The impact of tax credit rating system on short-term loans and long-term investments of small and medium-sized enterprises: based on the perspective of corporate financing constraints

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Abstract: This article focuses on the tax credit rating system and explores the impact of corporate tax credit on the short-term loan and long-term investment behavior of small and medium-sized enterprises. It selects listed companies of small and medium-sized enterprises from 2012 to 2021 as samples and uses a difference in differences model. The research mechanism analysis results show that the tax credit rating system can solve the problem of short-term loans and long-term investments for enterprises by alleviating financing constraints. In addition, in non-state-owned enterprises, a tax credit rating of A has a more significant alleviating effect on short-term loans and long-term investments. This study expands the research content on the relationship between tax credit rating and short-term loans and long-term investments, providing policy insights for improving tax collection and management systems and reducing financing constraints for enterprises.

Keywords: Tax credit rating system; Short term loans and long-term investments; Financing constraints

I. Research background and significance of tax credit rating system

1. Research background of tax credit rating system

In July 2014, the State Administration of Taxation issued the "Tax Credit Management Measures (Trial)", which conducted an annual tax rating for taxpayers, dividing their tax credit into four levels: A, B, C, and D (with the addition of M level after 2018), and publicly disclosing companies with a tax credit rating of A in the previous year. By implementing a tax credit rating system, we can further incentivize and promote corporate legal entities and their branches to consciously abide by tax laws and regulations, strengthen their self-discipline in paying taxes with integrity, and help improve their tax enthusiasm, thereby better playing a role in tax supervision and risk prevention.

The phenomenon of short-term loans and long-term investments in enterprises refers to the use of short-term loans by enterprises to invest in long-term investment activities, which is one of the phenomena of mismatched investment and financing periods. Since 1993, interest rate controls have brought significant financial repression effects in developing countries, becoming an important factor restricting the healthy development of real economy enterprises. In this macroeconomic context, enterprises have to adopt a financial strategy of "short-term loans and long-term investments" in order to maintain their long-term investment needs. Although this strategy is not the optimal choice in theory, it has become a suboptimal financial decision for Chinese physical enterprises to cope with financial repression challenges in the real economic environment.

The economic consequences of short-term loans and long-term investments cannot be ignored, as the short-term loan and long-term investment strategy can alleviate the financing constraints of enterprises while also causing the problem of mismatched asset and debt maturity. This mismatch may exacerbate the debt repayment pressure and financial risks of enterprises. Once the funding chain is broken, it will have a serious negative impact on the stability of enterprises and even the entire financial system. It is not difficult to see that by implementing the tax credit rating disclosure policy and using the company's tax credit rating as a representative of corporate credit, it will help reduce corporate credit risks, enhance corporate financing capabilities, and further effectively curb the phenomenon of short-term loans and long-term investments by enterprises.

2. The significance of researching the tax credit rating system

This study aims to comprehensively analyze the existence of the impact of tax credit rating policies on short-term loans and long-term investment behavior of enterprises, as well as the differences among different enterprises, which will help enrich the research on the flexible management system of tax credit rating policies. From a practical perspective, the introduction and implementation of tax credit rating policies are conducive to promoting corporate integrity and voluntary tax payment, filling the gaps in mandatory tax collection and management, and facilitating the government's adjustment and improvement of tax credit rating policies.

In addition, given the pivotal position of small and medium-sized enterprises in China's economic system, effectively alleviating their short-term loan and long-term investment problems is not only related to the development of small and medium-sized enterprises, but also the key to the sustained and healthy development of China's economy.

