

# Debt Financing, Social Responsibility and Firm Performance

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**Abstract:** This paper selects A-share listed companies in Shanghai and Shenzhen from 2015 to 2019 as research samples, explores the relationship between debt financing, social responsibility and corporate performance from two aspects of theoretical analysis and empirical hypothesis, and uses empirical methods to verify the moderating effect of corporate social responsibility on debt financing and corporate performance. The results show that: first, debt financing is negatively correlated with corporate performance; Secondly, enterprises that actively undertake social responsibility have lower debt financing capital, and assume social responsibility plays a significant moderating role between debt financing and enterprise performance. Thirdly, corporate social responsibility is negatively related to debt financing. Corporate active social responsibility can promote the reduction of debt ratio and the improvement of corporate performance. Based on the above research results, the following suggestions are put forward: first, enterprises should strengthen the use of funds and actively assume social responsibilities; Second, government departments should strengthen policy incentives for enterprises to bear social responsibility; Third, government departments push enterprises to increase their direct financing capacity.

**Keywords:** Listed company, Debt financing, Social responsibility, Enterprise performance.

## 1. Introduction

The Report on the Work of the Government of the National Two Sessions in 2021 pointed out that the COVID-19 epidemic is still spreading around the world, the world economy is facing a more severe and complex situation, and the task of preventing and controlling financial risks is still grim. We should continue to complete the important tasks of "three to one, one to the other". Since the global financial crisis in 2008, in response to the global economic downturn and domestic economic downturn, "debt investment" proposed by China's economic development model, the model driven development causes lead to rising corporate leverage, the problem of corporate leverage become a threat to China's economic stability and achieve high quality development of realistic problems. Under the background of increasing financial risks and systemic risks year by year, the Fifth Plenary Session of the 18th Central Committee of the Communist Party of China first proposed the policy of reducing the leverage ratio of enterprises. Reducing the financial leverage of enterprises is of great significance to promote the healthy development of China's economy. How to deleverage and stabilize risks has become an urgent issue in the economic field.

Macroeconomic factors such as economic uncertainties, financial frictions and monetary policies can affect the choice of deleveraging methods of enterprises (Zhang Yilin and Pu Ming, 2018; Jin Penghui et al., 2017; Wang Yong et al., 2018), the adjustment mode of corporate capital structure is also closely related to their own development level, internal governance level and investors as capital suppliers, etc. By actively assuming social responsibilities, enterprises can adjust the relationship between them and investors, and influence the adjustment of corporate financial leverage. On the one hand, enterprises actively undertake social responsibility and disclose social responsibility reports under the promotion of national policies, on the one hand, it helps to enhance corporate reputation, improve the relationship

between enterprises and investors, attract more investors' attention, and have an impact on the adjustment of financial leverage and corporate performance (Song Lin et al., 2012; Li Shu et al., 2013). However, on the other hand, enterprises taking on more socialist responsibilities will increase their costs (Cespa and Cestone, 2007; Quan Xiaofeng et al., 2015), which leads to excessive investment by enterprises and the mutual conflict between the interests of insiders and investors, the insiders will choose investment projects with lower risks out of consideration of their own rights and interests, which is not conducive to the adjustment of corporate financial leverage. In the overall level of corporate social responsibility is not high, the government actively promote the enterprise to fulfill social responsibility, at the same time, enterprises face the market investment atmosphere, problems such as imperfect legal system, its social responsibility motivation is different from the mature capital market, is also the result of the huge difference, which will further reflect on the enterprise's financing behavior.

How does corporate social responsibility affect the change of corporate financial leverage? Is it an effective and reasonable way to play a regulating role in the path of enterprise leverage and enterprise performance? At present, few scholars have studied these two issues. Most existing literatures examine the impact of CSR on corporate performance from the perspectives of financing constraints and financing costs. Therefore, this paper verifies the above issues from an empirical perspective. Choose Shanghai and shenzhen a-share listed companies from 2015 to 2019 in our country's relevant financial data and HeXun about social responsibility score data as research samples, explores the debts of the enterprise, the relationship between corporate social responsibility and corporate performance, and from two angles of theory and empirical analysis of enterprise positive social responsibility between debt financing and corporate performance of adjustment.

