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# Does Political Connection Affect Corporate Debt Financing-Empirical Evidence from China's Capital Market?

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***Abstract*：**
Using the data of Chinese private listed companies, this paper examines the effect of creditor rights protection of politically connected enterprises on the scale of debt financing, the structure of debt financing, maturity structure of debt financing, debt financing costs from both micro and macro fundamentals. We find that the higher level of creditor rights protection of politically connected enterprises, the larger the scale of corporate debt financing; the higher level of creditor rights protection of politically connected enterprises, the higher level of leverage; the higher level of creditor rights protection of politically connected enterprises, the greater proportion of long-term liabilities to total liabilities; the higher level of creditor rights protection of politically connected enterprises, the lower cost of debt financing. The research results show that establishing political connections and improving the protection of corporate creditor's rights is conducive to rational allocation of resources, alleviating the problem of insufficient corporate financing, and promoting the healthy development and orderly operation of China's economy under the new normal.

***Keywords:*** *Political Connection, The Protection of Creditors' Rights , the size of Debt Financing, the Structure of Debt Financing, The Maturity Structure of Debt Financing, The Cost of Debt Financing.*

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## I. INTRODUCTION

At present, China's economy has entered a new normal and is gradually promoting supply-side reforms. How to strengthen the protection of creditors' rights and interests, promote the healthy and steady development of the debt financing market, ensure the sound operation of China's economy under the new normal, and safeguard the socialist market economy escort , which is a hot and difficult issue concerned by the academic and practical circles. In view of this, this paper sets out to construct a micro-level creditor's rights protection index to comprehensively and systematically explore the effect of creditor's rights protection of politically connected enterprises at the micro-level on the scale of debt financing, the structure of debt financing, the term structure of debt financing, and the cost of debt financing. It will help the academic and practical circles to correctly understand and gain insight into the protection of creditors' rights under the new normal economy, thus contributing to the healthy operation and steady development of China's economy under the new normal.

The contributions of this paper are mainly reflected in the following three aspects: (1) the extant

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literature seldom pays attention to the impact of the protection of creditor rights of politically connected enterprises on corporate debt financing at the micro level. This paper explores the protection of creditors' rights of politically connected enterprises from the micro and macro levels, which provides a new research perspective for the study of the impact of creditor rights protection of politically connected companies on corporate debt financing, and enriches the research on the impact of creditor rights protection of politically connected companies on corporate debt financing; (2) This paper revises the limitations of existing domestic and foreign literature to construct creditor's rights protection index from the micro level;(3) From the perspective of political connection, systematically explore the impact of creditor rights protection of politically connected enterprises on the size of debt financing, the structure of debt financing, maturity structure of debt financing and the cost of debt financing. In addition, the extant literature mostly focuses on the negative effects of political connections while ignoring positive effects of political connections.

## II. LITERATURE REVIEW

At present, the foreign academic circles have formed two opposing viewpoints on the protection of creditors' rights. One view holds that strengthening the legal protection of creditors' rights is conducive to financing of enterprises, and has a positive impact on the company's equity structure, company dividend policy, and company value [1-7]. Another view is that strengthening the protection of creditor rights has negative effects. They believe that strengthening the protection of creditors' rights is not conducive to the debt financing of enterprises, that is, the better protection of creditors' rights, the smaller long-term debt financing of enterprises [8-12].

At present, the research on the protection of creditor's rights in domestic academic circles has also formed two opposing viewpoints. One view holds that the high level of protection of creditors' rights is not conducive to corporate debt financing [13-14]. Another view is that the improvement of creditors' rights protection is conducive to the increase of the size of corporate debt financing [15-17].

In summary, first, it is still a mystery whether the strengthening of the protection of creditors' rights has positive or negative effects. Second, the existing literatures lack systematic study the impact of the politically connected enterprises of creditors' rights protection on the size of corporate debt financing, the structure of debt financing, the cost of debt financing, and the term structure of debt financing. Finally, the existing literatures lack a relatively mature micro-level indicator to measure the level of creditor rights protection. Therefore, this paper will explore and further in-depth study.

