the non-state-owned economic development and the relationship between the government and the market in the ' China Provincial Marketization Index Report ' ; the market environment is also measured by the degree of product market development in the ' China Provincial Marketization Index Report ' (Zhao Jianmei and Zhu Yuxiang,2023[17]). At the enterprise level, this paper selects the natural logarithm of the company's total assets and the asset-liability ratio to measure by drawing on the research of Chen Zeyi, Li Changqing and Li Yukun,2022[18]. In addition to the above control variables, this paper also controls the year fixed effect and the industry fixed effect, and introduces the dummy variable of the equity type of the enterprise to avoid the interference of the equity type on the model. The definition of the research variables in this paper is shown in Table 1.

This paper constructs the following multiple linear regression model to test the hypothesis of this paper (1):

$$Gua_{it} = \beta_0 + \beta_1 Law_{it} + \beta_2 GDP_{it} + \beta_3 Edu_{it} + \beta_4 Nongov_{it} + \beta_5 Gov_{it} + \beta_6 Market_{it} + \beta_7 Size_{it} + \beta_8 Lev_{it} + \beta_9 Share_{it} + \beta_{10} Soe_{it} + \sum Year + \sum Ind + \varepsilon \quad (1)$$

Table 1: Variable Definition

Variable type	variable name	variable definition
Explained variables	External guarantee scale	The remaining part of the total amount of external guarantee is deducted from the amount of guarantee for subsidiaries.
Explanatory variables	legal environment	The development of regional market intermediary organizations and legal system environment score
Control variables	regional economic level	The natural logarithm of regional per capita GDP
	Regional Education Level	The proportion of people with higher education in every one hundred thousand people.
	Business relations	Non-state-owned economic development index
		the index of relationship between government and market
	market circumstances	Product market development index
	company scale	The natural logarithm of the company's total assets at the end of the year
	assets-liability ratio	total liabilities / total assets
	share concentration	proportion of the largest shareholder
	equity nature	The dummy variable is 1 when the equity nature belongs to non-state-owned enterprises, and the rest is 0.
	Year	The dummy variable is 1 when the sample belongs to a certain year, otherwise it is 0.
	industry	The dummy variable is 1 when the sample belongs to a certain industry, otherwise it is 0.

4. Authentic Proof Analysis

4.1. Descriptive Statistic

The descriptive statistical results of this paper are shown in Table 2. The average value of the guarantee scale of listed companies to non-subsidiary companies is 2.43411, the maximum value is 332.50, the standard deviation is 11.409, and the median is 0.It can be seen that the guarantee scale of listed companies to non-subsidiary companies is large, and the differences between companies are obvious. Large-scale guarantees may bring operational risks to the company and require strict supervision by investors and the external environment. The mean value of the legal environment variable is 11.77, the maximum value is 18.974, the standard deviation is 3.503, and the median is 12.05, which reflects the uneven development of the legal environment between different regions of China's provinces. The phenomenon of unbalanced development is also reflected by the remaining control variables at the regional level.

Table 2: Descriptive Statistic

Variable name	Sample quantity	maximum	minimum	mean value	standard deviation	median
Gua	12347	332.501	0	2.434	11.409	0
law	12347	18.974	0.46	11.77	3.503	12.05
GDP	12347	12.156	10.316	11.287	0.436	11.31
Edu	12347	0.505	0.024	0.185	0.101	0.152
Nongov	12347	23.237	0.47	11.351	1.802	11.904
Gov	12347	12.152	-7.145	7.489	1.418	7.358
Market	12347	10.456	-1.319	7.403	2.317	8.217
Size	12347	19.206	9.28	13.498	1.315	13.314
Lev	12347	3.648	0.034	0.502	0.19	0.504
Share	12347	89.99	1.84	32.997	14.662	30.6
Soe	12347	1	0	0.633	0.482	1

4.2. Regression Result

Table 3: Regression Analysis Results

	Gua (1)	Gua (2)	Gua (3)
law	-0.093** (-2.229)	-0.223*** (-3.163)	-0.17** (-2.497)
GDP		-0.292 (-0.426)	0.442 (0.666)
Edu		1.019*** (3.633)	0.335 (1.231)
Nongov		0.091 (0.989)	0.088 (0.988)
Gov		0.169 (1.317)	0.162 (1.305)
Market		-0.242*** (-2.895)	-0.252*** (-3.113)
Size			2.409*** (26.431)
Lev			1.461** (2.439)
Share			-0.01 (-1.4)
Soe			0.476** (2.071)
Ind	control	control	control
Year	control	control	control

Note: t value in parentheses, * * *, * *, * represent the significance level of 1 %, 5 %, 10 % respectively.