The innovations of this paper are as follows: first, this paper enriches the relevant theoretical researches in this field

from the perspectives of trade-off theory, principal-agent theory, financing prioritization theory, investment theory and technology innovation theory. Second, this paper innovatively analyzes the moderating effect of corporate social responsibility on debt financing and corporate performance, which provides a new path for enterprises to reduce debt financing and improve corporate performance. Third, the research results of this paper provide relevant guidance for enterprises and other stakeholders, which is helpful for policy implementation and enterprise performance improvement.

## 2. Literature Review and Theoretical Hypothesis

### 2.1. Debt Financing and Enterprise Performance

After the financial crisis in 2008, China introduced economic stimulus policies such as the "Four trillion Plan", which accelerated the increase of the leverage ratio of non-financial enterprises in China. Through the increase of debt leverage, enterprises used the funds obtained from debt financing to expand investment and enterprise production, which played a certain role in promoting economic growth. Enterprises through debt financing to reduce agency cost, according to the free cash flow theory, the enterprise loan expire when servicing pressure will reduce the waste in the process of management in the business, promote enterprise performance improvement (Jenson and Meckling, 1976). When the growth rate of enterprise output is greater than the growth rate of debt, the increase of debt leverage can promote economic growth, but when the growth rate of debt is higher than the growth rate of enterprise output, the expansion of debt financing will hinder economic growth (Qi Haodong, 2018).

At present, China's economic development from the high-speed growth stage into the medium-low growth stage, to achieve high-quality economic development, enterprises continue to increase debt financing will increase the risk of enterprises. According to the trade-off theory, the marginal cost caused by financial distress increases with the increase of corporate debt financing, and the revenue generated by tax shield effect also decreases. Higher debt financing ratio of enterprises will increase the risk of debt default of enterprises, and enterprise stakeholders will demand higher risk compensation premium, increase the financial cost of enterprises, increase the possibility of enterprises falling into debt difficulties, and have an adverse impact on enterprise performance. Reducing the proportion of debt financing can reduce the risk of debt default caused by excessive debt, reduce the financial cost and improve the profitability of enterprises. According to the agency theory, excessive debt financing harms the interests of creditors, and a higher asset-liability ratio increases the risk of insolvency. When making project investment, managers are more inclined to choose high-risk projects. The high returns generated by successful project investment can increase the wealth of shareholders, while the creditors will bear the corresponding losses if the project investment fails. When the net present value of income generated by an investment project is only for creditors, managers often give up the project, which has a negative impact on the long-term development of the enterprise (Parrinor and Weisbachms, 1999). According to investment theory and technological innovation theory, the higher the proportion of corporate debt financing is, the lower the

investment efficiency will be, and the innovation input will be inhibited and the interests of enterprises will be damaged. The higher the leverage ratio, the greater the damage to enterprises. Therefore, the deleveraging policy has a more significant effect on improving the performance of highly indebted enterprises.

Reducing the proportion of debt financing is conducive to improving the efficiency of capital use, promoting industrial upgrading and improving corporate performance. Tax law requires pretax deduction of corporate debt interest, which reduces corporate debt financing cost to a certain extent and enhances corporate debt financing willingness. As a result, the use efficiency of funds obtained from debt financing decreases. Under the policy of deleveraging, it becomes more difficult for enterprises to obtain funds through debt and the scarcity of debt funds increases. Encourage enterprises to improve the efficiency of capital use and return on investment (Ma Hong and Wang Yuanyue, 2017). In addition, the scarcity of internal funds in enterprises enhances the prudence of managers in project investment, avoids blind expansion, makes rational use of enterprise resources, improves enterprise factor productivity, and is conducive to enterprise transformation and upgrading (Xu Pengjie and Ma Zhongdong et al., 2019). Therefore, reducing the proportion of debt financing can significantly improve corporate performance. Based on the above analysis, this paper proposes H1:

H1: There is a significant negative correlation between corporate debt financing and corporate performance, and a high proportion of corporate debt financing will bring adverse impact on the improvement of corporate performance.