## III. THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

### 3.1 The impact of creditor protection of politically connected enterprises on the size and structure of debt financing

La Porta et al. believe that if a country or region's investor protection mechanism can provide strong external protection measures for the economic interests of external creditors of enterprises, creditors will have strong motivations to provide financing provide debt financing support for those who urgently need it [2]. Jappelli

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et al find that the improvement of a country's judicial efficiency will effectively reduce the degree of constraints on debt financing faced by enterprises to a certain extent. At the same time, it will help increase the willingness of financial institutions provide loans to enterprise [18]. It can be seen that a country's better legal environment is conducive to corporate debt financing. Safavian and Sharma find that if a company protects the rights of creditors, the company can obtain more debt financing in the future, but creditors in countries or regions with poor enforcement systems, the economic benefits are not immediately apparent [7]. Xiao and Tian believe that the establishment of political connections will help increase the size of debt financing[19]. Chen and Luo believe that politically connected companies hold less cash than those without political connections, because politically connected companies are more convenient for financing and easier to obtain government funding when they encounter financial difficulties[20]. Accordingly, under the special institutional background of the transition economy, the government has a certain degree of implicit guarantee for the debts of politically connected enterprises, which will greatly reduce default risk on debt of politically connected companies, thus the rights of creditors have been effectively protected. Therefore, creditors are also willing to provide large amounts of credit funds to those politically connected enterprises, thus helping to increase the size of debt financing of politically connected enterprises. In a word, the protection of creditors' rights of politically connected enterprises at the micro level may increase the size of debt financing of enterprises and the proportion of long-term debt. Based on the above analysis, we propose the first and second hypothesis to be tested.

**H1**: Ceteris paribus, the protection level of creditors' rights of politically connected enterprises has a significant positive correlation with the scale of debt financing.

**H2**: Ceteris paribus, the level of protection of creditors' rights and interests of politically connected enterprises has a significant positive correlation with the structure of debt financing.

### 3.2 The impact of the protection of creditors' rights of politically connected enterprises on the maturity structure of debt financing

In order to minimize and avoid the conflict of economic interests between shareholders and creditors of listed companies, companies should use more short-term debt for debt financing, which can effectively play the role of supervision of short-term debt to achieve effective monitoring [21]. Demirguc Kunt and Maksimovic believe that the degree of legal protection of a country has a positive correlation with the proportion of long-term loans of enterprises[6], in other words, the longer the debt period of enterprise in countries or regions with better legal protection. Chaumilind et al. find that politically connected firms help obtain longer-term loans with less collateral [22]. Ariss believes that less corruption and stronger law enforcement increase the reliance of enterprises on long-term liabilities[23], which means strengthening the protection of creditors' rights and helping to increase the ratio of long-term liabilities to total liabilities.

Based on above analysis ,we can make reasonable inferences, establish political connections, obtain implicit government guarantees for corporate debts, improve the protection of creditors' rights, and reduce default risk of corporate debts, which will certainly help the debtor to obtain the support of the long-term credit funds provided by the creditor, thereby correspondingly increasing the proportion of the long-term debt of

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the enterprise to the total debt. In summary, this paper proposes a third hypothesis to be tested:

**H3:** There is a significant positive correlation between the protection level of creditors' rights of politically connected enterprises and the term structure of debt financing.

### 3.3 The impact of creditor protection of politically connected enterprises on the cost of debt financing

Diamond believes that the conflict of economic interests between the company's external shareholders and creditors usually has a certain difference in the cost of debt implementation with different maturities [24].Generally speaking, the longer a company's debt maturities, the more the company's monitoring costs for future defaults by the debtor will increase over time. Therefore, for those borrowers who need financing funds, if they want to obtain debt financing with a relatively long term, Correspondingly, it is necessary to provide relatively more rights protection for creditors to ensure debts are repaid on time and risk-free. As a result, the cost of debt financing will increase accordingly. In this context, if the company protects the rights of creditors well, the creditors do not need to worry about the risk of default of the company's debt in the future, which means that the debt default costs will be reduced accordingly, and ultimately the cost of debt financing for companies will decline. To a certain extent, if companies improve the protection level of creditors' rights, which is conducive to reducing the cost of debt financing for companies. Sapienza find that the lending rates of banks reflect the influence of political parties in Italian. For enterprises with similar conditions in all aspects, state-owned banks will charge lower lending rates than that of private banks. The stronger the political party is, the lower the interest rate of the loan will be [25]. Khwaja and Mian find that Pakistani companies that have established political connections can enjoy lower interest rate [26].Yeh et al. find that politically connected companies can obtain loans from banks at a lower cost [27]. Infante and Piazza believe that politically connected enterprises with local government background can obtain loans from financial institutions such as banks at lower interest rates [28].

In short, based on the research conclusions and analysis of the existing literature, we can reasonably infer that politically connected company can enhance creditors' confidence in the company's future debt repayment, and at the same time, the company's debt can be implicitly guaranteed by the government to a certain extent, thereby reducing the company's default risk in the future, which suggest that creditors will offer lower debt financing cost for company. In summary, this paper proposes the fourth hypothesis to be tested:

**H4:** There is a significant negative correlation between the protection level of creditors' rights of politically connected enterprises and the cost of debt financing.