II. The current situation and problems of short-term loans and long-term investments in enterprises

1. The actual situation of short-term loans and long-term investments for enterprises

At present, the phenomenon of short-term loans and long-term investments in corporate loans is gradually increasing. According to data from 2023, 46.8% of technology-based small and medium-sized enterprises have adopted this strategy. As of March 2024, the total amount of newly added credit for enterprises has increased to 7.77 trillion yuan, of which the growth of short-term loans accounts for 2.97 trillion yuan. The reason why small and medium-sized private enterprises adopt short-term loans and long-term investment strategies is that financing constraints lead to a lack of bank loan support for private enterprises, which requires these enterprises to raise funds through various channels; The second is that enterprises pursue immediate financial performance brought by short-term funds, but short-term benefits may induce deterioration of the enterprise's operating conditions, which is not conducive to long-term development.

2. The problems of short-term loans and long-term investments for enterprises during policy implementation

Firstly, there is still further room for refinement in the evaluation criteria. The current rating system is not accurate and timely enough, and there is insufficient timely feedback on the tax behavior of enterprises. In addition, the current tax credit rating evaluation system has not fully considered the dynamic changes in historical years in terms of evaluation criteria.

Secondly, the current disclosure mechanism for tax credit results still needs further improvement. The list of A-level taxpayers is mainly published on the official website of the State Administration of Taxation, while the list of D-level taxpayers lacks a unified disclosure channel, which increases the cost of government information collection and reduces the transparency of tax credit information.

III. Theoretical analysis and research hypotheses of short-term loans and long-term investments for enterprises

Enterprises with high tax credit ratings are often able to pay taxes on time and in full, which usually indicates that their financial situation is relatively stable and the risk is low. In the eyes of banks, such enterprises are more trustworthy and therefore more likely to receive loan support. Publicly disclosing tax credit ratings can help reduce information asymmetry, lower agency costs, and make it more convenient for companies to seek long-term funding or more favorable short-term financing. This convenience enables enterprises to more smoothly meet their long-term investment needs, reduce their dependence on short-term loans, and thus lower overall financial risks. With the improvement of corporate tax credit ratings, their demand for short-term loans to support long-term investments has correspondingly decreased, which helps companies build a more stable and sustainable financial structure. Based on this, this article proposes the following research hypotheses.

H1: The tax credit rating system will alleviate short-term loans and long-term investments for enterprises under credit allocation.

H2: Alleviating financing constraints is the mechanism by which the tax credit rating system alleviates short-term loans and long-term investments for enterprises.

IV. Research and Design on Short term Loans and Long term Investment for Enterprises

This article measures the scale of short-term loans and long-term investments of enterprises through the ratio difference between short-term debt and short-term assets in stock analysis. Based on this, this article designs the following double difference model.

$$sfli_{i,t} = \beta_0 + \beta_1 reform_{i,t} + \gamma X_{i,t} + firm_i + year_t + \varepsilon_{i,t}$$

There are two main ways to measure the proxy indicators for short-term loans and long-term investments of enterprises. One is Dzcy=(short-term liabilities/total liabilities) - (short-term assets/total assets); Another type is Ddct=[Cash expenditures from investment activities such as purchasing and constructing fixed assets - (increase in long-term borrowings in the current period+increase in equity in the current period+net cash flows from operating activities+cash inflows from selling fixed assets)]/total assets of the previous period.

The explanatory variable is the interaction term between time and policy implementation before and after. For the time dummy variable, it is 1 for the policy implementation year of 2014 and subsequent years, otherwise it is 0. On the official website of the State Administration of Taxation, only the list of A-level taxpayers can be found. According to industry standards, if rated as A-level, it is 1; otherwise, it is 0.

V. Empirical results of short-term loans and long-term investments for enterprises

1. Benchmark regression results

After adding control variables to the benchmark regression results, the interaction term Ddct is significantly negative at the 5% level, with a coefficient of -0.2522, indicating that the tax credit rating system significantly reduces the degree of short-term and long-term investment in small and medium-sized enterprises, that is, rating A can alleviate the short-term and long-term investment of enterprises. Therefore, hypothesis H1 of this article holds true.

2. Replace the dependent variable

To verify the robustness of the results, a new indicator Dzcy was used for testing. At a significance level of 1%, the coefficient of the interaction term remains significant and is -0.3715. This indicates that even with changes in the measurement of explanatory variables, the conclusions of the study remain unchanged.

