

# Does Local Debt Governance Ease Corporate Financing Constraints? Empirical Evidence from Chinese A-share Listed Companies

Banchi Xia

Wuhan University of Technology, Wuhan, China

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**Abstract:** Local debt governance is an important practice of China's economy in the new era. Based on the A-share data of Chinese listed companies from 2010 to 2019, this paper takes the 2015 "New Budget Law" as an exogenous impact and constructs an intensity DID model. The research finds that local debt governance will make companies reduce cash on hand, thereby effectively alleviating the impact of corporate debt. A series of robustness tests prove the rationality and effectiveness of the DID model. The results of heterogeneity analysis show that local debt governance has different effects on alleviating the financing constraints of different types of enterprises. Among them, the effect on non-state-owned enterprises is stronger than that on state-owned enterprises, and the effect on high-tech enterprises is stronger than that on low-tech enterprises. What's more, the role of enterprises is stronger for enterprises in inland cities than for enterprises in coastal cities. This paper provides relevant policy suggestions for optimizing local debt governance and promoting the high-quality development of enterprises in the new era.

## 1 INTRODUCTION

Since the 18th National Congress of the Communist Party of China, the central government has issued a series of policies to administer local debts, the fundamental purpose of which is to prevent and resolve financial risks. Local government debt governance is an important fiscal and financial system reform of the Chinese government since the new era, and it has played an important role in the financial sector, micro-market entities, and monetary and credit sectors. During the 2008 financial crisis, the Chinese government introduced a large-scale stimulus plan to expand domestic demand, drive investment, and ease the pressure of the financial crisis. Local governments have chosen to issue local bonds on a large scale in order to collaborate with the central government's policies, and most of the debts have not been included in the budget management. There have been problems such as large debts, insufficient supervision, and unclear responsibilities. In response to these problems, the Chinese government issued the "Budget Law of the People's Republic of China in 2014" to coordinate and guide the governance of local debt. It has also continuously amended the law, standardized the governance

methods and introduced them to all localities, solved problems left over from history, enhanced the supervision of local debt, and fully included local debt in the tabled budget.

Enterprise financing constraints make enterprises confront problems such as high financing costs, difficult financing, and slow financing speed. These problems have a particularly obvious impact on small and medium-sized enterprises. The increase in the cost of the financing process will cause the company to abandon a part of the original investment activities with a positive net present value when investing and has to choose an investment with higher net income and greater risk, changing the existing investment structure of the company, and facing Higher risk management costs. Enterprise financing constraints hinder the long-term healthy development of enterprises, which may cause some enterprises to withdraw from the market due to cost reasons, reduce market competition, affect market vitality, and thus deal a blow to the country's overall economy. Easing corporate financing constraints helps companies obtain sufficient cash flow to support their rapid development, prompts companies to optimize their investment structure, diversify their investments to diversify their investment risks, and promote the long-term sustainable development of the capital market.

To explore the impact of local debt governance on corporate financing constraints is of significant significance to China's capital market, which is conducive to standardizing the development of marketization and stimulating the investment and financing activities of enterprises. The innovation points and contributions of this paper are as follows: First, in terms of content, the implementation of the New Budget Law in 2015 is taken as a quasi-natural experiment, and the investment and financing activities of enterprises are included into the governance framework system of local government debt, which is conducive to revealing the influence of local debt governance on micro subjects. Secondly, the intensity DID model was used to accurately identify the causal effect and solve the possible endogeneity and missing variable bias. This paper provides experience references for the virtuous circle of government debt and the high-quality development of micro market players in the new era.

The remaining contents of this paper are arranged as follows: the second part is the policy background and literature review, the third part is the data processing and model setting, the fourth part is the baseline regression and robustness test, the fifth part is the heterogeneity analysis, and the sixth part is the conclusion and policy enlightenment.