## IV. DATA, VARIABLES AND MODELS

### 4.1 Sample and data

In view of the fact that the political connection of Chinese state-owned enterprises is universal, not a market-oriented behavior, the research is of little significance, and the availability data are also considered. Therefore, this paper uses the financial data of Chinese private listed companies from 2000 to 2012. We

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delete the data of the financial and insurance industries, the data of ST companies and PT companies, and the data of companies with incomplete and incomplete data. The data in this paper come from CSMAR, WIND database, and online media such as Sina Finance. In order to ensure the robustness and reliability of the research conclusions, we winorize all the sample data at the 1% and 99% quantile , and finally obtains 16425 valid samples.

### 4.2 Variable

#### 4.2.1 Construction of the creditor's rights protection index

According to the existing literature, there is still a lack of a mature creditor's rights protection index constructed from the micro-level of enterprises to measure the degree of protection of the company's creditors' rights. In addition, the existing creditor's rights protection index is only constructed from a macro level and legal perspective, which is inevitably biased, because an enterprise's internal factors should be an important aspect of the level of creditor rights protection. In addition, this paper argues that the protection of the creditor's rights of enterprises should be a relatively complex concept, in other words, it should contain multiple meanings, so it is impossible to accurately reflect this concept with only one indicator in actual economic life. In view of this, in order to more accurately, objectively and comprehensively reveal the actual situation of the protection of creditors' rights of listed companies in china, this paper adopts the Analytic Hierarchy Process (AHP) method to determine the weights of each index of the creditor's rights protection index. First, 34 questionnaires are distributed to relevant authoritative experts and practitioners in the financial field, and 26 questionnaires is actually recovered; then the recovered questionnaires were calculated using the AHP to determine the weights of each indicator for the protection of creditors' rights, and finally calculate the creditor's rights protection index .The weights of specific indicators are shown in Table I.

**Table I Weights of each indicator in the evaluation of Creditor's rights protection**

| first-level indicator (%) | second-level indicator | weight (%) | third-level indicator | weight (%) |
|---|---|---|---|---|
| creditor's rights protection （100） | ability to pay short-term debt | 13.67 | Current Ratio | 17.84 |
| | | | quick ratio | 36.29 |
| | | | Cash ratio | 45.87 |
| | ability to pay long-term debt | 15.16 | Debt ratio of tangible Net value | 39.42 |
| | | | lev | 22.35 |
| | | | Interest coverage ratio | 38.23 |
| | Profitability | 28.03 | operating profit margin | 40.05 |

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| | | | | |
|---|---|---|---|---|
| | | | roa | 32.73 |
| | | | eps | 27.22 |
| | The level of cash flow | 31.45 | Ratio of cash flow | 24.16 |
| | | | cash-to-debt ratio | 33.29 |
| | | | Cash flow interest coverage ratio | 42.55 |
| | Debt guarantees and defaults | 12.69 | Ratio of Debt guarantee | 42.36 |
| | | | ratio of default | 57.64 |

**4.2.2 The measurement of political connections**

From the existing literature, there are many ways to measure political connections. Referring to existing literature , if the chairman or general manager of the business is a current or former government official, we define the company as a politically connected company [29-32] .

**4.3 Model**

To test H 1, H 2, H 3, and H 4, we construct the following four empirical models:

$$Zwrz_{i,t} = \alpha_0 + \alpha_1 Credit_{i,t} + \alpha_2 Poli_{i,t} + \alpha_3 Credit_{i,t} \times Poli_{i.t} + \alpha_4 Size_{i,t-1} + \alpha_5 Lev_{i,t-1} + \alpha_6 ROA_{i,t-1} + \alpha_7 Growth_{i,t-1} + \alpha_8 Year + \alpha_9 Indu + \varepsilon \quad (1)$$

$$Lev_{i,t} = \beta_0 + \beta_1 Credit_{i,t} + \beta_2 Poli_{i,t} + \beta_3 Credit_{i,t} \times Poli_{i,t} + \beta_4 Size_{i,t-1} + \beta_5 B/M_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 Growth_{i,t-1} + \beta_8 Year + \beta_9 Indu + \varepsilon \quad (2)$$

$$Cfzb_{i,t} = \gamma_0 + \gamma_1 Credit_{i,t} + \gamma_2 Poli_{i,t} + \gamma_3 Credit_{i,t} \times Poli_{i.t} + \gamma_4 Size_{i,t-1} + \gamma_5 Lev_{i,t-1} + \gamma_6 ROA_{i,t-1} + \gamma_7 Growth_{i,t-1} + \gamma_8 Year + \gamma_9 Indu + \varepsilon \quad (3)$$

$$Zwcb_{i,t} = \delta_0 + \delta_1 Credit_{i,t} + \delta_2 Poli_{i,t} + \delta_3 Credit_{i,t} \times Poli_{i.t} + \delta_4 Size_{i,t-1} + \delta_5 Lev_{i,t-1} + \delta_6 ROA_{i,t-1} + \delta_7 Growth_{i,t-1} + \delta_8 Year + \delta_9 Indu + \varepsilon \quad (4)$$

The definitions and descriptions of the variables of Model (1), Model (2), Model (3), and Model (4) are shown in Table II.