### 2.2. Corporate Social Responsibility and Debt Financing

Shareholders' investment and creditors' borrowing are the main channels for enterprises to raise funds. Both creditors and shareholders have the motivation to resist enterprises taking social responsibility. Corporate social responsibility will exert certain constraints on corporate financing behavior, and enterprises have certain pursuit for environmental protection value and other contents of social responsibility, which may encourage enterprises to invest in other enterprises. Therefore, we need to treat the role of corporate social responsibility in corporate financing dialectically (Wang Xiaohua, 2009). Academia also has a more direct point of view that corporate social responsibility has a certain negative impact on corporate financing ability. As an important part of corporate social responsibility, enterprises that pay attention to employee welfare tend to be more risk-averse, and the risk awareness of enterprises will affect the attitude of enterprise stakeholders towards corporate financing. Since enterprises often face higher risks with higher debt financing, Enterprises with risk aversion tend to reduce debt financing (Berk et al., 2010). The social responsibility of the enterprise report information would increase the cost of the rights and interests of companies, even if they don't consider the rights and interests of the enterprise cost, creditors will also be some specific content of social responsibility said rejection (tube and mei, melon&fiona xin, 2013). Enterprises with labor rights protection organizations will have higher financing costs in the process of debt financing, because the interests of creditors will be greatly damaged when enterprises go bankrupt and pay off. Corporate social responsibility reduces debt financing to a certain extent (Campello et al., 2015).

The supervision hypothesis holds that a firm's social responsibility will prompt its stakeholders to pay attention to its venture capital behavior. Under the stake-related supervision, a firm will reduce its investment in high-risk projects and encourage it to choose low-risk investment projects. When the disclosure of social responsibility information affect the interests of the enterprise and its related trade, business investment in the net income is high but still need to raise additional capital project's enthusiasm will reduce, the social responsibility information disclosure of enterprise debt financing have a negative impact. In addition, the company's social responsibility information disclosure level is low leveraged firms will be higher. From the perspective of supervision hypothesis, in order to evaluate the impact of social responsibility on debt financing, this paper proposes the following hypothesis:

H2: There is a negative correlation between CSR and debt financing, that is, enterprises actively undertake social responsibility helps to reduce the proportion of debt financing.

### **2.3. The Moderating Role of Corporate Social Responsibility in the Path of Debt Financing and Corporate Performance**

Corporate social responsibility can adjust the relationship between enterprises and their stakeholders, and is closely related to enterprise value. Based on stakeholder theory, the enterprise to improve the long-term performance of enterprises, need to get the support of the enterprise stakeholders, enterprise stakeholders is an important guarantee of normal operation of enterprises can get, executives if can support from the staff of the business strategy, will greatly enhance the productivity of enterprises, can also reduce the loss of enterprises in the production, The development of an enterprise is inseparable from the support of investors. When managers get the support of investors, the risk of poor capital turnover of the enterprise will be reduced. If the enterprise gets the support of customers, the sales growth rate will be increased, the healthy development of the enterprise will be promoted, and the cost of the enterprise will be reduced. According to social responsibility effect hypothesis, the enterprise by establishing good relationship with the enterprise stakeholders can bring a good reputation for the enterprise, positive promoting effect on enterprise performance, enterprise in the process of social responsibility takes a certain resources, produce certain costs, but the benefits brought by the social responsibility is greater than the cost, therefore, Corporate social responsibility will improve corporate performance (Preston and O'Bannon, 1997).

Enterprise positive social responsibility to a certain extent, improve the enterprise's risk consciousness, in under the supervision of stakeholders, enterprises can reduce the high risk project investment, negative influence on enterprise's debt financing, reduce corporate debt leverage. Enterprises reduce the proportion of debt financing, can reduce enterprise default risk and operating financial risk; As the proportion of debt financing decreases, the investment efficiency of enterprises increases, and R&D investment increases. Although R&D investment does not have a significant promoting effect on enterprise performance in the current year, it will have a positive impact on the improvement of enterprise performance in the future (Dai Zhimin and Gu Liyuan et al., 2021; Li Xiuzhi and Zhao Shaojuan et al., 2019); Under the condition of enterprise in debt capital is scarce, will improve the service efficiency of funds, to avoid

blind expansion, promote transformation and upgrading of enterprises, and have a positive impact not only on business performance also is advantageous to the enterprise long-term development. Therefore, high debt financing is not conducive to the improvement of corporate performance. Actively undertaking social responsibility can improve the awareness of corporate risk avoidance, reduce the proportion of corporate debt financing, and have a positive impact on corporate performance. Based on this, this paper proposes the following hypothesis:

H3: Corporate social responsibility can positively promote the negative correlation between corporate debt financing and corporate performance, that is, corporate social responsibility can reduce the proportion of corporate debt financing, thus promoting the improvement of performance.

## **3. Sample Selection and Study Design**

### **3.1. Sample Selection and Data Sources**

This paper selects the financial data of A-share non-financial listed companies in Shanghai and Shenzhen from 2015 to 2019 as the research sample. In order to make the sample data more representative, this paper sorts out the sample data as follows: first, the sample companies in Hexun.com that did not report social responsibility scores in that year were excluded; Secondly, the sample companies of financial industry and insurance industry are excluded. Third, exclude ST and other listed companies that are specially treated; Fourth, the listed companies that have not disclosed or not disclosed the information of relevant variables are excluded. In order to eliminate the influence of extreme values, all non-dummy variables are treated with a 1% reduction at the first and last level. The financial data of this paper comes from the database of Guotai 'an (CSMAR), and the social responsibility score data are obtained by manually sorting out the data of the professional evaluation system of the social responsibility report of listed companies of Hexun.com. Excel and Stata15.0 software are used to process the above data.

### **3.2. Explanation of Variables**

#### **3.2.1. Explained variable**

Business Performance (ROA). At present, the measurement indicators of corporate performance at home and abroad mainly include return on total assets (net profit/average total assets, ROA), return on equity (after-tax profit/net assets, ROE), Tobin's Q value (market value/asset replacement cost). Foreign scholars generally use Tobin's Q value to measure enterprise value. However, due to the immaturity of domestic capital market, market value and asset replacement cost are simply measured by stock price, which has low reliability. Therefore, return on total assets (ROA) is selected as the index to measure the enterprise performance and measure the overall profitability of the enterprise, and return on equity (ROE) is its substitute variable.

#### **3.2.2. Explanatory variables**

Asset-liability ratio (LEV). The debt financing degree of an enterprise can be expressed as the leverage ratio of the enterprise. The paper draws on the research of Long Haiming and Hu Ming (2020) and adopts the asset-liability ratio of the enterprise to reflect the leverage ratio of the enterprise and reflect the debt degree of the enterprise, and the data is easy to obtain and has strong comparability.

#### **3.2.3. Adjust the variable**

Corporate social responsibility(CSR).Previous scholars mainly adopts content analysis method and the third party rating method to measure the corporate social responsibility, but the content analysis relies too much on subjective judgment, in order to eliminate the influence of subjective factors for final conclusion, this paper fang-zhao zhou, Jin Yuan culture(2020), published by the listed company social responsibility rating of HeXun to represent corporate social responsibility, Let's call it a CSR.The index is composed of five dimensions: shareholder responsibility, employee responsibility, supplier customer and consumer responsibility, environmental responsibility and social responsibility (charitable donation responsibility), and a comprehensive score representing corporate social responsibility is

calculated through a certain weighting.In order to avoid the impact of the range on the results, the comprehensive score of corporate social responsibility divided by 100 represents the variables in this paper.

### 3.2.4. Control variables

Based on the research of Shi Min (2017) and Li Shu (2014), this paper set the following 6 control variables: Company SIZE (SIZE), total asset turnover (TATO), CAPITAL intensity (CAPITAL), main business GROWTH rate (GROWTH), shareholding ratio of top ten shareholders (H10), enterprise nature (SOE), INDUSTRY and YEAR. To control for the effects of year and industry on the regression results.