## 2 BACKGROUND AND LITERATURE REVIEW

### 2.1 System Background

Since China's reform and opening up policy, with the establishment of the market economic system, the scale of local government debt has been expanding. The government is making efforts to make the issuance of local bonds more transparent and institutionalized through supervision. With the historical change of the concept of social and economic development in the new era, the debt governance mode needs to be changed from the traditional quantitative governance based on GDP to the performance governance oriented by long-term benefits, and focus on improving the quality and efficiency of debt financing.

Since China entered the fast lane of economic development in the 1990s, the speed of urbanization has accelerated, and more and more attention has been paid to the construction of infrastructure in various regions to protect people's livelihoods and further promote economic development. In this

situation, the local government is facing huge pressure from a shortage of funds and stagnant development. In order to ease the economic pressure on local governments, China began to implement the local debt policy to raise funds for local governments to support their development. The issuance of local government bonds in China can be divided into four stages. The first stage is from 2009 to 2010, China implemented the policy of issuing and repaying on behalf of the central government. The Ministry of Finance should issue the "2009 Local Government Bond Budget Management Measures", which formulated the policy of the Ministry of Finance to issue local bonds on behalf of local governments. In the same year, the State Council approved the Ministry of Finance to issue 200 billion yuan of local bonds as an agent. The second stage is from 2011 to 2013, China implemented the pilot project of self-issued local debt repayment by local governments. The Ministry of Finance issued the "Pilot Measures for Issuing Bonds by Local Governments in 2011", which designated Shanghai, Guangdong, Zhejiang, and Shenzhen as pilot areas for voluntary repayment, and the policy of repayment and repayment is still implemented in other regions except for the pilot area. The third stage is from 2014 to 2015, China implemented the pilot project of local government self-issue and self-repayment of local debt. The "2014 Local Government Bond Self-Issuance and Self-Repayment Pilot Measures" issued by the Ministry of Finance stipulated that local governments have the right to voluntarily issue book-keeping fixed bonds. Interest rate bonds. In the same year, the "New Budget Law" was revised and would be officially implemented from 2015. Article 35 of it stipulates that part of the funds for construction investment necessary for the budgets of provinces, autonomous regions, and municipalities approved by the State Council may be borrowed through the issuance of local government bonds within the limit determined by the State Council, furthermore standardize the policies related to the self-issue and self-repayment of local debt. The fourth stage is from 2015 to the present, the issuance of the "Local Government General/Special Bond Budget Management Method" marks the full implementation of local governments' self-issued and self-repaid local debts. The issuance of local government bonds in China presents the characteristics that the issuer goes from top to bottom and the scale of issuance gradually increases.

At present, China's local government debt model has formed an institutional framework with notice, measures, and opinions as the main body, with the Ministry of Finance as the core regulatory body, the

People's Bank of China, the China Banking Regulatory Commission and the National Development and Reform Commission as the central point, and other departments as the response points. In the "management measures", the focus is on the policy design of borrowing, using, and repayment.

## 2.2 Literature Review

The existing literature on research on local debt and micro-market entities is carried out from two aspects, one of which is the impact of local debt on the economy, and the other is the relationship between local debt and corporate financing.

### 2.2.1 Local Debt and Economy System

With the gradual acceleration of regional construction in China, local governments are facing increasing financial pressure. In order to meet the financial needs of local governments, the scale of local bond issuance has also increased rapidly. Large local debts and long debt repayment time have also led to problems such as insufficient government repayment capacity, unsound risk management and control mechanisms, and debt invisibility (Zhou & Ren 2020). Local governments in China are also carrying out local debt management while implementing the local debt policy. The methods and key points of local debt governance have always been hotly debated issues in academic circles. (Tao 2015) pointed out that the government needs to improve the fiscal transparency of local governments and reform the fiscal system. (Guo & Mao 2019) believe that the debt governance model needs to shift from traditional quantitative governance based on gross domestic product to long-term benefit-oriented performance governance, focusing on improving the quality and efficiency of debt financing. (Li, Zhou, Liu & Ge 2022) believe that local governments need to promote debt legislation, formulate a sound public debt law, and establish a social monitoring mechanism for the use of debt funds. However, the conclusions of the academic circles are not uniform regarding the impact of local debt governance on Chinese economic development. (Zhang & Wang 2009) pointed out that only by strictly controlling the risks of local bond issuance can local bonds promote the development of China's economy, while (Zheng & Zhang 2020) believed that the growth of local bonds may inhibit technological innovation, enterprises, and investment, thereby inhibiting the development of the real economy. (Tang 2022) pointed out that the scale of local government debt in China has exceeded a