**Table II Definition of main variables**

| Variable | Definitions of variable |
|---|---|
| zwrz | The ratio of the loan amount to the total assets |
| lev | The ratio of corporate liabilities to assets |
| cfzb | Ratio of long-term debt to total debt |
| zwcb | Ratio of interest to loan |

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| | |
|---|---|
| poli | If the company has political connections, the value is 1, otherwise the value is 0 |
| credit | The protection index of creditor's Rights Constructed by AHP |
| size | Natural logarithm of total assets |
| roa | The ratio of EBIT to average total assets |
| b/m | The ratio of the book value of the company's shareholders' equity to the market value |
| growth | The ratio of the change in operating income to the operating income of the previous period |

## V. EMPIRICAL RESEARCH AND RESULT ANALYSIS

5.1 Descriptive statistics of the main variables

**Table III Descriptive statistics of the main variables**

| VARIABLE | MEAN | STD. | MIN | P25 | P50 | P75 | MAX |
|---|---|---|---|---|---|---|---|
| poli | 0.239 | 0.426 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 |
| zwrz | 17.210 | 6.720 | 0.000 | 18.051 | 19.475 | 20.553 | 23.784 |
| cqfzb | 0.257 | 0.308 | 0.000 | 0.000 | 0.124 | 0.443 | 1.000 |
| zwcb | 0.013 | 0.038 | -0.197 | 0.003 | 0.019 | 0.033 | 0.070 |
| credit | 37.872 | 26.984 | 0.000 | 5.000 | 45.000 | 60.000 | 81.000 |
| size | 21.562 | 1.246 | 19.236 | 20.713 | 21.366 | 22.170 | 26.055 |
| lev | 0.464 | 0.208 | 0.048 | 0.309 | 0.471 | 0.619 | 0.937 |
| roa | 0.050 | 0.173 | -1.108 | 0.029 | 0.069 | 0.113 | 0.336 |
| b/m | 0.682 | 0.219 | 0.156 | 0.526 | 0.707 | 0.857 | 1.075 |
| growth | 0.210 | 0.480 | -0.655 | -0.011 | 0.138 | 0.316 | 3.146 |

Table III shows that the minimum and maximum values of the main variables of each model are within the normal range, and there is no extreme value, so the value of each model variable has little impact on the model regression results. The mean of poli (political connection) is 0.239, which indicates that the proportion of political connections in Chinese private listed companies is relatively high.

### 5.2 Correlation Analysis

Table IV reports the correlation coefficients between the main variables of each model. It can be clearly seen from Table 4 that the explained variables zwrz (the size of debt financing),Lev (leverage), cfzb (long-term debt ratio), zwcb (the cost of debt financing cost) and poli (political connection) are all significantly correlated , which preliminarily shows that the independent variables of each model have strong explanatory power to the dependent variables.

**Table IV Correlation coefficient of each main variable**

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| 1 | poli | zwrz | cqfzb | zwcb | credit | size | lev | roa | growth |
|---|---|---|---|---|---|---|---|---|---|
| poli | 1 | 0.09*** | 0.04*** | -0.02*** | 0.19*** | 0.18*** | 0.08*** | 0.10*** | -0.02*** |
| zwrz | 0.09*** | 1 | 0.43*** | 0.275*** | -0.08*** | 0.76*** | 0.64*** | 0.07*** | 0.08*** |
| cqfzb | 0.059*** | 0.30*** | 1 | 0.030*** | 0.016** | 0.39*** | 0.24*** | 0.12*** | 0.07*** |
| zwcb | -0.039*** | 0.34*** | -0.03*** | 1 | 0.01 | -0.09*** | 0.56*** | -0.24*** | -0.09*** |
| credit | 0.209*** | -0.10*** | -0.03*** | 0.010 | 1 | -0.14*** | 0.02** | 0.13*** | 0.12*** |
| size | 0.19*** | 0.73*** | 0.35*** | -0.05*** | -0.17*** | 1 | 0.10*** | 0.26*** | 0.11*** |
| lev | 0.07*** | 0.62*** | 0.13*** | 0.493*** | 0.01 | 0.09*** | 1 | -0.20*** | -0.01 |
| roa | 0.08*** | 0.03*** | 0.11*** | -0.175*** | 0.08*** | 0.20*** | -0.23*** | 1 | 0.8*** |
| growth | -0.02** | 0.05*** | 0.05*** | -0.05*** | 0.06*** | 0.06*** | -0.01 | 0.23*** | 1 |

