Research on Debt Risk Management and Control of High Liability Enterprises

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Abstract: *In recent years, the number of debt defaults in the bond market has started to surge, and the debt risk brought by high debt of enterprises has become a severe test. Real estate enterprises are a typical representative of high debt enterprises. The real estate industry plays a crucial role in many industries, contributing to economic development while also improving the living environment for residents. The real estate industry, due to its long construction cycle and large financing scale, has a greater debt risk compared to other enterprises. Against the backdrop of increasing debt risk and financing difficulties for high debt enterprises, this article takes real estate enterprises as representatives of high debt enterprises to explore control measures for debt risk of high debt enterprises. A Group was selected as the case study object to analyze the current situation of debt risks faced by the company from three perspectives: debt composition, debt cost, and debt repayment pressure. At the same time, targeted suggestions were proposed.*

Keywords: *debt risk, debt financing, risk management, real estate industry*

1. Introduction

In recent years, there have been frequent explosive events in the bond market. In 2020, the number of bond defaults reached 77, with a default amount of 65.621 billion. The debt risk of high debt of enterprises is gradually becoming apparent, and the debt risk brought by high debt of enterprises has become one of the severe tests [1]. Among high debt enterprises, real estate enterprises are relatively concentrated. The real estate industry holds a pivotal position in many industries.

The production and construction of the real estate industry requires a large amount of funds, and relying solely on one's own funds is far from sufficient, therefore external financing is needed. But at present, most real estate enterprises rely too much on debt financing channels, especially bank credit funds, which contains greater risks [2]. Overreliance on the banking system can increase the instability of the entire financial system, and once a large number of debt defaults occur, it will have an impact on the financial system. A scholar pointed out the net operating income theory, which believed that no matter how the company's capital structure changed, it would not have an impact on the company's total value. He believed that although the company's debt financing had more advantages in cost than equity financing, with the increase of the company's debt scale, the company's overall risk would increase, and the company's shareholders would also require a higher rate of return due to the increase of the company's shareholders' equity risk, the cost of equity capital will increase, and this one decrease and one rise serves as a offsetting effect [3]. Scholars in this field abroad believe that due to the unobserved ability of the optimal capital structure and the different ways in which bankruptcy costs are reflected in different analyses, they divide the performance and application of balance theory into dynamic and static states through research [4]. In terms of debt financing, technicians found that listed companies prefer short-term debt financing through research, but at the same time, institutional investors can largely affect their decisions in debt financing. After analyzing the data, they found that there is a negative correlation between the shareholding ratio of institutional investors and the proportion of short-term debt financing, because institutional investors can participate in the daily governance of companies, it can inhibit the tendency of short-term debt financing [5]. In terms of debt risk research, research has been conducted abroad for a long time. In recent years, experts have found that the debt scale of non-financial enterprises and households is positively correlated with the occurrence of economic and debt crises. There are various risks in the real estate market, including but not limited to market, interest rates, and exchange rates [6]. Therefore, when dealing with innovative

financing channels, it is necessary to be cautious about the risks involved.

This paper selects Group A as a research case. First, it describes the current debt situation and risks in the real estate industry, then analyzes the current debt structure and debt risks faced by Group A, then analyzes the debt risks faced by the company from various debt financing channels, closely analyzes and summarizes the measures taken by the company to control debt risks from multiple aspects, and finally further discusses the applicability of these measures to highly indebted enterprises, this provides a reference for high debt enterprises to reduce debt risk.

2. Analysis of financing and high debt situation

2.1 Debt repayment pressure

Against the backdrop of deleveraging by financial institutions, coupled with regulatory policies that restrict financing in the real estate industry, the difficulty of financing for real estate companies continues to increase, and financing costs have also significantly increased compared to before. The financing costs of bank credit funds, corporate direct bonds, and non-standard financing products are generally around 5%, 5.5%, and 8%. The financing costs of trust financing products have also increased by one to two percentage points, and the cost of overseas financing is around 6% to 10%. After continuous efforts, large real estate companies can still control their financing costs at around 5%. Many medium-sized real estate companies have financing costs exceeding 6%, and some small enterprises have financing costs even exceeding 10% [7]. It can be seen that the financing costs of various channels are all in an upward channel.

In addition, due to the issuance of a large number of bonds by real estate companies in 2015 and 2016, which mostly adopted a 3+2 structure, the industry is about to enter a period of concentrated debt repayment in 2021. Currently, under the financing environment, the overall debt repayment pressure on the industry is high. The debt due in 2021 is a peak, which undoubtedly increases the debt repayment pressure for real estate enterprises that face difficulties in financing capital.

