

Research on Constraints of Information Transparency and Credit System on Private Enterprises' Financing

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Abstract

"Financial difficulty and expensive financing" is still one of the important difficulties restricting the development of private enterprises. This article uses 2014-2018 A-share listed companies as a sample to empirically test the impact and mechanism of information transparency and credit system development on private enterprise financing. The research finds that: (1) Financing constraints are common in listed companies. The current capital market is still imperfect. Information asymmetry has become the main reason for companies to face financing constraints. Improving corporate information transparency can ease the degree of financing constraints. (2) Comparatively speaking, small and medium-sized private enterprises are facing a significantly higher degree of financing constraints. Therefore, the scale of the enterprises has effectively eased the financing constraints of private enterprises. (3) Considering the external environment, the mechanism of mitigation of the perfect credit reporting system is that it can promote more transparent information on financing-constrained enterprise, increase competition among credit institutions, and effectively solve the problem of adverse selection and moral risk in the credit market, and alleviate the degree of corporate financial constraints. The research results in this article show that building a sound credit reporting system can effectively alleviate the "financing difficulties" of private enterprises and SMEs.

Keywords

Credit system development, financing constraint, Enterprise size.

1. INTRODUCTION

Four decades of reform and opening up, China has achieved rapid and stable development, but the "financing", "financing expensive" is still one of the major constraints for enterprise development bottleneck [1]. The stagnation of the development of private enterprises will inevitably restrict the improvement of the comprehensive strength of China's economy and other aspects, so it is urgent to solve the financing problems of private enterprises.

At present, many scholars have proved that asymmetry of credit information is the direct cause of the difficulty of financing for private enterprises. To solve this problem, China has introduced a credit information sharing mechanism [2-3]. After more than 30 years of development, great progress has been made in the overall construction of the credit information system. World Doing Business (Doing Business), the display of the depth of credit index (De PTH of at Credit Information index) has reached the highest level of 8. Credit system construction can be in solving the problem of asymmetric information to some extent, alleviate the problem of financing of private enterprises. Most private enterprises due to the low level of information disclosed, opaque financial situation, lack of food collateral, credit degree is not

high and the lack of management stability and other reasons, so that the bank cannot determine the operating conditions and the credit risk of the enterprise, not included in the current credit assessment framework. This puts private companies at a disadvantage in their refinancing activities. The credit information system provides banks with reliable credit reports by collecting a large amount of relevant information about companies, reducing non-performing loan ratios, and improving the credit awareness of private enterprises [4].

Although the achievements of China's credit reporting system have been recognized by the international community, it is still in its infancy as a whole and there are still many shortcomings. For example, the development of private credit reporting agencies is relatively slow, and relevant laws and regulations have yet to be improved. So how to optimize the credit system, reducing the information asymmetry between private enterprises, further ease the financing constraints have important significance [5].

In 1958 Modigliani and Miller proposed a frictionless perfect capital market hypothesis. In a perfect capital market environment, the information is completely symmetrical, and various types of personnel will not generate different investment returns because of different or different levels of information. The company will not be subject to financing constraints. Investors only need to pay attention to the company's own production situation when making decisions. And technology development. In fact, information asymmetry is widespread in real life. In the credit market, Stiglitz and Weiss pointed out in 1981 that the borrower has more comprehensive information than the bank on the risk return of the project and the use of funds. Therefore, the asymmetric information in the credit market will inevitably lead to "adverse selection" And "moral hazard" issues.

Financing constraints refer to situations in which the external financing cost of an enterprise is too high due to incomplete markets, and as a result, corporate investment cannot reach the optimal level. Compared with the situation in a complete market, the matching of investment risks and returns of enterprises has changed significantly (Fazzari et al. 1988) [13].

Information asymmetry and the existence of transaction costs are the root causes of financing constraints. China's capitalist market is still in the stage of development and improvement, and there are obvious differences in the internal and external financial conditions of enterprises. Therefore, the asymmetry of information and the existence of transaction costs will cause significant differences between internal and external financing costs. In order to solve this problem, China has set up small and medium-sized enterprises and GEM as direct financing venues for SMEs and new-type growth enterprises. Liu Fei and Wang Kaike (2014) also confirmed that due to differences in internal and external financing costs, small and medium-sized enterprises will face more severe financing constraints, and restrictions on bank credit and commercial credit will lead to greater dependence on internal cash flows. From the perspective of banks, compared to the information disclosure specifications, the "hard information" of large enterprises that is easy to quantify and transmit, and the "soft information" of vagueness in small and medium-sized enterprises will restrict SME loans [8].