## 5.3 Empirical test results

**Table V Regression results of each model**

| Model（1） | | Model（2） | | Model（3） | | Model（4） | |
|---|---|---|---|---|---|---|---|
| variable | zwrz | variable | lev | variable | cqfzb | variable | zwcb |
| constant | 0.6586*** （5.49） | constant | 0.5426*** （3.74） | constant | -0.0186* (-1.70) | constant | -0.0859*** (-10.71) |
| credit | 0.0143* （1.71） | credit | 0.0110* （1.84） | credit | 0.0106* (1.67) | credit | -0.0135* (-1.78) |
| poli | 0.0985*** (2.94) | poli | 0.0842*** (3.27) | poli | 0.0924*** (3.01) | poli | -0.0540*** (-4.65) |
| Credit*poli | 0.0321*** (3.62) | Credit*poli | 0.0708*** (5.04) | Credit*poli | 0.0331*** (6.41) | Credit*poli | -0.0328*** (-4.76) |
| size | 0.0114*** （8.64） | size | 0.0154*** （7.05） | size | 0.0214*** (9.62) | size | -0.0605*** (-5.72) |
| lev | 0.0306*** （3.84） | bm | 0.0252** （2.32） | lev | 0.1832*** (3.27) | lev | 0.0937** (2.41) |
| roa | 0.0654*** （5.28） | roa | 0.1206*** （7.50） | roa | 0.0193*** | roa | -0.0286** |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | (6.62) | | (-2.25) |
| growth | $0.0262^{**}$ (2.03) | growth | $0.0207^{**}$ (2.25) | growth | $0.0175^{**}$ (2.09) | growth | $-0.0403^{**}$ (-2.13) |
| Year fixed effects | yes | | yes | | yes | | yes |
| firm fixed effects | yes | | yes | | yes | | yes |
| obs | 16425 | obs | 16425 | obs | 16425 | obs | 16425 |
| Adj-$R^2$ | 0.5183 | Adj-$R^2$ | 0.4136 | Adj-$R^2$ | 0.2937 | Adj-$R^2$ | 0.3384 |

***、**、* denote significance at the $p<0.01$, $p<0.05$, $p<0.10$,respectively

Table V reports the regression results of Model (1). The regression coefficient of Credit*poli of Model (1) is 0.0321, and it is significant at the 1% level, thus H1 holds. It suggests that the creditor's rights of politically connected enterprises are well protected, which can significantly increase the size of debt financing of enterprises.

Table V reports the regression results of Model (2). The regression coefficient of Creditor* poli of Model (2) is 0.0708, and it is significant at the 1% level. It shows that if creditor's rights of politically connected enterprises are well protected, the Lev of listed companies can be significantly improved, thereby it is verified that the protection level of the creditor's rights of the politically connected enterprises is positively correlated with the debt financing structure.

Table V reports the regression results of Model (3). The regression coefficient of Creditor* poli of Model (3) is 0.0331, and it is significant at the level of 1%. It indicates that if creditor's rights of politically connected enterprises are well protected, the long-term debt ratio of the enterprise can be significantly improved. Thus, it is verified that the degree of protection of the creditor's rights of politically connected enterprises is positively correlated with the term structure of debt financing, that is, the long-term debt ratio.

Table V reports the regression results of Model (4). The regression coefficient of Credit*poli of Model (4) is -0.0328, and it is significant at the level of 1%.It suggests that if politically connected enterprises protect the rights of creditors well, they can significantly reduce the cost of debt financing of politically connected enterprises. Therefore, it verifies that the level of creditors' rights protection of politically connected enterprises is negatively related to the cost of debt financing.

### 5.4 Robustness analysis

#### 5.4.1 Endogeneity

In view of the possible endogenous problems of political connections, Referring to existing literature, We use the place of company registration(Province) as an instrumental variable for political connections[33],and conduct regression analysis by constructing a Heckman two-stage regression model, that is, We construct a logistic Model (5), and calculate IMR (inverse Mill's Ratio) as the control variable of

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the above models (1), (2), (3), (4) to alleviate endogenous problems.

$$Political = \alpha_0 + \alpha_1 Province + \alpha_2 Size + \alpha_3 lev + \alpha_4 roa + \alpha_5 growth + \alpha_6 Industry + \alpha_7 Year + \varepsilon \quad (5)$$

**Table VI Results of first stage regression**

| poli | dF/dx | Std. | z | P>z |
|---|---|---|---|---|
| province | 0.0184 | 0.0083 | 2.21 | 0.027 |
| size | 0.0561 | 0.0045 | 12.44 | 0.000 |
| lev | -0.2288 | 0.0233 | -9.81 | 0.000 |
| roa | 0.0396 | 0.0296 | 1.34 | 0.181 |
| growth | 0.0207 | 0.0232 | 0.90 | 0.371 |
| year | -0.1694 | 0.0122 | -12.03 | 0.000 |
| indu | -0.2746 | 0.0148 | -11.14 | 0.000 |
| Pseu-$R^2$ | 0.0412 | | | |