reasonable threshold, and the crowding out effect of debt expansion on the real economy is more obvious. (Panizza & Presbitero 2013) pointed out that the relationship between government debt and economic growth is not monotonous, and the threshold of monotonic transition may not be single. (Wu 2014) also confirmed through empirical evidence that there is a nonlinear relationship between economic growth and local government debt.

### 2.2.2 Local Debt and Corporate Financing Constraints

The impact of local debt on corporate behavior is multifaceted. (Yang & Song 2015) believed that local debt can not only have a micro impact on corporate behavior but may also lead to macro risks such as fiscal risks and financial risks, thereby affecting corporate behavior. The direct impact of local debt on enterprises is reflected in the impact on corporate innovation. High R&D companies are more likely to be exposed to government debt than low R&D companies (Croce, Nguyen, Raymond & Schmid 2019). (Xu, Li, Feng, Wu, & He 2021) studied the data of China's Shanghai and Shenzhen A-share listed companies and 31 provinces' local debts and concluded that local debts have a relatively strong crowding-out effect on corporate R&D investment. (Zhang, Yin & Wang 2021) conducted an empirical study to show that the level of hidden debt in local government debt has a significant inhibitory effect on the patent applications of local companies and leads to a reduction in internal R&D expenses. Some scholars conduct research on state-owned enterprises and private enterprises separately. (Liang, Shi, Wang & Xu 2017) found that the expansion of local government debt greatly crowded out the leverage of non-state-owned enterprises, and also crowded out the leverage of state-owned enterprises. (Huang, Pagano & Panizza 2020) found that local debt restricts the investment of private enterprises by tightening capital restrictions, but does not affect the investment of state-owned enterprises.

Existing literature has different views on whether local debt can effectively alleviate corporate financing constraints. (Luo & Mi 2010) believed that local debt is an effective way to solve the current financing difficulties of SMEs. It enables small and medium-sized enterprises to get rid of the discrimination of banks and other financial institutions in indirect financing. (Demirci, Huang & Sialm 2019) studied the data of several countries and found that there is a negative correlation between government debt and corporate leverage, and government debt crowds out

corporate debt. However, (Zhen, Zhang, She, Shen & Chen 2020) used the PVAR model to carry out empirical analysis and concluded that the growth of local debt and financial efficiency are two-way linkages and mutual promotion; while the growth of local debt will crowd out financing for private SMEs and push up financing costs.

### 3 METHODS AND MATERIALS

#### 3.1 Experimental Subject

The empirical analysis in this paper uses three major databases: the first is the A-share database of Chinese listed companies from 2010 to 2019, which includes the basic information of listed companies, total assets, total liabilities, owners' equity, cash flow and other financial indicators, as well as the patent information of enterprises. The second is the 2010-2019 prefecture-level city database, which includes population, GDP, primary industry, secondary industry, tertiary industry and other relevant information at the prefecture-level city level. The third is the local debt database for 2010-2019, which contains the total outstanding debt of prefecture-level cities and can measure the scale and timing of debt issuance. The data used in this demonstration are all from the CSMAR database.

#### 3.2 Empirical Method

##### 3.2.1 Methodology

Since this empirical study is about the change of corporate financing constraints before and after the implementation of China's local debt governance

policies, we choose the DID model to evaluate the policy effect. Compared with other statistical methods, the DID model can control the qualitative heterogeneity that does not change over time, avoid the endogeneity problem, alleviate the missing variable bias problem, and better reflect the changes of the research object before and after a certain exogenous impact.