In addition, we also believe that under the conditions of different corporate ownership and different sizes, the effects of information asymmetry on corporate financing constraints will have different performances. Compared with private enterprises that have developed to a certain extent through self-accumulation and self-financing, state-owned enterprises have long been supported by the policies and funds of governments at all levels or state-owned banks. They have always been the main players in the field of investment and financing. The state-owned background also tends to tilt credit towards state-owned enterprises. By the same token, from the perspective of company size, classic financial theory holds that compared with large companies, small companies usually have shorter time to set up, have fewer collaterals, and have lower information transparency, thus causing friction in their financial markets. It is more

costly and more difficult to obtain external financing, so it is more likely to fall into the constraints of financing constraints [12]. Therefore, in theory, we can think that under the conditions of different enterprise ownership and different scales, the effect of information asymmetry on corporate financing constraints will have different performance.

The effectiveness of the market is the basis for ensuring fair transactions and optimizes the allocation of resources. The effectiveness of the market benefits from the transparency of information. Based on the development of China's capitalist market, the inherent institutional defects and immature market environment, there are still common instances where the quality of accounting information is poor, the disclosure is opaque, and even the accounting information is fraudulent. If companies can actively increase the transparency of accounting letters, it will reduce the cost for investors to obtain and process company-related information. Bider (2007) and Willd (2010) also confirmed that the information asymmetry in the investor market is eliminated, so that the financial constraints of the enterprise can be eased, on the one hand, it can improve the internal cash flow of the enterprise, and on the other hand, it is appropriate capital cost Get external financing.

In credit markets, information asymmetry between borrowers and lenders can lead to adverse selection and moral hazard issues. In order to maximize profits and ensure minimum risks, lenders will set up some non-interest rate conditions to screen borrowers, resulting in increased corporate financing constraints (Pagano&Jappelli, 1993; Stiglitz&Weiss, 1981). The development of the credit information system can promote the improvement of corporate information transparency, and further effectively alleviate the asymmetry of information in the credit market, thereby effectively increasing credit supply and alleviating corporate financing constraints. More developed credit system can provide a richer credit information, which can enhance the selection and pricing power lenders, making lenders to better assess the borrower's default risk, avoid adverse selection problems out now, then more good reputation Borrowers are able to obtain loans (Turner et al., 2014; Japelli & Pagano, 2002). Establishing a credit reporting system can also reduce the rent of information obtained by borrowing institutions from relational lending, and solve the "hold-in problem" (Padilla & Pagano 1997). Although research generally believes that relational lending can improve the availability of corporate credit (Degryse & Cayseele, 2000; Bharath et al. 2009), because relational lenders can obtain more private information about borrowers, and other potential lenders Compared with a stronger information advantage, this may make it possible to ask borrowers for higher interest rates to obtain information rents (Sharpe, 1990; Yin Zhichao et al., 2015). Credit reporting systems can reduce information asymmetry among lenders, increase competition, and help reduce corporate borrowing costs (Marquez, 2002). This article will be proved in the following empirical research. Based on the above theory and relevant empirical conclusions: This article proposes the following hypotheses:

H1: Financing constraints are common in listed companies.

H2: There is a negative correlation between the transparency of corporate information and the degree of financing constraints. The higher the quality of financial information, the lower the degree of financing constraints.

H3: In contrast, state-owned enterprises, enterprises of information asymmetry will make private enterprises face greater financing constraints.

H4: Compared with large-scale private enterprises, the information asymmetry of the enterprise will make small and medium-sized private enterprises face greater financing constraints, and the scale of the enterprises will ease the financing constraints of private enterprises.

H5: Perfect credit reporting system can ease corporate financing constraints.