**Table VII Results of second stage of each model**

| model（1） | | model（2） | | model（3） | | model（4） | |
|---|---|---|---|---|---|---|---|
| variable | zwrz | variable | lev | variable | cqfzb | variable | zwcb |
| constant | 0.9452*** （3.05） | constant | 0.1016*** （3.97） | constant | -0.0557** (-2.61) | constant | -0.0630** (-2.21) |
| credit | 0.0172* （1.83） | credit | 0.0652*** （3.86） | credit | 0.0728*** (3.29) | credit | -0.0301** (-2.40) |
| poli | 0.0870*** (3.67) | poli | 0.0477*** (3.01) | poli | 0.0516** (3.42) | poli | -0.0452*** (-3.69) |
| Credit*poli | 0.0272*** (3.15) | Credit*poli | 0.0302** (2.85) | Credit*poli | 0.0443*** (3.54) | Credit*poli | -0.0245*** (-4.16) |
| size | 0.0223*** （10.70） | size | 0.0256*** （6.83） | size | 0.0182*** (3.58) | size | -0.0132** (-2.09) |
| lev | 0.0928** （2.06） | bm | 0.0905*** （6.45） | lev | 0.0234*** (5.87) | lev | 0.0786** (2.01) |
| roa | 0.0338** | roa | 0.0568*** | roa | 0.0495** | roa | -0.0192*** |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | * (4.55) | | (8.25) | | * (3.77) | | (-3.36) |
| growth | 0.0626$^{***}$ (5.01) | growth | 0.0864$^{***}$ (3.53) | growth | 0.0196$^{**}$ (3.64) | growth | -0.0108$^{***}$ (-3.10) |
| lambda | -0.3812$^{***}$ | | 0.0187$^{***}$ | | -0.4117$^{*}$ | | -0.1349$^{***}$ |
| | (-6.43) | | (4.28) | | (-1.86) | | (-7.88) |
| Year fixed effects | yes | | yes | | yes | | yes |
| firm fixed effects | yes | | yes | | yes | | yes |
| obs | 16425 | obs | 16425 | obs | 16425 | obs | 16425 |
| Adj-$R^2$ | 0.2621 | Adj-$R^2$ | 0.2633 | Adj-$R^2$ | 0.3145 | Adj-$R^2$ | 0.2206 |

***、**、* denote significance at the $p<0.01$, $p<0.05$, $p<0.10$,respectively

Table VI shows that the instrumental variable coefficient of the first-stage regression result is significant at the 5% level, indicating that there is a high correlation between the endogenous variables and the instrumental variables, so the instrumental variable is effective. From the regression results of Models (1), (2), (3), and (4) in Table VII, the regression results remain basically unchanged after controlling for the endogeneity of political connections, which suggests that H1, H2, H3 and H4 still holds .

5.4.2 Alternative measure of creditor's rights protection

This paper also uses the marketization index (Index1), government-market relationship index (Index2), and market intermediary organization development and legal system environment index (Index3) constructed by Wang, et al [34]. The specific regression results are as follows:

(1) The regression results of the impact of creditors' rights protection of politically connected enterprises on the debt financing scale at the macro level

Table VIII shows that the regression coefficient of Index1*poli is 0.0503, and significant at the level of 1%. It suggests that the creditor protection of politically connected enterprises at the macro level has a significant positive relationship with the scale of debt financing. The conclusion is consistent with that of the relationship between the creditor protection of politically connected enterprises and the scale of debt financing at the micro level, which further verifies the establishment of H 1. In other words, whether politically connected enterprises strengthen creditor protection at the micro level or strengthen creditor protection at the macro level, it will help to increase the scale of debt financing of listed companies. In addition, this paper uses the government-market relationship index (Index 2) and the development of market intermediary organizations and the legal system environment index (Index 3) constructed by Wang et al. as alternative measure of creditor’s protection at the macro level and test [34]. The results of the regression are also shown in Table VIII, and the conclusions still holds.