##### 3.2.2 Model Setting

In order to identify the causal effect of the "New Budget Law" implemented in 2015, we constructed an intensity DID model. Because the "New Budget Law" in 2015 was rolled out at a comprehensive level at once without a pilot, therefore, ordinary DID cannot be used for estimation, we use the intensity of local debt issuance in the database to group according to the median, among which those greater than or equal to the median enter the treatment group, and those less than the median enter the control group. Taking this as the core, the model is constructed as follows:

$$cflow_{ict} = \alpha_0 + \alpha_1 treat * post + \alpha_2 X_{ict} + \delta_i + \sigma_c + \varphi_t + \varepsilon_{ict} \quad (1)$$

Among them,  $cflow_{ict}$  represents the financing constraints of  $i$  enterprises in city  $c$  in year  $t$ ,  $treat$  represents the grouping according to the intensity of local debt issuance,  $post$  is a policy dummy variable,  $\delta_i$  represents a dummy variable at the enterprise level,  $\sigma_c$  represents a dummy variable at the city level, and  $\varphi_t$  represents a dummy variable at the time level,  $\varepsilon_{ict}$  representing the random disturbance term.

The statistical analysis software used in this paper is Stata17. Table 1 shows the code interpretation of the explanatory variables and the explained variables used in Stata. Figure 1 is a statistical description of the variables studied in this paper.

Table 1: Code interpretation of the statistical variables.

Variable code	Variable
cash	Cash holdings
did	$treat * post$
size	Company size; $\ln(TA)$
lnSale	Logarithm of the operating income
lnage	Logarithm of the age of a listed company
roa	ROA
roe	ROE
rjgdp	Urban GDP per capita
decyzb	The added value of the secondary industry accounted for GDP
dscyzb	The added value of the tertiary industry accounted for GDP
rkzrzl	Natural population growth rate
fisspt	Financial freedom
fiscal	Scale of fiscal expenditure

variable	N	mean	sd	min	max
cash	26821	.2026686	.1558695	0	1
did	27249	.3454439	.4755215	0	1
size	26908	22.13474	1.529014	13.07597	31.03586
lnSale	26363	21.32663	1.568032	9.044175	28.7183
lnage	26615	2.05288	.9246495	0	3.401197
roa	26908	.0349992	.7694489	-48.31592	108.3657
roe	26697	.0609061	5.472797	-207.3971	713.2036
rjgdp	25897	97783.16	54119.49	8988	467749
decyzb	23985	42.4135	11.18864	14.74	89.75
dscyzb	23985	53.1928	13.45522	9.76	83.52
rkzrzl	27068	5.997388	6.215792	-16.64	39.18
fisspt	27245	1.514345	.7692321	.6488204	14.24419
fiscal	26375	.1553425	.0570697	.0438815	.6750427

Figure 1: Statistical description of variables.

## 4 BASIC REGRESSION AND ROBUSTNESS TEST

### 4.1 Basic Regression

We use the database of listed companies to verify the benchmark regression model. The regression results are shown in Figure 2. Column (1) is the company’s cash on hand as the explained variable. We can find that the regression result is negative and significant at 5%. Column (2) added the control variables at the enterprise level on the basis of column (1), we can see that the direction of the regression result is still unchanged, and the significance is 1%; then, we add the control variables at the city level variable, the regression results are shown in column (3) in Figure 2, we can find that the result is still significantly negative at the 1% level. It can be found that after the implementation of the new budget law, local governments have strengthened the management of debt quotas, financing constraints in the entire market have been relaxed, more resources will flow into enterprises, and enterprises’ expectations for the future will become better. Under normal circumstances, the company will increase investment and reduce cash on hand, so we found that the cash on hand of the company has decreased through regression, and the financing constraints have been eased at this time.