2. RESEARCH DESIGN

2.1. Setting of Study Variables

2.1.1 Measures of financing constraints

Almeida et al. (2004) proposed a financing constraint identification strategy using cash-cash flow sensitivity as a proxy variable based on a new financial perspective. They believed that companies with financing constraints had cash sensitivity to cash flow. Companies that do not have financing constraints are not sensitive. Therefore, the research method of Almeida et al. (2004) is used to avoid the measurement error of Tobin q, and the growth rate of the main business is used as an agent variable for corporate growth. An empirical model is constructed. as follows:

$$cash = \alpha + \beta_1 * cf + \beta_2 * growth + \beta_3 * size + \beta_4 * std + \beta_5 * nwc + \beta_5 * expense + \varepsilon$$

In the formula, the explanatory variable cash represents the ratio of held cash to total assets, and the explanatory variable cf is the ratio of the company's operating net cash flow to total assets. The coefficient β_1 indicates the cash-cash flow sensitivity of the sample enterprises, and reflects the degree of financing constraints of the enterprises. For financing-constrained companies, they β_1 should be significantly positive, while non-financial-constrained companies β_1 should be insignificant.

2.1.2 Measurement of information transparency

Existing studies have widely adopted the modified Jones model to measure the information transparency of an enterprise by calculating manipulable accruals based on financial report-related information. The author refers to existing practices and uses the absolute value (opaque) of the company's manipulative accruals in the past year to measure the company's information transparency. The larger the opaque, the higher the degree of corporate earnings manipulation. Here, earnings manipulation refers to the purpose of controlling the financial information disclosed by an enterprise to influence the judgment of the information user on the financial status of the enterprise. Therefore, the higher the degree of earnings management, the lower the information transparency.

$$opaque = abs(DA_{i,t-1})$$

$$opaque = abs(DA_{i,t-1}) + abs(DA_{i,t-2}) + abs(DA_{i,t-3})$$

In the formula, DA represents manipulable accrued profit, which is calculated by the modified Jones model.

$$NDA_{i,t} = \beta_1 \frac{1}{A_{i,t-1}} + \beta_2 \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} + \beta_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

In the formula, the total accrued profit of the i-th enterprise in the t-year is equal to the difference between the net profit and the net cash flow from operating activities. $\Delta REV_{i,t}$, $\Delta PPE_{i,t}$ and $\Delta REC_{i,t}$ represents the increase in the operating income, net fixed assets, and accounts receivable of the i-th enterprise in the t-year. $\varepsilon_{i,t}$ represents the error term of the i-th enterprise in the t-year. $NDA_{i,t}$ indicates the non-manipulating accrued profits of the i-th enterprise in the t-year.

2.1.3 Measurement of credit system development

The credit development level is measured using relevant data from the World Bank's Business Environment Project, which has disclosed the credit system development indexes of various countries since 2004, including credit index breadth index and credit index depth index. Among them, the credit reference breadth index is measured by credit reference agency coverage indicators (including public credit reference coverage and private credit reference coverage). The number of individuals and companies with a history of borrowing in the past five years listed by the credit reference agency accounts for Adult population, This variable is measured by the Credit Information Depth Index, which reflects the ease with which a country obtains information from public or private credit agencies, and the quality and scope of the information obtained. The index ranges from 0 to 8. The higher the total score obtained by the 8 summations, the more information the borrower has obtained about the borrower's historical borrowing from public or private credit agencies, the better it is for him to correctly evaluate the borrower's credit status. Drawing on the research of Long Haiming et al. (2015), the credit index development index = credit index depth index \times credit index breadth index [9].

2.1.4 Control variables

Paper selected financial control variables: firm size (Size), growth (Growth), short-term debt change (std), non-cash changes in net working capital (NWC), and capital changes (Expense). The above five indicators are hard information that banks usually consider during the credit approval process. Generally speaking, large banks are more inclined to lend to large-scale, good growth, strong profitability, small financial leverage, and more collateral collateral, while poorly qualified companies are more likely to be blocked from lending [10]. The meanings of the above variables are shown in Table 1.