2.2 Debt structure

The asset liability ratio of real estate enterprises is generally high and increasing year by year. Currently, the asset liability ratio of most enterprises has exceeded 75%, which has also exceeded the standards in the latest three red line regulatory indicators [8]. A high debt ratio can lead to high financial leverage and high financial risks for enterprises, leading to a tendency to pursue short-term benefits. It can also reduce significant risks and transfer them to the banking system, adding instability to the financial environment. In addition, a high debt ratio can reduce a company's reputation and lead to difficulties in financing. In addition, most real estate companies also have asset liability mismatches. Enterprises generally borrow short-term funds, but use short-term funds for long-term real estate development projects. This operation will result in the enterprise facing a greater short-term solvency. Some companies continue to borrow short-term funds to roll back their repayments. Once there is a risk in the operation of the enterprise, these funds face the risk of being unable to repay upon maturity.

2.3 Debt risk

(1) The risk of excessive reliance on a single channel

There is usually a famous saying in the investment field called "Don't put your eggs in one basket", which means spreading the risk of your own investment portfolio. Not only does this apply to investment, but it also applies to financing. Overreliance on a single channel can create hidden dangers for future smooth financing. Once there is a problem with the funding supply of this channel, the enterprise will face the situation of not being able to raise sufficient funds in the future, or even if funds can be raised, the cost of funds will significantly increase. So in summary, excessive reliance on a single channel during financing can bring huge risks [9].

(2) The risk of not being able to repay maturing debts

Enterprises face the pressure of repaying principal and interest at maturity through debt financing, and the ability to repay at maturity depends on many factors, such as the company's operating conditions, cash flow arrangements, debt scale, and so on. For real estate enterprises with long development cycles, multiple engineering nodes, high demand for funds, high asset liability ratio, and

high financing frequency, the risk of not being able to repay at maturity is particularly prominent [10].

(3) Risks without risk warning mechanisms

At present, the internal control system of real estate enterprises is not very complete. The control of debt risk through internal control is mainly reflected in strengthening the review of financing plans and strengthening the approval of fund use, which are still some conventional fund avoidance plans. Some small enterprises also lack internal control, and the design and implementation of the internal control measures mentioned above are not very complete. The timing of such risk intervention is often too late [11].

2.4 Weight calculation

When applying Analytic Hierarchy Process for indicator analysis, the results obtained need to pass consistency testing. Generally, CI can be used to determine whether the relationship between CI values and consistency is the opposite. The calculation formula for CI is as follows [12]:

$$CI = \frac{\lambda - \alpha}{\alpha - 1} \tag{1}$$

λ Substituting λ max, N represents the order of the matrix. If the value is equal to 0, it indicates complete consistency. If it is near zero, it indicates satisfactory consistency. If the value is high, it indicates serious inconsistency. In order to accurately evaluate the values, the consistency ratio CR was calculated using the following formula [13] based on the comparison of RI shown in the below:

$$CR = \frac{CI}{RI} \tag{2}$$

This article uses the sum product method to determine the weight of matrix indicators. Firstly, the matrix is normalized using formula (3), and then the sum of elements is obtained according to formula (4) [14].

$$\overline{a_\upsilon} = a_\upsilon / \sum_{i=1}^{n} a_\upsilon (i, j = 1,2,...,n) \tag{3}$$

$$\overline{w_i} = \sum_{j=1}^{n} \overline{a_\upsilon} (i, j = 1,2,...,n) \tag{4}$$

Finally, for the above $\overline{w_i}$, normalization is applied to obtain the weight W [15].

$$w_i = \overline{w_i} / \sum_{i=1}^{n} \overline{w_i} (i = 1,2,...,n) \tag{5}$$

3. Case analysis using A Group as an example

3.1 The basic situation of group debt risk

Due to the characteristics of the industry in which Group A operates, its asset liability ratio has always maintained a high level, but it has always been lower than the industry average. However, due to the fact that a portion of the group's liabilities are composed of advance receipts, the advance receipts of real estate companies are relatively special and account for a large proportion, but do not require payment of financial expenses. In the future, they will be converted into the company's operating income. Therefore, based on the asset liability ratio after excluding accounts receivable, it can be seen that Group A's debt structure is relatively reasonable, within the reasonable range of the three red line regulatory indicators, and risk control is relatively appropriate.

By analyzing the debt structure of Group A from 2015 to 2019, we can find that the proportion of current liabilities of the company is relatively high. Compared to long-term liabilities, current liabilities have a higher cost and a higher short-term repayment pressure, and an excessively high proportion is not a good thing. However, the real estate industry is relatively special, and it is generally reasonable to analyze current liabilities after excluding advance payments. The ratio of current liabilities to long-term liabilities after excluding advance payments is relatively reasonable.