	(1) cash	(2) cash	(3) cash
did	-0.0152** (0.0277)	-0.0136*** (0.0008)	-0.0135*** (0.0011)
size		0.0070 (0.1617)	0.0079 (0.1021)
lnSale		-0.0188*** (0.0001)	-0.0203*** (0.0000)
lnage		-0.1574*** (0.0000)	-0.1656*** (0.0000)
roa		0.0131*** (0.0000)	0.0134*** (0.0000)
roe		0.0002 (0.5660)	0.0000 (0.9474)
rjgdp			-0.0000 (0.3577)
decyzb			0.0029 (0.1055)
dscyzb			0.0027 (0.1480)
rkzrzl			-0.0001 (0.7658)
fisspt			-0.0163*** (0.0028)
fiscal			0.0239 (0.7963)
_cons	0.2062*** (0.0000)	0.7767*** (0.0000)	0.5646*** (0.0019)
N	26639	25688	22386

Figure 2: Basic regression results.

### 4.2 Robustness Test

#### 4.2.1 Parallel Trend Test

We use the event study method to test the parallel trend, on this basis, construct the econometric model as follows:

$$cflow_{ict} = \alpha_0 + \beta \sum_{k \geq -3}^3 treat * D_t^k + \alpha_2 X_{ict} + \delta_i + \sigma_c + \varphi_t + \varepsilon_{ict} \quad (2)$$

Among them,  $D_t^k$  is an event-time dummy variable with a value of 0 or 1. The value of  $k$  ranges from  $-3$  to  $3$ . When  $k < 0$ , the value is 1 in the  $k$ -th year before the policy shock occurs, otherwise it is 0; when  $k > 0$ , the value is 1 in the  $k$ -th year after the policy shock occurs, otherwise it is 0; if  $k = 0$ , the value is 1 in the year when the policy shock occurs, otherwise it is 0. When doing regression, we will use it as a baseline group to compare the difference between the treatment group and the control group.

Figure 3 shows the test results of parallel trends. The dot in the figure represents the estimated value of did coefficient, reflecting the financing constraints of the enterprise. The dotted line passing through the dot and perpendicular to the horizontal axis represents the 95% horizontal confidence interval. pre3-pre2 represents the estimated value of did coefficient corresponding to the three years before the occurrence of the policy to the two years before the occurrence of the policy. post1-post3 represents the estimated value of did coefficient corresponding to one year to three years after the occurrence of the

policy. As shown in the figure, pre3-post1 fluctuates around 0, which corresponds to a wider 95% confidence interval and crosses 0, indicating that there is no significant difference between the treatment group and the control group compared with the year before the implementation of the New Budget Law in 2015. In summary, before the policy impact occurred, the gap between the enterprises in the treatment group and the control group in financing constraints did not change significantly, indicating that the parallel trend hypothesis was valid. In addition, Figure 1 also reflects the dynamic impact of policy shocks on corporate financing constraints. post2-post3 is significantly negative, which proves that local debt governance policies only take effect two years after their implementation, and corporate cash inventory decreases, reflecting that corporate financing constraints have been alleviated to some extent. From the perspective of the size of the regression coefficient, the coefficient of local debt governance has a downward trend since the second year after the implementation of local debt governance policy, which proves that the easing effect of local debt governance on corporate financing constraints has gradually increased.

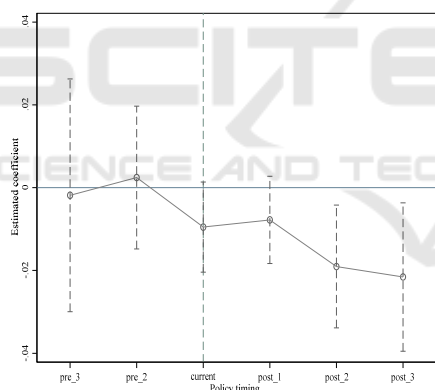


Figure 3: Parallel trend test.