Table 1. Definition of Study variable

Variable type	Variable name	Symbol	Variable meaning
Explained variables	Cash changes	cash	Net/total assets of cash and cash equivalents
	Cash flow	cf	Net operating cash flow as a percentage of total assets
Explaining variables	Transparency of information	opaque	According to the formula calculation, where the information transparency calculated by the formula is used for the robustness test
	Credit System Development Indicators	cdvi	Credit Breadness \times Index Credit Depth Index
Control variables	Size of the enterprise	size	Natural numeratal of total assets at the end of the period
	Growth	growth	Revenue growth ((end-of-period operating income - opening operating income)/ opening operating income)
	Changes in short-term debt	std	End of short-term liabilities / total assets
	Changes in non-cash net working capital	nwc	Non-cash net working capital /total assets
	Capital expenditures	expend	End of Capital Expenditure / Total Assets At End

2.2. Model Setting

We mainly study the impact of information asymmetry and credit system development on the financing constraints of private enterprises, in order to verify the impact of information asymmetry and credit system development variables on private enterprise financing constraints, and introduce them into the model:

$$cash_{i,t} = \alpha_0 + \alpha_2 opaque_{i,t} * cf_{i,t} + \beta control_{i,t} + \varepsilon_{i,t}$$

$$cash_{i,t} = \alpha_0 + \alpha_2 CDVI_{i,t} * cf_{i,t} + \beta control_{i,t} + \varepsilon_{i,t}$$

Which $control_{i,t}$ represents the control variable for the enterprise.

2.2.1 Data Description

This paper selects the data of all A-share listed companies in 2014-2018, the sample company based on the new financial accounting standards for 2007, the sample of relevant financial data and non-financial data provided by the CSMR Database, some of the missing data through the company's official website and The disclosed annual reports are manually collated, and the credit breadth index and credit depth index are derived from the credit system coverage and credit information depth index in the World Bank's Business Environment Report. The following treatment was made for the purpose of this paper: (1) excluding financial listed companies; (2) excluding samples with serious data deficiencies; (3) excluding companies that were PT, ST, and ST during the sample period; and (4) shrinking the continuous variables at the levels of 1% and 99%. The observations of 1827 samples were obtained from the pre-processing of the above data.

3. ANALYSIS OF EMPIRICAL RESULTS

3.1. Descriptive Statistics for Major Variables

Before the empirical regression of the sample in this paper, the descriptive statistics of the main variables, as shown in the table, can be seen that in 1827 samples, most enterprises will hold a certain amount of cash, the change in cash holdings has a positive or negative, indicating that some enterprises in the sample enterprises hold cash in the current year or decreased compared to the previous year, or increased by the previous year, the average 0.007, the median is 0.004, indicating that some enterprises hold a higher amount of cash resulting in high average; The ability of cash flow generated by enterprises is strong, the amount of investment is large, the change of non-cash net working capital is serious, and the scale difference between enterprises is large.

Table 2. Descriptive Statistics for Main Variables

Variable	Mean	Median	Sd	Min	Max
cash	0.007	0.004	0.088	-0.836	2.169
cf	0.044	0.042	0.070	-0.67	0.684
cdvi	481.72	22.245	250.22	181.2	762.4
opaque	0.053	0.1001	0.051	0	0.243
size	22.411	22.247	1.279	18.611	28.52
growth	0.308	0.325	3.431	-0.982	251.211
nwc	0.010	0.006	3.432	-2.192	2.406
std	0.345	537	0.173	0.01	0.964
expense	0.043	0.038	0.041	0	0.450

Note: ***, **, * indicate that the coefficients are significant at 1%, 5% and 10%, respectively.

The table shows the descriptive statistics according to the main variables of different classifications, grouped according to the scale of fixed assets, and the results show that the ratio of cash holdings of small and medium-sized listed companies to total assets is significantly higher than that of large listed companies, and the results show that the ratio of cash holdings of private enterprises to total assets is also higher than that of state-listed enterprises. The F-test shows that there is a significant difference in the confidence level of 5% between the average of cash (cash holdings as a percentage of total assets) of listed enterprises of different business sizes and the average of cf (net cash flow operating).