The specific definitions of the above variables are shown in Table 1:

**Table 1.** Primary variable definitions

Variable types	The variable name	Variable symbol	Variable declaration
Explained variable	Return on total assets	ROA	Net profit/total assets
Explanatory variables	Debt financing	LEV	Total liabilities/total assets
Adjust the variable	The social responsibility	CSR	Hexun.com social responsibility comprehensive score
Control variables	The enterprise scale	SIZE	Number of total assets of the enterprise
	Total asset turnover	TATO	Operating income/total average assets
	Degree of capital intensity	CAPITAL	Fixed assets/total assets
	Growth rate of main Business	GROWTH	(Current period main business revenue - last period main business revenue)/last period main business revenue
	Enterprise nature	SOE	The value is 1 for state-owned enterprises and 0 for non-state-owned enterprises
	Shareholding ratio of top 10 shareholders	H10	Represents management shareholding status
	industry	INDUSTRY	Industry dummy variable
	year	YEAR	Annual dummy variable

### 3.3. Model Construction

To test the relationship between hypothesis 1 debt financing and firm performance, a model was constructed (1):

$$ROA = \alpha_0 + \alpha_1 LEV + \alpha_2 SIZE + \alpha_3 TATO + \alpha_4 CAPITAL + \alpha_5 GROWTH + \alpha_6 SOE + \alpha_7 H10 + \alpha_8 YEAR + \alpha_9 INDUSTRY + \epsilon.$$

Explained variable is ROA to measure enterprise performance, and explained variable LEV is the debt financing cost of the enterprise. If LEV coefficient is negative, it proves the negative correlation between the two, that is, high debt is not conducive to the improvement of performance.

In order to test hypothesis 2, the relationship between corporate social responsibility and corporate debt financing was constructed (2):

$$LEV = \beta_0 + \beta_1 CSR + \beta_2 SIZE + \beta_3 IGR + \beta_4 CAPITAL + \beta_5 GROWTH + \beta_6 SOE + \beta_7 H10 + \beta_8 YEAR + \beta_9 INDUSTRY + \epsilon.$$

The explained variable is LEV to measure the degree of corporate debt financing, and the explained variable is CSR to measure corporate social responsibility. If the CSR coefficient is negative, it proves the negative correlation between the two, that is, corporate social responsibility can reduce corporate debt financing.

In order to test the moderating effect of hypothesis 3 on corporate debt financing and corporate performance, a model was constructed (3):

$$ROA = \gamma_0 + \gamma_1 LEV + \gamma_2 CSR + \gamma_3 CSR \times LEV + \gamma_4 SIZE + \gamma_5 IGR + \gamma_6 CAPITAL + \gamma_7 GROWTH + \gamma_8 SOE + \gamma_9 H10 + \gamma_{10} YEAR + \gamma_{11} INDUSTRY + \epsilon.$$

Model (3) adds CSR and interaction item CSR×LEV on the basis of model (1).If there is a negative correlation between LEV and ROA in model (1), a negative correlation between CSR and LEV in model (2), and the coefficient of interaction item CSR×LEV in model (3) is significantly positive, it indicates that corporate social responsibility can reduce debt financing and thus have a positive effect on performance. If the coefficient of interaction term is significantly negative, it indicates that corporate social responsibility cannot alleviate the negative correlation between debt financing and performance. If the interaction term coefficient is not significant, it indicates that the moderating effect of corporate social responsibility is not significant.

## 4. Empirical Analysis

### 4.1. Descriptive Statistics

The descriptive statistical results are shown in Table 2.

The average return on total assets of China's Shanghai A-share listed companies is 0.049, and the standard deviation is 0.072, indicating that the performance level of China's Shanghai and Shenzhen A-share listed companies is generally good, and the development is balanced. The average asset-liability ratio of enterprises is 0.425, and the median is 0.414. The large average asset-liability ratio indicates that the debt financing scale of listed companies in China is large, and the gap between the maximum value and the minimum value is large, and the borrowing scale of different enterprises is different. The average score of CSR is 0.217, and its

corresponding grade is D in Hexun.com's comprehensive social responsibility scoring system, with A median of 0.214, indicating that more than half of China's A-share listed companies in Shanghai and Shenzhen have A corporate social responsibility score of D or below, and they do not pay enough attention to social responsibility. Enterprises do not pay attention to social responsibility; The standard deviation is as high as 0.129, and there is a significant difference in the overall score of corporate social responsibility. Therefore, enterprises need to further strengthen their emphasis on corporate social responsibility.

