

Research on Financial Risk Control and Prevention from the Perspective of Enterprise Value Maximization

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Abstract. Corporate financial risk refers to the possibility that the financial benefits and expected returns of the enterprise will deviate from each other due to various unpredictable and control factors in the financial activities of the enterprise, thus suffering losses. In the financial management work, we must fully implement the concept of corporate value enhancement and aim at maximizing corporate value. Based on this, based on the research on the correlation between corporate financial risk and corporate value, this paper proposes a set of financial risk assessment system based on the enterprise value maximization and enterprise risk assessment. In the process of financial management, enterprises cannot only grasp the maximization of current profits, but also consider the growth of long-term profits, and minimize the risks to achieve sustainable development of enterprises.

Keywords: Maximizing corporate value; Financial risk; Financial activities; Risk control.

1. Introduction

The normal operation and long-term development of enterprises are often threatened by financial risks such as raw material costs, liquidity, currency exchange rates, etc. If the internal financial risks of the enterprises are not well managed, they will bring a lot of losses to themselves, and even lead to bankruptcy in serious cases. Therefore, the dynamic monitoring of financial management and timely avoiding financial risks is a topic of general concern to corporate management and related research institutions. The financial risk assessment system is one of the keys means to evaluate, warn and evade the financial risks of enterprises. It can provide an important basis for the management departments, enterprises, creditors and investors to make decisions. Therefore, it has important theoretical and practical significance [1].

The construction of risk assessment model is a hot topic in the current financial risk assessment system. Foreign researchers have achieved systematic results in modeling, but the current domestic financial risk management is mainly empirical research, and the use of construction models to evaluate predictions is less reported. In the research of financial risk assessment modeling, most of them are based on the single factor level of financial management characteristics, financial risk causes or business performance, analyze the causes, evaluation and control of financial risks, and consider financial risks and corporate values. There are few studies on association effects [2]. Therefore, based on the maximization of enterprise value, this paper establishes evaluation indicators based on profit, debt repayment, development, management assets and cash attracting ability, and uses factor analysis method to construct the model, and constructs a set of enterprise financial risk evaluation system, which can The company provides certain theoretical guidance for enhancing value and avoiding risks.

2. Corporate Value and Corporate Financial Risk

2.1 Enterprise Value

(1) Market value

The market value of an enterprise is the market value of the company's shareholders' equity plus the debt value of the company. The key is to determine the market value of shareholders' equity. For listed companies, the number of ordinary shares outstanding can be multiplied by the market value per share (which should be based on the stock market price on the day of assessment).

(2) Book value

The book value of an enterprise is an accounting concept based on historical cost. The assumption is that the value of an enterprise is the sum of the value of all the investors, including creditors and shareholders, to the assets of the company. The book value is easily obtained based on the company's balance sheet, which is the sum of shareholders' equity and liabilities as shown in the table. In accounting statements, assets are depreciated at the time of purchase or production cost minus net historical cost, so the reason for this is objectivity and prudence.

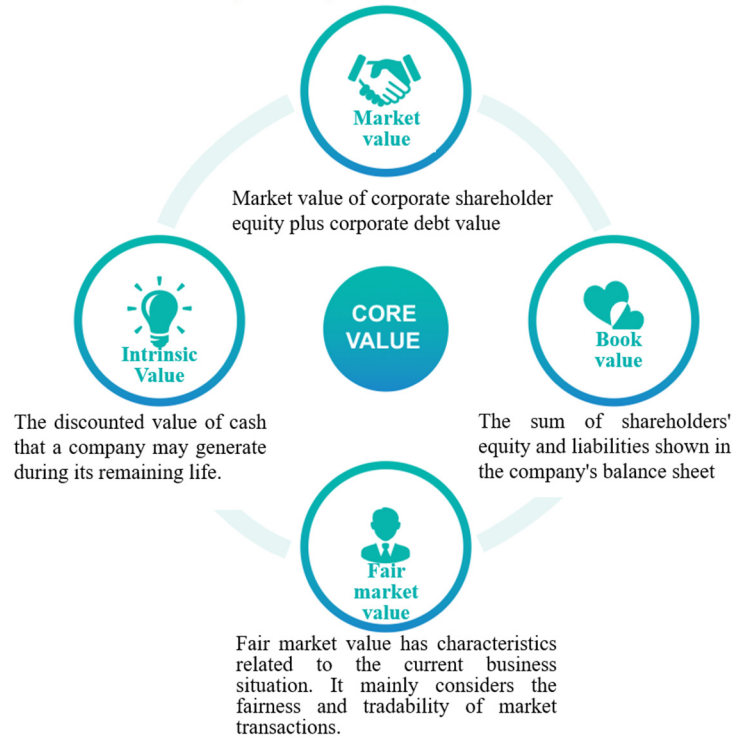


Fig.1 Corporate value

(3) Fair market value

Internationally, economists, appraisers and both parties emphasize the concept of “fair market value”. The main points and assumptions of “fair market value” are: 1 Voluntary buyers and sellers; 2 Buyers and sellers are not subject to any forced trading transactions; 3 Information is complete; 4 The situation of the company being sold has reasonable disclosure time in the market. Compared with the historical cost of accounting, the fair market value has characteristics related to the current business situation. It is mainly considered from the perspective of fairness and tradability of market transactions.