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**Table VIII The regression results of the impact of creditor on the size of debt financing at the macro level**

| variable | zwrz | variable | zwrz | variable | zwrz |
|---|---|---|---|---|---|
| constant | 0.0102 (1.41) | constant | 0.0109* (1.67) | constant | 0.0107 (1.34) |
| Index1 | 0.0103* (1.74) | Index2 | 0.0116* (1.82) | Index3 | 0.0127* (1.94) |
| Poli | 0.2832** (2.34) | Poli | 0.2932** (2.52) | Poli | 0.3073** (2.40) |
| Index1*poli | 0.0503*** (7.82) | Index2*poli | 0.0507*** (6.34) | Index3*poli | 0.0323*** (4.24) |
| size | 0.0718*** (7.89) | size | 0.3678*** (7.06) | size | 0.0271** (2.04) |
| lev | 0.0944*** (6.64) | lev | 0.0293*** (6.28) | lev | 0.0293*** (6.01) |
| roa | 0.0459* (1.86) | roa | 0.0 484** (2.02) | roa | 0.0146* (1.66) |
| growth | 0.0151* (1.82) | growth | 0.0168* (1.75) | growth | 0.0162* (1.79) |
| Year fixed effects | yes | | yes | | yes |
| firm fixed effects | yes | | yes | | yes |
| obs | 16425 | obs | 16425 | obs | 16425 |
| Adj-$R^2$ | 0.5574 | Adj-$R^2$ | 0.4926 | Adj-$R^2$ | 0.5563 |

***、**、* denote significance at the p<0.01, p<0.05, p<0.10,respectively

(2) the regression results of the impact of the protection of creditors' rights of politically connected enterprises on the structure of debt financing at the macro level

Table IX shows that the regression coefficient of Index1*poli is 0.0412, and significant at the level of 1%. It suggests that the creditor’s rights protection of politically connected enterprises at the macro level has a significant positive correlation with debt financing structure. The conclusion is consistent with the conclusion of the relationship between creditor protection and the leverage of politically connected enterprises at the micro level, which further verifies the establishment of H 2. In other words, whether politically connected enterprises strengthen the creditor protection at the micro level or strengthen the creditor protection at the macro level, it will help to improve the leverage of listed companies. In addition, this paper uses the government-market relationship index (Index 2) and the market intermediary organization development and legal system environment index (Index 3) constructed by Wang et al. as alternative measure of creditor’s protection at the macro level and test. The results of the regression are also shown in Table IX, and the conclusions still holds.

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**Table IX The regression results of the impact of creditor on the structure of debt financing at the macro level**

| variable | lev | variable | lev | variable | lev |
|---|---|---|---|---|---|
| constant | 0.0213* (1.67) | constant | 0.02130* (1.72) | constant | 0.0346** (2.01) |
| Index1 | 0.0121* (1.68) | Index2 | 0.0135* (1.73) | Index3 | 0.0165* (1.85) |
| Poli | 0.3420** (2.61) | Poli | 0.1653** (2.03) | Poli | 0.2623** (2.37) |
| Index1*poli | 0.0412*** (8.04) | Index2*poli | 0.0531*** (7.12) | Index3*poli | 0.0405*** (5.61) |
| size | 0.0645*** (6.25) | size | 0.0420*** (6.53) | size | 0.0314*** (3.76) |
| bm | -0.0204** (-2.34) | bm | -0.0632** (-2.13) | bm | -0.0261* (-1.74) |
| roa | 0.0706*** (5.32) | roa | 0.0374*** (7.67) | roa | 0.0410*** (5.83) |
| growth | 0.0203* (1.91) | growth | 0.0175* (1.86) | growth | 0.0180* (1.67) |
| Year fixed effects | yes | | yes | | yes |
| firm fixed effects | yes | | yes | | yes |
| obs | 16425 | obs | 16425 | obs | 16425 |
| Adj-$R^2$ | 0.4344 | Adj-$R^2$ | 0.4602 | Adj-$R^2$ | 0.5041 |

***、**、* denote significance at the $p<0.01$, $p<0.05$, $p<0.10$,respectively

(3) The regression results of the impact of the protection of creditors' rights of politically connected enterprises on the maturity structure of debt financing at the macro level.

Table X shows that the regression coefficient of Index1*poli is 0.0286 and significant at the 1% level. It suggests that if the rights of creditors of politically connected enterprises are well protected at the macro level, then long-term debt ratio can be significantly improved, which further verifies the establishment of H3. In other words, the better the protection of the rights of creditors of politically connected enterprises at the macro level, the lower default risk in the future, and creditors will provide for more long-term debts to enterprises. In addition, this paper adopts the government-market relationship index (Index 2) and the development of market intermediary organizations and the legal system environment index (Index 3)

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constructed by Wang et al. as the macro-level alternative measure of the creditor's rights protection of politically connected enterprises and test[34]. The results of the regression are also shown in Table X, and the conclusions still holds.