**Table 2.** Statistical table of variable description

variable	Sample size	The median	The mean	The standard deviation	The minimum value	The maximum
ROA	14287.000	0.050	0.049	0.072	0.330	0.229
LEV	14287.000	0.414	0.425	0.203	0.062	0.922
CSR	14287.000	0.214	0.217	0.129	0.044	0.704
SIZE	14287.000	22.153	22.312	1.287	19.974	26.245
GROWTH	14287.000	0.106	0.191	0.478	0.579	3.240
CAPITAL	14287.000	0.174	0.208	0.161	0.002	0.700
TATO	14287.000	0.530	0.620	0.414	0.069	2.480
H10	14287.000	59.520	58.655	14.708	24.370	90.170
SOE	14287.000	0.000	0.345	0.475	0.000	1.000

## 4.2. Correlation Analysis

It can be seen from Table 3 that debt financing has a significant negative correlation with corporate performance at the significance level of 1%, and the improvement of corporate debt financing will hinder the improvement of corporate performance. Hypothesis 1 has been preliminarily verified. The correlation coefficient between corporate social responsibility evaluation and debt financing cost is -0.093, which has a significant negative correlation at the level of

1%. The correlation coefficient between corporate social responsibility and corporate performance is 0.501, showing a significant positive correlation between the two, which preliminarily indicates that corporate social responsibility actively reduces corporate debt and promotes the improvement of corporate performance. The correlation between other variables of the sample is small, indicating that there is basically no multicollinearity problem, and the model can be regression.

**Table 3.** Correlation coefficients

	ROA	CSR	LEV	SIZE	GROWTH	CAPITAL	TATO	H10	SOE
ROA	1								
CSR	0.501 ***	1							
LEV	0.273 ***	0.093 ***	1.000						
SIZE	0.056 ***	0.229 ***	0.510 ***	1.000					
GROWTH	0.192 ***	0.094 ***	0.027 ***	0.046 ***	1.000				
CAPITAL	0.013	0.079 ***	0.054 ***	0.086 ***	0.094 ***	1.000			
TATO	0.197 ***	0.083 ***	0.088 ***	0.037 ***	0.114 ***	0.011	1.000	1	
H10	0.222 ***	0.186 ***	0.062 ***	0.150 ***	0.092 ***	0.023 ***	0.080 ***	1.000	
SOE	0.046 ***	0.069 ***	0.256 ***	0.352 ***	0.075 ***	0.195 ***	0.011	0.011	1.000

## 4.3. Analysis of Regression Results

The data samples in this paper were non-balanced panel data. OLS regression and fixed effect regression were performed on all models respectively. After correlation analysis, the fixed effect model was used for regression in this paper.

Regression results as shown in table 4, as you can see, the model 1 shows LEV regression coefficients of ROA is 0.242 under the 1% level significantly, regression results show that the corporate debt financing and corporate performance show significant negative correlation relationship, established in this paper, we assume that 1, higher debt financing to make enterprises face higher financial and operational risks, Therefore, other conditions being equal, low debt financing is conducive to the improvement of corporate performance. It can be seen from the second column of Table 4 that the overall

regression results of Model 2 are significant, and the regression coefficient of CSR to LEV shows a significant negative correlation at the level of 1%. Therefore, a high social responsibility score of enterprises is conducive to reducing corporate debt financing, which proves hypothesis 2. The third column of Table 4 reveals the regression results when social responsibility is used as a moderating variable. The regression coefficient between CSR×LEV and ROA is 0.068, which has a significant negative correlation at the 1% level, indicating that when enterprises actively undertake social responsibility, debt financing of enterprises is lower, which also promotes the improvement of corporate performance. Social responsibility plays a significant moderating role between debt financing and corporate performance. Model 3 other control variables in the regression results show that the total asset turnover, enterprise scale, main business growth and business performance are

related, fixed assets ratio showed significant negative correlation between corporate performance and relationship, so enterprises need to attach importance to fixed assets turnover speed of ascension, and the nature of enterprise business performance regression result was not significant.