3.2 Selection of evaluation methods

The reasons for debt risk on local government investment and financing platforms are often influenced by multiple factors, making it difficult to comprehensively and effectively evaluate debt risk using independent indicators. Compared to conventional enterprises, investment and financing platforms have certain particularities, so when evaluating debt risk, in addition to the company's own operations, it is also necessary to consider close contact with the local government[15]. Therefore, this study mainly constructs the corresponding indicator system through the fuzzy comprehensive evaluation method, uses the Analytic Hierarchy Process and expert survey method to determine the corresponding weights of each indicator, calculates the corresponding result vector through the fuzzy comprehensive evaluation method, and comprehensively applies quantitative and qualitative methods to evaluate the debt risk of the company.

3.3 Design of evaluation system

(1) Design principles

The debt risk of Company A is caused by the combined action of internal and external factors. Therefore, in the process of constructing a debt risk evaluation index system, it is necessary to fully consider the hierarchy and diversification level of indicator selection, and be able to objectively and scientifically evaluate the debt risk of the company. In the process of designing the evaluation system, the following principles should be followed:

This article adopts a combination of theory and practice to select indicators based on the research experience of others and the current situation of Company A, and evaluates different risk levels based on determined standards.

The main focus is to observe the correlation between different indicators, and then design indicators based on a systematic and comprehensive perspective, in order to comprehensively reflect the characteristics of debt risk influencing factors from multiple perspectives and evaluate the correlation of indicators.

Different indicators should be able to be compared from both vertical and horizontal dimensions, in order to fully reflect the changes and differences in the indicators.

The risk influencing factors of local government investment and financing platforms are diverse, so they should be layered and summarized based on the attribute characteristics of different indicators, and can use different levels of indicator structures to reflect corresponding characteristics. Due to the internal connections between different factors, they can collectively form an organic whole, reflecting the overall situation of debt risk from various dimensions and levels.

Due to the conductivity of debt risk, different indicators are often dynamically changing parts. Quantitative indicators are originally constantly evolving dynamic variables that will change due to changes in various influencing factors.

(2) Indicator selection

Based on the identification of the influencing factors of Company A's debt risk in the previous text, indicators are mainly selected from the perspectives of platform companies, local governments, and macro policies. The company's debt risk evaluation indicator system can be divided into three different dimensions. The first is the first level indicator, which consists of three levels; The second is a secondary indicator, with a total of 11 indicators; The third is the third level indicator, with a total of 22 indicators. These indicators together form the evaluation system of this article.

4. Identification and evaluation of debt risk in company A

4.1 Evaluation results using fuzzy comprehensive evaluation method

The author designed evaluation indicators for risk management level based on the influencing factors of Company A's debt risk, and based on this, designed a survey questionnaire. The evaluation of all indicators includes five levels, namely V=V1, V2, V3, V4, V51=[Low risk, lower risk, medium risk, higher risk, high risk 1, and assign a value of V= 20, 40, 60, 801001. 20 experienced personnel are encouraged to rate the indicators. Experts rate each indicator based on their professional competence

and work experience, and then judge the degree of affiliation of a certain indicator to a specific evaluation level based on the scoring of all experts. Then, the proportion of 20 approved individuals is selected as the degree of affiliation, and a corresponding fuzzy comprehensive evaluation matrix is constructed based on the fuzzy comprehensive evaluation matrix mentioned earlier The calculation process of the evaluation method is used to obtain the membership evaluation table for the second and third level indicators. As is shown in Figure1 and Figure 2.
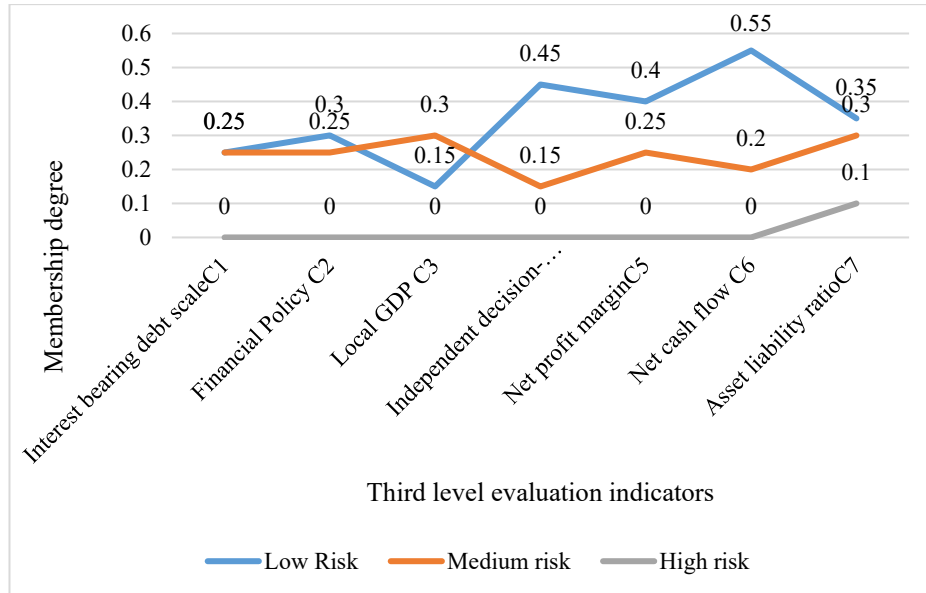