**Table X The regression results of the impact of creditor on the maturity structure of debt financing at the macro level**

| variable | cqfzb | variable | cqfzb | variable | cqfzb |
|---|---|---|---|---|---|
| constant | -0.5253*** (-4.50) | constant | -0.0530*** (-5.96) | constant | -0.0482*** (-4.54) |
| Index1 | 0.0124* (1.72) | Index2 | 0.0167* (1.76) | Index3 | 0.0125* (1.94) |
| Poli | 0.0147** (2.24) | Poli | 0.0233*** (3.01) | Poli | 0.0482*** (6.06) |
| Index1*poli | 0.0286*** (6.02) | Index2*poli | 0.0304*** (3.93) | Index3*poli | 0.4245*** (4.14) |
| size | 0.0112*** (5.22) | size | 0.0109*** (5.29) | size | 0.0102*** (4.26) |
| lev | 0.0845*** (6.82) | lev | 0.0867*** (7.62) | lev | 0.0870*** (7.74) |
| roa | 0.0650 (1.63) | roa | 0.0142* (1.70) | roa | 0.0185 (1.62) |
| growth | 0.0213*** (8.99) | growth | 0.0210*** (7.83) | growth | 0.0242*** (6.52) |
| Year fixed effects | yes | | yes | | yes |
| firm fixed effects | yes | | yes | | yes |
| obs | 16425 | obs | 16425 | obs | 16425 |
| Adj-$R^2$ | 0.2591 | Adj-$R^2$ | 0.2093 | Adj-$R^2$ | 0.2648 |

***、**、* denote significance at the p<0.01, p<0.05, p<0.10,respectively

(4) The regression results of the impact of creditor's rights protection of politically connected enterprises on the cost of debt financing at the macro level

Table XI shows that the regression coefficient of Index1*poli is -0.0284, and significant at the 1% level. It suggests that the creditor's rights protection of politically connected enterprises at the macro level has a significant negative correlation with the cost of debt financing. The conclusions are basically the same, which further verifies the establishment of H4. This means that the improvement of the protection level of creditors' rights of politically connected enterprises at the macro level will help to reduce the debt financing cost of listed companies. In addition, this paper uses the government-market relationship index (Index 2) and the development of market intermediary organizations and the legal system environment index (Index 3)

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constructed by Wang et al. as alternative measures of creditor protection at the macro level[34]. The results of the regression are also shown in Table XI, and the conclusions still holds.

**Table XI The regression results of the impact of creditor on the cost of debt financing at the macro level**

| variable | zwcb | variable | zwcb | variable | zwcb |
|---|---|---|---|---|---|
| constant | -0.0472*** （-3.96） | constant | -0.0486*** （-4.14） | constant | -0.0528*** （-4.01） |
| Index1 | -0.0156* （-1.83） | Index2 | -0.0142* （-1.78） | Index3 | -0.01252*** （-1.90） |
| Poli | -0.0242** (-2.38) | Poli | -0.0238** (-2.19) | Poli | -0.02453** (-2.06) |
| Index1*poli | -0.0284*** (-4.04) | Index2*poli | -0.0321*** (-5.62) | Index3*poli | -0.02976*** (-3.24) |
| size | -0.0127*** （-5.06） | size | -0.0124*** （-4.50） | size | -0.01274*** （-5.03） |
| lev | 0.0102*** （4.60） | lev | 0.0105*** （4.74） | lev | 0.0113*** （5.24） |
| roa | -0.0110* （-1.67） | roa | -0.0184* （-1.79） | roa | -0.0102* （-1.76） |
| growth | -0.0243*** （-4.24） | growth | -0.0211*** （-6.13） | growth | -0.0310*** （-6.54） |
| Year fixed effects | yes | | yes | | yes |
| firm fixed effects | yes | | yes | | yes |
| obs | 16425 | obs | 16425 | obs | 16425 |
| Adj-$R^2$ | 0.2619 | Adj-$R^2$ | 0.2245 | Adj-$R^2$ | 0.2384 |

***、**、* denote significance at the p<0.01, p<0.05, p<0.10,respectively

## VI. CONCLUSIONS

This study investigates the impact of the creditor protection of politically connected enterprises on corporate financing. We find that there is a significant positive correlation between the protection of creditors' rights of politically connected enterprises and the size of debt financing; the better protection of the rights of creditors by politically connected enterprises, the higher leverage; the better protection of the rights of creditors by politically connected enterprises, the higher long-term debt ratio, which leads to corresponding increase in the debt maturity structure; the higher the degree of protection of rights, the lower default in the future, resulting in a correspondingly lower debt financing cost for politically connected enterprises. Finally, in order to make the research conclusions robust and reliable, we firstly adopt the marketization index (Index1), the government-market relationship index (Index2) ,and the development of market intermediary organizations and the legal system environment index (Index3) constructed by Wang et al. as alternative measure for the creditor protection index of politically connected enterprises at the macro level to conduct robustness tests [34]. In short, through in-depth research of this paper, we find that establishing political connections and improving the protection level of the rights corporate creditors is conducive to the rational allocation of economic resources for enterprises, alleviates the problem of insufficient financing of enterprises, and improves the efficiency of resource allocation to promote the sound development of enterprises and the healthy development and orderly operation of the Chinese economy under the new normal.

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