#### 4.2.2 Placebo Test

Select all enterprises in the year of policy implementation in 2015 from the overall panel data, randomly select 50% of the enterprises and match them with the overall panel data, 50% of the enterprises selected are used as the experimental group, and the rest are used as the control group. Do DID processing on it, and repeat this process 200 times. The final result is shown in Figure 4, which shows the results of 200 random processes, where the X-axis represents the size of the estimated coefficient of the "pseudo-policy dummy variable", the Y-axis

represents the density value and p value, and the curve is the estimated coefficient Kernel density distribution, the dots are the p-values corresponding to the estimated coefficients, the vertical dotted line is the true estimated value of the DID model  $-0.013$ , and the horizontal dotted line is the significance level of 0.1. It can be seen that most of the estimated coefficients are concentrated around zero, and most of the p-statistics are greater than 0.1. The real estimated value of the DID model is an obvious outlier, indicating that the policy implementation effect is significantly different from the placebo effect, and the reform of the new budget law on local debt is the reason for the change in corporate financing constraints.

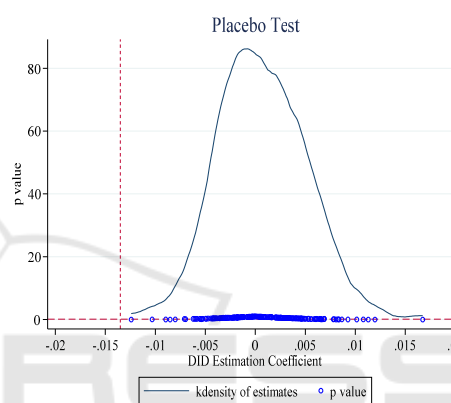


Figure 4: Placebo test.

## 5 HETEROGENEITY ANALYSIS

### 5.1 State-Owned Enterprises and Non-State-Owned Enterprises

The nature of the enterprise is an important reason that affects the financing constraints of the enterprise. According to the attribution of enterprise ownership, we divide the enterprises studied into state-owned enterprises and non-state-owned enterprises, and include them in the regression respectively, as shown in Figure 5, in which columns (1) and (2) is the regression result of non-state-owned enterprises, and columns (3) and (4) are the regression results of state-owned enterprises. We can see from the regression results that the regression results of columns (1) and (2) are negative and significant at the 1% level, and the regression results of columns (3) and (4) are also Negative, but only significant at the 10% level. The results prove that local debt governance has a greater impact on non-state-owned enterprises. State-owned

enterprises funded by the state have sufficient and stable financing and lower financing costs. Compared with state-owned enterprises, non-state-owned enterprises have more financing needs and face financing difficulties. Under the situation of local debt control, resources will be further tilted to non-state-owned enterprises. At this time, the financing constraints of non-state-owned enterprises will be greatly eased.

	(1) cash	(2) cash	(3) cash	(4) cash
did	-0.0186*** (0.0041)	-0.0192*** (0.0036)	-0.0098* (0.0702)	-0.0088* (0.0824)
size	0.0104 (0.1185)	0.0114* (0.0715)	0.0113 (0.1205)	0.0103 (0.1863)
lnSale	-0.0187*** (0.0032)	-0.0205*** (0.0002)	-0.0158** (0.0257)	-0.0152*** (0.0422)
lnage	-0.1550*** (0.0000)	-0.1662*** (0.0000)	-0.1116*** (0.0000)	-0.1124*** (0.0000)
roa	0.0667** (0.0221)	0.0633** (0.0408)	0.0450* (0.0775)	0.0421* (0.0815)
roe	-0.0018*** (0.0033)	-0.0020** (0.0269)	0.0003* (0.0946)	0.0002 (0.6339)
rjgdp	-0.0000 (0.7824)	-0.0000 (0.0059**)	-0.0000 (0.0326)	-0.0000 (0.2315)
decyzb	-0.0000 (0.0732)	0.0059** (0.0053*	-0.0028 (0.3643)	-0.0028 (0.0003)
dscyzb	-0.0000 (0.6421)	-0.0003 (0.4456)	0.0003 (0.4456)	0.0003 (0.4456)
rkzrzl	-0.0003 (0.6421)	-0.0003 (0.4456)	0.0003 (0.4456)	0.0003 (0.4456)
fisspt	-0.0226*** (0.0016)	-0.0226*** (0.0016)	-0.0074 (0.2162)	-0.0074 (0.2162)
fiscal	0.0418 (0.7352)	0.0418 (0.7352)	0.1460* (0.0911)	0.1460* (0.0911)
_cons	0.6581*** (0.0000)	0.1986 (0.4810)	0.5465*** (0.0000)	0.7773*** (0.0025)
N	15919	13693	8485	7426

Figure 5: Heterogeneity analysis of state-owned enterprises and non-state-owned enterprises.