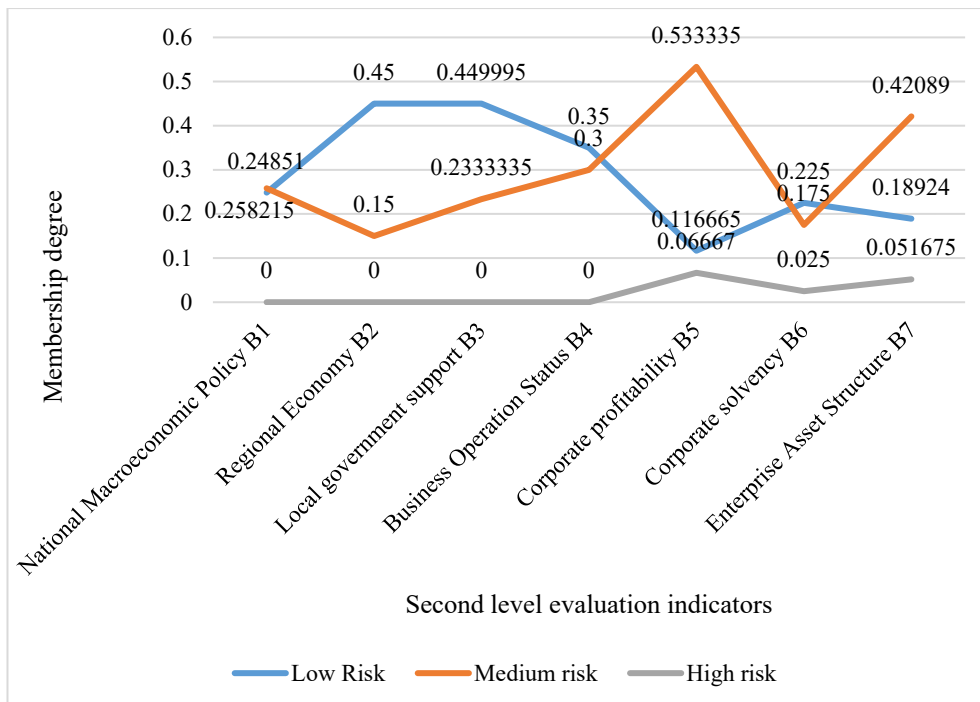*Figure 1: Evaluation table for membership degree of third level indicators*

Figure 2: Secondary indicator membership evaluation table

According to Figure 1 and Figure 2, the overall evaluation vector B (0.346717, 0.3229363, 0.246257, 0079150.00504) is obtained. Based on the evaluation score of V=[20, 40, 60, 80100], the overall evaluation score of Company A is calculated to be 41.4643, which is between low and medium. As is shown in Table 1.

According to the previous analysis, Company A's debt risk level is between low and medium, and the overall debt risk is controllable. However, at the same time, from the summary of fuzzy evaluation vectors, it can be seen that the scores of enterprise operation status and debt paying ability in the

secondary evaluation indicators are relatively high, with 55 points and 52.6 points respectively, which are at a moderate risk level; The scale of interest bearing debt and net cash flow in the third level evaluation indicators are at a relatively high risk level, while the proportion of market-oriented operating revenue, asset liability ratio, platform regulatory policies, net profit margin, interest coverage ratio, and enterprise decision-making power are all close to a relatively high risk level. Company A should focus on changes in relevant risk influencing factors.

Table 1: Summary of medium to high risk evaluation indicator vectors

Risk indicators	Score
Interest bearing debt scale	63
Net cash flow	60
Asset liability ratio	57
Business operation status	55.0004
Net profit margin	52
Independent decision-making power of enterprises	52

4.2 Risk prevention and control suggestions

Establishing a risk warning and monitoring system suitable for oneself can help such enterprises monitor risks in real-time during the use of funds and take measures in advance to avoid risks. At the same time, strict control of capital expenditures and the establishment of a fund pool can also help enterprises improve the efficiency of fund utilization and further reduce debt risks.

5. Conclusions

This article analyzes and studies the debt risk of local government financing platform A company through a case study method. On the basis of reviewing and collecting internal data of Company A, the identification of risk influencing factors closely related to Company A's debt risk was carried out, and a debt risk management evaluation index system was constructed based on this. The weights of each risk indicator were determined through the analytic hierarchy process, and the debt management risk evaluation results of Company A were calculated using the fuzzy comprehensive evaluation method. The debt risk level and main causes of Company A were summarized, and feasible suggestions were proposed for Company A to prevent and control debt risks.

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