Table 3. Descriptive Statistics of Major Variables by Group

Variable	Grouped by fixed assets			Group by property		
	Small and medium-sized (873)	Mass (954)	ANOVAF value	Private enterprises (1061)	State-owned enterprises (766)	ANOVAF value
cash	0.0049	0.0098	7.49 **	0.0063	0.0089	3.05 *
cf	0.0414	0.0410	17.74 ***	0.0413	0.0469	15.02 ***
opaque	0.0554	0.0584	21.80 ***	0.0563	0.0480	8.84 ***
size	21.84	22.44	8.84 ****	22.01	22.96	18.53 ***
growth	0.2467	0.6845	1.89	0.3697	0.2235	11.90 ***
nwc	0.0109	0.0117	2.45 *	0.0111	0.0077	1.95
std	0.2975	0.3629	6.07 ***	0.3159	0.3841	9.93 ***
Expend	0.0469	0.0399	43.01 ***	0.0449	0.0398	37.18 ***

Note: ***, **, and * indicate that the coefficients are significant at the 1%, 5%, and 10%, respectively, and the sample size is in parentheses

3.2. Correlation Test

The table shows the correlation analysis of the main variables. According to the analysis results in the above table, the explanatory variable cash and the explanatory variable cf are significantly correlated at the 5% test level. The correlation between cash and the control variable growth is not significant. Most of the control variables were not significantly correlated. Although some of them were statistically significant at the 5% test level, the correlation coefficients between the variables were all less than 0.3, which can be regarded as uncorrelated. Therefore, it can be considered that there is no significant correlation between the variables, and the regression results of this article will not be affected by severe multicollinearity.

Table 4. Correlation analysis of main variables

Variable	cash	cf	size	growth	nwc	std	expense	cdvi	opaque
cash	1								
cf	0.169	1							
size	0.055*	0.089*	1						
growth	0.0186	0.002	0.033*	1					
nwc	-0.291*	-0.098*	-0.060*	0.032*	1				
std	-0.0096	-0.150*	0.309*	0.024*	-0.191*	1			
expense	-0.061*	0.152*	0.044*	-0.0068	-0.091*	-0.094*	1		
cdvi	-0.039*	-0.025*	0.153*	0	-0.0091	0.0167	-0.094*	1	
opaque	0.038	-0.094*	-0.106*	0.035*	0.021*	0.052*	-0.067*	-0.0011	1

Note: ***, **, * indicate that the coefficients are significant at 1%, 5% and 10%, respectively.

3.3. Regression Results Analysis

First, the variables were tested for correlation and multicollinearity. It was found that the absolute values of the correlation coefficients between the variables were less than 0.5, and the maximum value of the variance expansion factor VIF was 2.56. The results all excluded the existence of multicollinearity. Using Stata 15 software on the panel data for the regression estimate, as the results obtained in the table 5.

Table 5. Financing Constraints and Cash - Cash Flow Sensitivity Regression Results

Variable	Full sample		
	(1)	(2)	(3)
cf	0.1401 ***	0.1347 ***	0.1363 ***
size	0.0008 ***	0.0015 ***	0.0009 ***
growth	0.0169 ***	0.0173 ***	0.0154 ***
nwc	-0.1113 ***	-0.1060 ***	-0.1109 ***
std	0.0015	-0.0066 ***	-0.0022
expense	-0.1526 ***	-0.1145 ***	-0.1154 ***
Opaque*cf		1.0902 ***	
cdvi*cf	0.0002 *		0.0002 *
Intercept term	-0.0165 ***	-0.0274 ***	-0.0177 ***
Wald chi2	1611.92	1211.73	1306.59
Prob> chi2	0.0000	0.0000	0.0000
N	9,135	9,135	9,135

Note: ***, **, * indicate that the coefficients are significant at 1%, 5% and 10%, respectively.

Table 5 (1) shows that the regression coefficient of cash flow(cf) is 0.176, which is significantly positive at the confidence level of 1%, indicating that internal cash flow has a strong impact on the change of the company's cash holding level, i.e. the prevailing financing constraints of listed companies. And columns (2) and (3) in Table 5 show that the regression coefficient of cf is also significantly positive at the 1% level, thus supporting hypothesis 1. From column 5 (2), we can see that the regression coefficient of information transparency and cf's multiplication (opaque*cf) is significantly positive at the significant level of 1%, which means

that the increase of information transparency, that is, the increase of information asymmetry, makes enterprises face greater financing constraints. The empirical results support the establishment of hypothesis 2.