This paper tests the model by gradually adding control variables. The specific regression results are shown in Table 3.The results of Column (1) show that when only the industry fixed effect and the year fixed effect are controlled, the regression coefficient of the legal environment (Law) to the company's external guarantee scale (Gua) is − 0.093, and it is significant at the level of 5 %, which supports the hypothesis of this paper. Column (2) adds the regression results of the control variables at the regional level. At this time, the regression coefficient of the legal environment (Law) is − 0.223, which is significant at the 1 % level, and the significance of the explanatory variables is further improved. We focus on the results of adding all control variables in column (3). The regression coefficient representing the legal environment variable is-0.17, and it is significant at the level of 5 %, which further verifies the hypothesis of this paper. In the three regression results, the explanatory variable legal environment (Law) always has a significant negative correlation with the explanatory variable company's external guarantee scale (Gua), which means that under the control of regional level variables and enterprise level variables, with the rise of legal environment (Law), the scale of the company's external guarantee (Gua) is decreasing, which verifies that a good legal environment can effectively restrain the scale of the company's excess guarantee.

5. Robustness Test

In order to make the conclusions of this paper more robust, the following two methods are used to test the robustness of the conclusions.

Table 4: Robustness Test

	Gua (1)	Gua (2)
law	-0.002*** (-2.362)	-0.282*** (-4.206)
GDP	0.796 (1.429)	1.029* (1.942)
Edu	0.44* (1.715)	0.093 (0.478)
Nongov	-0.027 (-0.329)	0.058 (0.701)
Gov	0.024 (0.205)	0.234* (1.954)
Market	-0.365*** (-5.202)	-0.309*** (-4.454)
Size	0*** (36.136)	0*** (36.168)
Lev	4.425*** (7.952)	4.385*** (7.883)
Share	-0.013* (-1.856)	-0.012* (-1.774)
Soe	-0.26 (-1.179)	-0.235 (-1.066)
Ind	control	control
Year	control	control

Note: t value in parentheses, * * *, * *, * represent the significance level of 1 %, 5 %, 10 % respectively.

Replace explanatory variables and control variables. By referring to the existing research, this paper replaces the measurement method of the core explanatory variable legal environment with the proportion of lawyers per million people (Wang Huacheng, Cao Feng and Gao Shenghao, 2014[19]). At the same time, referring to the research of Lu Mingtao (2017)[20], the variable measuring the level of education at the regional level is replaced with the number of years of education per capita, and the variable measuring the scale of the enterprise is replaced with the natural logarithm of the number of employees of the enterprise by referring to Cao Yue, Xin Hongxia and Sun Li (2022)[21]. The remaining variables remain unchanged. Bring the above variables into the model for testing.

Considering that the impact of the legal environment on the scale of corporate external guarantees may have a lag effect, and in order to avoid potential endogenous problems in the model, this paper substitutes the explanatory variables that lag one period into the model for testing.

The results of the two regressions are shown in table 4. The regression coefficient of the legal environment after replacing the explanatory variables and control variables is-0.002, and the regression coefficient after lagging the explanatory variables for one period is-0.282. The results of the two regressions show that the legal environment and the scale of the company's external guarantee have a significant negative correlation at the 1 % level. The results once again strongly support the hypothesis of this paper, indicating that the conclusion of this paper is robust.

6. Conclusions

The existing literature mainly studies the negative impact of excess guarantees on the company's operation, and there are few studies on the external environmental factors affecting excess guarantees. Based on the data of A-share listed companies from 2013 to 2022, this paper takes the legal environment as the starting point, and analyzes the correlation between the two. The final study found that: in the case of other factors unchanged, the legal environment has a significant negative correlation with the scale of the company's excess guarantees. In areas with better legal environment, the scale of excess guarantees of the local company is relatively small, indicating that a good legal environment can constrain the company's guarantee scale.

The conclusion of this paper is an expansion and supplement to the existing research, and has a certain theoretical role in the prevention, control and management of excess guarantee. The policy implications are as follows: (1) All sectors of society should recognize the adverse effects of excess guarantee on enterprises. At the same time, due to the potential interest transfer behavior of major shareholders, it is difficult to effectively control the guarantee behavior only by the company itself. External environmental factors should play a more powerful role in the control process.(2) Evidence shows that the external legal environment can affect corporate behavior by reducing information asymmetry, reducing judicial costs, strengthening supervision and increasing the cost of violations. The regulatory authorities should continue to improve the relevant policies and laws and regulations on external guarantees, further improve the efficiency of resource allocation, and promote the healthy operation of the capital market.

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