3. Analysis of intermediary effect

In the previous theoretical analysis, we found that honest tax behavior helps alleviate the financing constraints of enterprises, thereby reducing their dependence on short-term borrowing for long-term investment. Based on this theoretical foundation and drawing on Kaplan and Zingales, this article analyzes the financing constraint index KZ as a key mediator variable. The smaller the value of the KZ index, the smaller the financing constraint faced by the enterprise, and its financing efficiency is relatively higher.

According to the empirical results, the coefficient of the interaction term is significant and -0.2473. This result indicates that reducing the financing constraints of enterprises can enhance the positive impact of the tax credit rating system on short-term loans and long-term investments, and help to reduce the operational and financial risks of enterprises to a certain extent.

4. Heterogeneity analysis

For non-state-owned enterprises, the interaction coefficient is -0.255 at a significance level of 1%, indicating that obtaining an A-level tax credit rating can effectively alleviate the short-term loan and long-term investment problems of these enterprises. Compared with state-owned enterprises, non-state-owned enterprises usually perform worse in terms of the quality of financial information disclosure and the social reputation of the enterprise. Meanwhile, state-owned enterprises enjoy more advantages in financing due to their reliance on national capital. Therefore, for state-owned enterprises, obtaining an A-level tax credit rating has a relatively small impact, while non-state-owned enterprises are the main beneficiaries of the tax credit rating system.

VI. Conclusion and Implications

The tax credit rating system plays a key role in alleviating the problem of short-term loans and long-term investments for enterprises, which helps them build a more stable and sustainable financial structure. The fundamental reason why enterprises adopt the strategy of short-term loans and long-term investments is the existence of financing constraints. Due to financing constraints, companies often find it difficult to obtain long-term loans from banks, and therefore have to use short-term debt funds to invest in long-term assets. In order to prevent the occurrence of short-term loans and long-term investments, measures need to be taken fundamentally. This requires not only the joint efforts of enterprises and banks, but also the establishment of a more comprehensive institutional environment at the national level to effectively curb the short-term lending and long-term investment behavior of enterprises.

1. Improve the information disclosure system

Enterprises first need to start from themselves, solve the problem of information asymmetry, proactively disclose their true financial situation to banks and other fund providers, and actively eliminate information barriers with fund providers. At the same time, the country should strengthen the construction of legal norms for corporate information disclosure, increase the cost of violations, strengthen punishment measures, and establish a sound third-party regulatory system. In addition, establish a platform for sharing corporate financial information between formal and informal financial institutions, utilizing the geographical and networking advantages of informal finance to comprehensively collect relevant information about enterprises.

2. Establish a comprehensive banking system

Banks should design diversified loan schemes, including different loan terms, amounts, and corresponding interest rates. Banks need to differentiate based on the risk level of enterprises and implement differentiated pricing strategies. In addition, banks should strengthen risk management, build interactive risk monitoring and reporting systems, take necessary measures based on monitoring results, and ensure that risks are within a controllable range. In terms of corporate loans, banks should establish cooperative relationships with informal financial institutions to obtain more comprehensive corporate information and accurately assess loan risks.

3. Expand financing channels

First, use the Internet financial platform to alleviate the information asymmetry between banks and enterprises by relying on its big data resources and mobile communication technology. Secondly, companies can acquire assets through financial leasing, which helps to reduce financing costs and increase the company's cash flow. Furthermore, enterprises can explore asset securitization pathways, find suitable initiators, sell loans or debt with poor liquidity to special purpose institutions, or have the institutions actively purchase securitizable assets. Then, the institutions package these assets into a fund pool and use the cash flow generated by the fund pool as support to issue bonds and other securities in the financial market to obtain long-term funds. Finally, companies can also consider utilizing government funds that belong to national key research areas as a way to meet their funding needs.

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