### 5.2 High-Tech Industries and Low-Tech Industries

The industry in which the enterprise is located also has an important impact on the financing constraints of the enterprise. From this perspective, we divide enterprises into high-tech industry enterprises and low-tech industry enterprises, and include them in the regression respectively, as shown in Figure 6, where columns (1) and (2) are the regression results of enterprises in non-high-tech industries, and columns (3) and (4) are the regression results of enterprises in high-tech industries. The regression results show that after adding all the control variables, the regression results of columns (2) and (4) are both negative and significant at the 5% level, but we can see that the regression of high-tech enterprises The coefficient is significantly higher than that of enterprises in low-tech industries, indicating that local debt governance is more effective in alleviating financing constraints in high-tech industries. Generally speaking, enterprises in the high-tech industry need to invest more in R&D and innovation, so they need more capital investment to obtain patents. Therefore, the

financing needs of enterprises in the high-tech industry are more vigorous. Resources will flow to high-tech industry enterprises, thereby easing their financing constraints and helping their sustainable development.

	(1) cash	(2) cash	(3) cash	(4) cash
did	-0.0120*** (0.0094)	-0.0112** (0.0107)	-0.0164** (0.0349)	-0.0184** (0.0201)
size	-0.0033 (0.5830)	-0.0022 (0.6977)	0.0470*** (0.0001)	0.0456*** (0.0004)
lnSale	-0.0133** (0.0238)	-0.0152*** (0.0054)	-0.0419*** (0.0000)	-0.0414*** (0.0000)
lnage	-0.1496*** (0.0000)	-0.1575*** (0.0000)	-0.1653*** (0.0000)	-0.1740*** (0.0000)
roa	0.0481** (0.0236)	0.0463** (0.0351)	0.0070 (0.7234)	0.0669 (0.1183)
roe	0.0001 (0.8228)	0.0004* (0.0823)	-0.0001 (0.8557)	-0.0039 (0.1233)
rjgdp	0.0000 (0.8317)	0.0000 (0.8317)	0.0000 (0.8317)	0.0000 (0.1122)
decyzb	0.0031 (0.1035)	0.0031 (0.1035)	0.0031 (0.1035)	0.0025 (0.4579)
dscyzb	0.0033 (0.1106)	0.0033 (0.1106)	0.0033 (0.1106)	0.0020 (0.5517)
rkzrzl	-0.0003 (0.5014)	-0.0003 (0.5014)	-0.0003 (0.5014)	-0.0002 (0.7748)
fisspt	-0.0183*** (0.0016)	-0.0183*** (0.0016)	-0.0183*** (0.0016)	-0.0134 (0.1455)
fiscal	0.0072 (0.4199)	0.0072 (0.4199)	0.0072 (0.4199)	-0.0657 (0.6027)
_cons	0.8701*** (0.0000)	0.6128*** (0.0038)	0.3994** (0.0213)	0.2593 (0.4733)
N	18790	16395	6841	5929

Figure 6: Heterogeneity analysis of high-tech industries and low-tech industries.