#### 4.4. Robustness Test

In this paper, the stability test was conducted by

substituting variables and changing sample time intervals, and the fixed effect model was used for regression. The return on equity of an enterprise can reflect its ability to create net assets through capital. The return on equity of total assets is replaced by the return on equity to represent the performance of the enterprise. After replacing variables and changing the sample time interval, the regression results are basically consistent with the above.

**Table 4.** Regression results

variable	Model 1	Model 2	Model 3
	ROA	LEV	ROA
CONSTANT	0.781*** (15.35)	1.359*** (18.39)	0.660*** (13.78)
LEV	0.242*** (37.57)		0.222*** (32.20)
CSR		0.104*** (14.11)	0.148*** (14.33)
CSR×LEV			0.068*** (3.59)
SIZE	0.041*** (21.71)	0.087*** (32.25)	0.034*** (19.03)
GROWTH	0.016*** (14.01)	0.003* (1.71)	0.014*** (12.58)
CAPITAL	0.067*** (7.27)	0.166*** (12.22)	0.048*** (5.45)
TATO	0.074*** (21.20)	0.009* (1.68)	0.064*** (19.27)
H10	0.000 (0.40)	0.003*** (18.91)	0.000 (0.73)
SOE	0.010* (1.91)	0.010 (1.40)	0.008* (1.81)
YEAR	YES	YES	YES
INDUSTRY	YES	YES	YES
N	1.4 e+04	1.4 e+04	1.4 e+04
F	112.160	65.970	164.877

**Table 5.** Robustness test

variable	Model 1	Model 2	Model 3
	ROE	LEV	ROE
CONSTANT	4.964*** (22.58)	2.123*** (22.82)	2.969*** (16.22)
LEV	0.992*** (34.85)		1.001*** (35.37)
CSR		0.318*** (24.54)	0.116** (2.29)
CSR×LEV			2.372*** (25.46)
SIZE	0.240*** (27.26)	0.118*** (32.56)	0.144*** (19.40)
GROWTH	0.036*** (7.00)	0.008*** (3.80)	0.015*** (3.69)
CAPITAL	0.039 (1.04)	0.127*** (7.83)	0.077** (2.51)
TATO	0.151*** (9.86)	0.030*** (4.53)	0.064*** (5.08)
H10	0.001 (1.13)	0.002*** (9.13)	0.001*** (2.93)
SOE	0.007 (0.42)	0.013* (1.82)	0.004 (0.29)
YEAR	YES	YES	YES
INDUSTRY	YES	YES	YES
N	9275.000	9275.000	9275.000
F	77.637	77.023	211.620

#### 4.5. Further Analysis

This paper further studies the impact of the five dimensions of CSR and the cross term of debt financing on corporate performance to verify whether different dimensions of CSR have a moderating effect on the relationship between debt financing and corporate performance. Watch list, the debt financing and corporate performance coefficient to 1% significance level is negative, financing and the shareholders liability for the debts of the enterprise by item and corporate debt financing and social responsibility to pay by item and

significantly positive correlation coefficient of enterprise performance, companies make active shareholder responsibility and the social donation and so on can provide corporate performance significantly. However, other dimensions of CSR do not have the same conclusion as the above, which needs further investigation. It can be seen from the further analysis of the text that enterprises need to actively make charitable donations to establish a good corporate image and ensure the rights and interests of shareholders to promote the improvement of corporate performance.