Table 6. Regression Analysis By Ownership

Variable	State-owned enterprises			Private enterprises		
	(1)	(2)	(3)	(4)	(5)	(6)
Cf	0.1366 ***	0.1270 ***	0.1374 ***	0.1458 ***	0.1472 ***	0.1465 ***
Size	0.0001	- 0.0004	0.0001	0.0054 ***	0.0047 ***	0.0051 ***
growth	0.0129 ***	0.0102 ***	0.0118 ***	-0.0235 ***	0.0224 ***	0.0227 ***
nwc	- 0.0992 ***	- 0.1062 ***	-0.0966 ***	-0.120 7 ***	- 0.1221 ***	- 0.1214 ***
std	- 0.0056 ***	- 0.0006	-0.0058	-0.016 1 ***	- 0.0114 ***	- 0.0159 ***
expense	- 0.0893 ***	- 0.0928 ***	-0.078 1 ***	-0.1459 ***	- 0.1471 ***	- 0.1346 ***
opaque * cf	0.1452 ***			1.0187 ***		
cdvi * cf		0.0002 ***			0.0002 ***	
Intercept term	0.0061	0.0148 ***	0.0067	- 0.1102 ***	-0.099 2***	-0.103 1***
Waldchi2	551.46	608.07	511.73	795.75	807.26	724.21
Prob> chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N	3,830	3,830	3,830	5,305	5,305	5,305

Note: ***, **, * indicate that the coefficients are significant at 1%, 5% and 10%, respectively.

Table 6 mainly examines the effect of information transparency and credit system development on corporate financing constraints under different property rights. Comparison Table 6 in section (3) and (6) Liang Lie in information transparency (opaque) and cf cross multiply items (opaque*cf) of the regression coefficients, private enterprises and state-owned enterprises are in the 1% level is significantly positive, which means that private enterprises and state-owned enterprises because of information within the enterprise transparent restricted financing constraints, but private enterprises regression coefficient was 1.0187, while the state-owned enterprises regression coefficient was 0.1452, significant differences exist between the two, This also shows that due to the effect of information asymmetry on corporate financing constraints, private enterprises have performed more prominently, and private enterprises do face more severe financing constraints than state-owned enterprises. It can be seen that the study of this result on the nature of different property rights provides further evidence, and this empirical result confirms the establishment of hypothesis 3.

Table 7. Regression Analysis Results for Private Enterprises classified by Size

Variable	Large scale			Small and medium-sized		
	(1)	(2)	(3)	(4)	(5)	(6)
Cf	0.1145 ***	0.1652 ***	0.1134 ***	0.1553 ***	0.135	0.1763 ***
size	0.0016	0.0024 ***	0.0012	0.0081 ***	0.0082 ***	0.0078 ***
growth	0.0246 ***	0.0236 ***	0.0234 ***	0.0223 ***	0.0223 ***	0.0207 ***
nwc	-0.1118 ***	-0.0994 ***	-0.1082 ***	-0.1345 ***	-0.1369 ***	-0.1378 ***
std	-0.0117 ***	-0.0147 ***	-0.0124 ***	-0.0152 ***	-0.0253 ***	-0.0193 ***
expense	-0.1597 ***	-0.1127 ***	-0.1050 ***	-0.2005 ***	-0.1665 ***	-0.1763 ***
opaque*cf		0.6803 ***			1.3463 ***	
cdvi*cf			0.0002 ***			0.0002 ***
Intercept term	-0.0289 ***	-0.0452 ***	-0.0212	-0.1729 4***	-0.1683 ***	-0.1631 1***
Waldchi2	277.75	298.94	292.68	728.23	618.94	630.33
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N	1,490	1,490	1,490	3,815	3,815	3,815

Note: ***, **, * indicate that the coefficients are significant at 1%, 5% and 10%, respectively.