(4) Intrinsic value

Intrinsic value is defined as the discounted value of cash that a business may generate over its remaining life. The intrinsic value of a firm is a very important concept for corporate investors and management. It provides the only logical means and criteria for assessing the relative attractiveness of investments and firms and the true performance of firms. Understanding the intrinsic value and its source is the key to investment management and success. It is also the key to the scientific decision-making of the internal management of the enterprise, the effective value management of the wealth management personnel and the continuous improvement of the value of the enterprise to achieve the goal of maximizing value.

2.2 Financial Risk

(1) Impact of external environment

A good external environment brings great room for the development of the enterprise. However, under the influence of the market economy, the external market environment is complex and

changeable, and the growth of the enterprise is bound to be restricted by the external environment. The rapid development of China's economy not only provides great opportunities for enterprise development, but also makes the enterprise economy rapidly upgraded [3]. It also led to the impact of the increasingly complex external environment on corporate financial management, increasing the difficulty of implementing corporate financial projects. First of all, the influence of the external environment of the company cannot accurately predict the development of the market, and directly increase the financial risk of the company due to adverse changes in the international environment, market changes, economic development, technological innovation, and so on. Second, changes in the financial market will lead to exchange rate, interest rate fluctuations, unethical behavior in the market, etc., which will cause financial risks.

(2) Internal management impact

The impact of the internal environment of the enterprise will also cause the financial management crisis of the enterprise. Poor management is the main reason for the financial risk of the enterprise. Business management should pay attention to the problem and avoid the risk of financial management. First, the financial risks caused by corporate investment decisions, the wines often faced by modern enterprise development are the problems of investment decisions. The success or failure of investment decisions is directly related to the economic interests of enterprises. If a company lacks an investment management solution in the face of sudden problems in the investment market, the company faces not only the reduction of economic benefits, but also the more serious problem is the increase of corporate investment risk. Second, the financial risks caused by improper allocation of funds, the unreasonable distribution of liquid funds makes the company face a financial crisis caused by a large financial crisis. Finally, the financial risks caused by excessive guarantees of enterprises, a common way of doing business in guarantees, but enterprises should pay attention to the issue of guarantee risks. In the case of breach of contract by the guarantee unit, the guarantee company needs to bear all losses, causing its own enterprises to fall into huge Financial risk [4].

3. Value Maximization Enterprise Financial Risk Evaluation System

Taking into account the limitations of the current corporate financial risk assessment system, the evaluation index system (2) is optimized and summarized, and a financial risk assessment system based on the maximization of enterprise value is constructed.

The first step is to assess the link between corporate value and financial risk. According to the literature analysis, the enterprise value V is proportional to the total cash flow F of the future, and is inversely proportional to the discount rate D . The discount rate is determined by the risk and can reflect the change in the risk. See the formula (1) for the specific relationship.

$$V = \sum_i^n \frac{F_i}{1 + D_i} \quad (1)$$

In the second step, choose to summarize the evaluation indicators at different levels. Under the premise of applicability principle, objectivity principle and systemic principle, the financial risk evaluation index system based on the enterprise maximization goal is obtained, as shown in Figure 2.

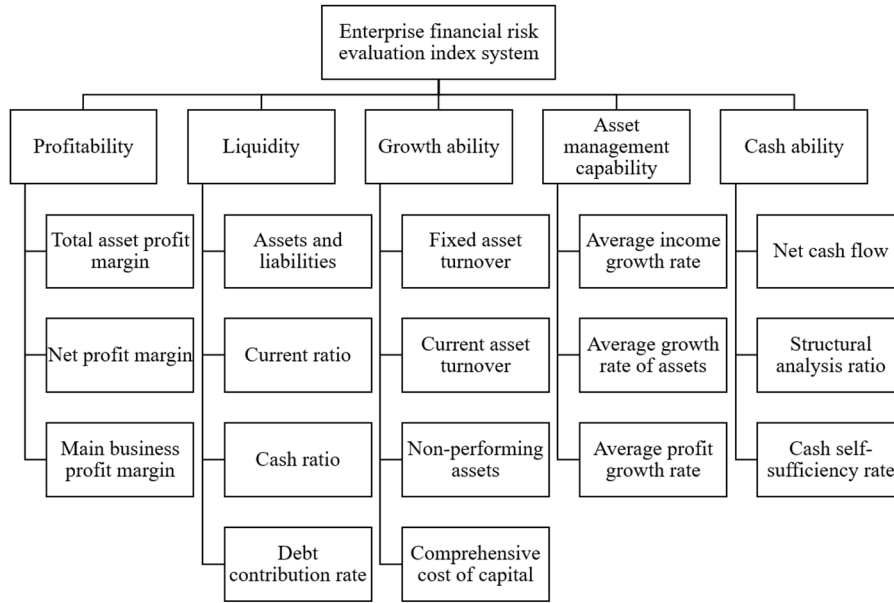


Fig.2 Financial risk assessment indicator system structure

The third step is to use factor analysis to model. Firstly, the sample data is normalized, then the contribution rate of the eigenvalues of the coefficient matrix is solved, and then the principal component method is used to calculate the factor load matrix. Finally, the coefficient matrix of each variable is obtained from the contribution rate of the main factor, which is transformed into a linear equation, that is, a factor mathematical model.