### 5.3 Coastal and Inland Areas

The regional location of the enterprise will also have a certain impact on the financing constraints of the enterprise. According to the location of the enterprise, we divide the enterprise into coastal area enterprises and inland area enterprises and include them in the regression, as shown in Figure 7. Columns (1) and (2) are inland enterprises, columns (3) and (4) are coastal enterprises. We can find from the regression results that the regression results of columns (1) and (2) are negative and significant at the 1% level, but the regression results of columns (3) and (4) are not significant. This indicates that local debt governance can ease financing constraints in inland areas much more than that in coastal areas. This difference is mainly caused by two reasons. One is that the government's local debt and its governance model in coastal areas are more open and transparent than those in inland areas, and the financing process of enterprises is more standardized; Compared with enterprises in inland areas, enterprises in coastal areas have more abundant financing channels, and enterprises in coastal areas also have the advantage of easier access to overseas financing funds. The financing channels of enterprises in inland areas are mainly bank loans or corporate debt financing. After the government fully implements the local debt management policy, the effect of expanding financing channels for enterprises in inland cities is

more obvious than that for enterprises in coastal cities.

	(1) cash	(2) cash	(3) cash	(4) cash
did	-0.0217*** (0.0001)	-0.0190*** (0.0004)	-0.0054 (0.3708)	-0.0089 (0.2228)
size	0.0077 (0.2633)	0.0079 (0.2558)	0.0082 (0.2778)	0.0101 (0.1512)
lnSale	-0.0191*** (0.0013)	-0.0193*** (0.0009)	-0.0199** (0.0202)	-0.0227*** (0.0025)
lnage	-0.1517*** (0.0000)	-0.1568*** (0.0000)	-0.1621*** (0.0000)	-0.1737*** (0.0000)
roa	0.0394* (0.0833)	0.0379* (0.0971)	0.0579* (0.0557)	0.0532* (0.0852)
roe	0.0004** (0.0288)	0.0003 (0.2931)	-0.0016** (0.0125)	-0.0018* (0.0503)
rjgdp		-0.0000* (0.0538)		-0.0000 (0.8785)
decyzb		0.0020 (0.2450)		0.0048 (0.4145)
dscyzb		0.0019 (0.3025)		0.0041 (0.5118)
rkzrzl		0.0004 (0.3192)		-0.0005 (0.5477)
fisspt		-0.0147*** (0.0056)		-0.0353** (0.0437)
fiscal		0.0016 (0.3362)		-0.0059 (0.4029)
_cons	0.7561*** (0.0000)	0.6063*** (0.0009)	0.7755*** (0.0000)	0.4564 (0.4481)
N	14293	12534	11377	9831

Figure 7: Heterogeneity analysis of coastal areas and inland areas.

## 6 CONCLUSIONS AND POLICY IMPLICATIONS

Based on the A-share data of Chinese listed companies from 2010 to 2019, this paper takes the 2015 "New Budget Law" as an exogenous shock, constructs an intensity DID model, and studies the causal effect of local debt governance on corporate financing constraints. The results of the basic regression show that local government debt governance will make enterprises reduce cash on hand, thus achieving the effect of effectively alleviating corporate financing constraints. Parallel trend test and placebo test proved the rationality and validity of the DID model. The results of heterogeneity analysis show that local debt governance has different effects on alleviating the financing constraints of different types of enterprises. Among them, the effect on non-state-owned enterprises is stronger than that on state-owned enterprises, and the effect on high-tech enterprises is stronger than that on low-tech enterprises. The role of enterprises is stronger for enterprises in inland cities than for enterprises in coastal cities.

Based on the above research conclusions, this paper proposes the following policy implications. First, local debt governance can effectively alleviate the financing constraints of enterprises. Local governments should take this opportunity to further complete open and transparent governance based on

the existing policy framework of local debt issuance, reasonably control the scale of local debt issuance, improve the local debt governance system, reduce the "crowding out effect" on enterprises, and thus promote local construction. Second, strengthen the relevant supervision of local debt issuance. The central government needs to assume the external supervision task of local government debt issuance, and the local government also needs to optimize the policy of local debt issuance, so that local debt can really play its role and promote the development of China's macro and micro economy. Third, local government should further optimize and improve the capital market, reduce the financing costs of enterprises, effectively solve the dilemma of "difficult and expensive financing" for enterprises, stimulate the economic vitality of market players, and promote the high-quality development of enterprises.

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