**Table 6.** For further analysis

variable	ROA	ROA	ROA	ROA	ROA
CONSTANT	0.394*** (10.62)	0.781*** (15.35)	0.781*** (15.36)	0.781*** (15.37)	0.709*** (14.30)
LEV	0.103*** (17.28)	0.241*** (34.45)	0.242*** (37.50)	0.243*** (37.50)	0.234*** (35.06)
Stknumber	0.870*** (45.64)				
Stknumber ×LEV	0.196*** (5.47)				
Lootchip		0.017 (0.27)			
Lootchip× LEV		0.036 (0.30)			
Scramble			0.015 (0.38)		
Scramble×LEV			0.061 (0.79)		
Rscramble				0.034 (0.82)	
Rscramble× LEV				0.092 (1.16)	
Strongstk					0.313*** (8.51)
Strongstk× LEV					0.181*** (2.61)
SIZE	0.017*** (11.85)	0.041*** (21.68)	0.041*** (21.72)	0.042*** (21.73)	0.038*** (20.35)
GROWTH	0.007*** (7.88)	0.016*** (14.01)	0.016*** (14.00)	0.016*** (13.98)	0.015*** (12.98)
CAPITAL	0.001 (0.18)	0.067*** (7.27)	0.067*** (7.25)	0.067*** (7.25)	0.062*** (6.90)
TATO	0.027*** (10.51)	0.074*** (21.20)	0.074*** (21.20)	0.074*** (21.23)	0.068*** (19.97)
H10	0.000*** (6.08)	0.000 (0.39)	0.000 (0.37)	0.000 (0.38)	0.000 (0.92)
SOE	0.002 (0.66)	0.010* (1.91)	0.010* (1.91)	0.009* (1.89)	0.011** (2.27)
YEAR	YES	YES	YES	YES	YES
INDUSTRY	YES	YES	YES	YES	YES
N	1.4 e+04	1.4 e+04	1.4 e+04	1.4 e+04	1.4 e+04
F	516.659	105.134	105.183	105.199	131.970

## 5. Conclusions, Suggestions and Limitations

### 5.1. Conclusion

Based on the data of Chinese A-share listed companies in Shanghai and Shenzhen from 2015 to 2019, this paper focuses on the analysis of the relationship between debt financing and corporate performance, and analyzes the moderating effect of corporate responsibility between them. After analysis, the following conclusions are drawn: First, the higher the corporate debt financing, the lower the corporate performance, the higher the corporate debt financing will increase the risk of debt default and the risk of capital debt repayment, enterprise stakeholders will charge risk premium to enterprises due to high risk, increase the financial cost of enterprises, hinder the improvement of corporate profitability. In the case of high debt financing, enterprises tend to invest in risky projects, which reduces the investment efficiency and innovation input of enterprises, which is not conducive to the long-term development of enterprises. Therefore, enterprises need to reduce corporate financing to promote the improvement of corporate performance. Secondly, corporate social responsibility helps to reduce debt financing, and can positively adjust the negative effect of debt financing on corporate performance. Under the supervision of related interests, enterprises will reduce their investment in high-risk projects and encourage them to choose low-risk investment projects. Corporate social responsibility can reduce debt financing and improve corporate performance. Third, through the analysis of the five dimensions of corporate social responsibility? And the relationship between debt financing costs, the study found that the enterprises to undertake social responsibility in five dimensions are negatively related to the corporate debt financing, corporate shareholder responsibility and social responsibility can significantly adjust the debt financing cost and the relationship between the corporate performance, which reduce the debt financing of enterprises, and further promote the business performance improvement.

### 5.2. Suggestions

By analyzing the relationship between debt financing and corporate performance and the moderating effect of corporate social responsibility between them, this paper puts forward the following suggestions on how to improve corporate performance: First, companies need to actively undertake social responsibility, combined with the current epidemic situation, the government of the corresponding call to pay attention to the interests of enterprise employees and other stakeholders, to strengthen links with the government actively makes charitable donations, the enterprise bear the social responsibility of the good cultural atmosphere, establish a good corporate image, reduce the debt financing of enterprises, improve enterprise performance. Second, government departments through policy encourage enterprises to actively undertake social responsibility, intensify policy support to bear the social responsibility of enterprises, to actively undertake the social responsibility of the enterprise to give preferential tax policies, and to give honor or bonuses, and carries on the propaganda in the society, to ignore corporate social responsibility and damage the interests of the public enterprise is increasing punishment for it, To guide enterprises to pay attention to and actively

undertake corporate social responsibility. Finally, the promotion enterprise's overall leverage, will be conducive to the improvement of enterprise operating performance, the need to make full use of the resources of our capital market, listed companies improve enterprise direct financing ability, to reduce the debt financing and guard against enterprise financial risk focus on implementation of the capital increase of channels, actively promoting quality enterprises listed financing, guide the folk capital investment, Promote enterprise transformation and upgrading and improve performance.

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