Table 7 mainly examines the role of formula size and financing constraints and the size of companies in the relationship between information asymmetry and the degree of financing and constraints. Table 7 (1) and (4) show two regression coefficients cf, respectively of 0.1145 and 0.1553 significantly positive at 1% of level of experience, indicates that without considering other conditions than large Private enterprises, small and medium-sized private enterprises face greater financing constraints. 7 (2) and (5) columns comparison table, opaque * CF regression coefficients were 0.6803, 1.3463 in 1% the level of both the positive and significant gap significantly, which also shows the comparison large-scale private enterprises, small and medium private enterprises lower internal transparency of information, not a sound management system and information disclosure system, resulting in small and medium private enterprises in the industry face greater financing constraints, this also shows that the company scale to ease the financing constraint degree of private enterprise. This also supports the establishment of Hypothesis 4. From column (3) of Table 5, columns (2) and (4) of Table 6, and columns (3) and (6) of Table 7, the degree of credit system development and the cf crossover term (cdvi *CF) can be observed cf) regression coefficient is 0.0002 at 1% significantly lower levels, based on the foregoing analysis shows, credit system development really can ease financing constraints caused by asymmetric information, significantly reduced the level of regulation of financial companies, Therefore, empirical results also confirm the establishment of hypothesis 6.

For the control variables in terms of, NWC coefficient is negative in all models, and are in the 1% level significant, and A lmedia agreement (2004) test results, which is consistent with practical significance, because the net non-cash operating There is a substitution relationship between changes in capital and changes in cash holdings. The coefficients of s td, size and growth are also significant at the 5 % experience level, and are in line with practical significance.

4. CONCLUSIONS AND RECOMMENDATIONS

This article takes listed companies from 2014 to 2018 as research objects, and analyzes the impact of corporate information transparency and credit system development on corporate cash-cash flow sensitivity through the use of market microstructure theories such as the information asymmetry theory. This paper, while studying the financing constraints of private listed companies, firstly proves the existence of financing constraints of private listed companies, establishes a financial constraint measurement model, that is, a cash-cash flow sensitivity model, and proves that private listed companies generally have external financing Constraints , and the sum of absolute value of manipulative accrual items of the company over the past three years is used to measure the information transparency of the company. The results of the article are tested for robustness.

The main research conclusions of this article are as follows:

Information asymmetry has a significant impact on corporate cash holdings. This paper uses the cash-cash flow sensitivity model to measure the financing constraints of the company. The empirical results confirm that the amount of cash held by the company has a significant positive correlation with the information transparency of the company and the crossover term of the cash flow. With the increase of information transparency. It can be understood that if the company wants to obtain the resource advantage, it needs the support of credit from the credit bureau, and the bank can provide limited loans. Therefore, the bank needs to investigate the financial information, project risk, and repayment ability of the loan application company. Comprehensive evaluation, if the company's financial statement information is opaque and information collection is difficult during the survey, the bank will lend or not lend at high interest rates, which will increase the company's financing constraints.

First, we confirmed that the development of the credit reporting system eased the financing constraints of enterprises, indicating that the more perfect the credit reporting system is, the lower the degree of corporate financial constraints. This mechanism can be understood from two aspects: On the one hand, a perfect credit reporting system is more convenient and cheaper for credit institutions to obtain richer credit information, which can better identify the characteristics of borrowers and assess the risk of default, The ability of screening and pricing was strengthened, and the occurrence of adverse selection problems was reduced. On the other hand, the improvement of the credit information system helped to solve the problem of moral hazard in the information market. The sharing of breach of contract information can play a role in motivating trustworthy people and punishing those who fail to trust. In addition, the sharing of credit information can reduce information rents and strengthen competition among borrowing institutions, which can help reduce borrowing rates. These increase the repayment ability and willingness of the enterprise to reduce the occurrence of moral hazard problems. In short, a perfect credit reporting system better solves the problem of adverse selection and moral hazard in the credit market, which reduces the default rate of borrowing companies, and the borrowing institutions have greater incentives to issue loans to enterprises, thus reducing corporate financing constraints.

The research results of this paper have a wide reference meaning for governments and enterprises. First, the financing constraints of private enterprises generally exist in China. Therefore, the relevant laws and regulations to protect the financing of private enterprises

should be improved to build a good financing environment. The importance of information transparency and the improvement of information transparency can reduce the asymmetry of information and ensure that investors and financial institutions can fully and timely understand the situation of the enterprise. This is conducive to financial institutions and investors to conduct risk assessments, increase trust in enterprises, increase credit availability, and reduce financing costs. Third, accelerate the improvement of the construction of credit information platforms for private enterprises and realize the sharing of credit information between departments. The role of local governments and the construction of the social credit system should be improved, and the implementation of the national social credit system construction should be implemented, the local credit environment improved, and the basic credit information database expanded.

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