4. AHP Analysis of Financial Risk Indicator Weight Analysis

Assuming that the element B of the previous layer is used as a criterion, it has a dominant relationship with the elements $B1, B2, \dots, Bn$ of the next level. The establishment of the judgment matrix is to assign the corresponding weights of $B1, B2, \dots, Bn$ according to their relative importance under criterion B , that is, to repeatedly weigh the importance of criterion B , the two elements $B1$ and $B2$, and here we need to use the 9-point ratio [5]. The scale assigns importance to importance. If the factor i is compared with j by a_{ij} , the factor j is compared with i and judged as $1/a_{ij}$. The consistency test is performed on the evaluation results using the formula (2), and the formula is as follows.

$$CI = \frac{\lambda_{\max} - n}{n - 1} \tag{2}$$

Then determine the indicator weights, there are formulas as follows.

$$\bar{w}_i = n \sqrt[n]{\prod_{j=1}^n a_{ij}} \quad (i = 1, 2, 3, \dots, n) \tag{3}$$

Then, the normalized judgment matrices are added by columns according to formula (4), and then the entire column vector is normalized to obtain the normalized relative importance of the elements relative to the upper layer criterion.

$$w_i = \frac{\bar{w}_i}{\sum_{i=1}^n \bar{w}_i} \quad (i = 1, 2, 3, \dots, n) \tag{4}$$

Calculate the weight of each dimension of the criteria layer relative to financial performance, and obtain Table 1.

Tab.1 Enterprise Judgment Matrix and Weights of Enterprises

A	B1	B2	B3	B4	B5	W
B1	1	1/2	1/2	4	2	0.20
B2	2	1	3	1/2	2	0.35
B3	2	1/3	1	4	1/2	0.16
B4	4	2	1/4	1	1/3	0.12
B5	1/2	1/2	2	3	1	0.17

Consistency test results: $lmax = 6.329$; $CI = 0.0658$; $RI = 1.24$; $CR = 0.0531 < 0.1$.
In the same way, the weight of each sub-indicator is obtained.

Tab. 2 Fuzzy comprehensive index weights determined by entropy determination method

Profitability (B1) 0.2625	B11	0.38
	B12	0.35
	B13	0.27
Liquidity (B2) 0.231	B21	0.341
	B22	0.327
	B23	0.245
	B24	0.087
Growth ability (B3) 0.1925	B31	0.354
	B32	0.305
	B33	0.253
	B34	0.088
Asset management capability (B4) 0.139	B41	0.476
	B42	0.284
	B43	0.24
Cash ability (B5) 0.175	B51	0.345
	B52	0.274
	B53	0.381

5. Method Evaluation and Risk Prevention Advice

5.1 Method Evaluation

From the perspective of comprehensive evaluation indicators, the indicator system reflects the process of value-added of enterprises and all aspects and results of business operations, covering profitability, solvency, asset management capabilities, business growth potential and cash acquisition capabilities, including : asset contribution rate, net asset contribution rate, main business profit rate, asset-liability ratio, current ratio, cash ratio, operating cash net flow debt service contribution rate, fixed asset turnover rate, current assets turnover rate, non-performing assets proportion, comprehensive The capital cost rate, the average growth rate of the three-year main business profit, the average growth rate of three-year self-owned capital, the average growth rate of three-year sales revenue, the net cash flow per share, the structural analysis ratio and the cash self-sufficiency rate are 17 indicators.

From the comprehensive evaluation method, after the norm matrix is standardized, the correlation matrix is calculated, the feature vector with the feature root greater than 1 is selected, the orthogonal rotation is performed, the main factor is determined, and the financial status is comprehensively evaluated according to the main factor. The conclusion is objective and fair, and the conclusion is eliminated. Subjectively determine the human influence of the indicator weight.

5.2 Related Recommendations

(1) Strengthen risk awareness and strengthen protection of the external environment

Strengthening the awareness of risk protection should be based on the quality of employees in the enterprise, and through various trainings and explanations, the employees of the company have a true understanding of financial risk management. Clarify the connection between the company's development and financial management, and strengthen the risk awareness of the employees in a short period of time. Both in theory and in the actual work business, employees can use risk management control. Increasing employee risk, the meaning there, can maintain risk awareness in all aspects of financial management. Increase the propaganda of enterprises and form an atmosphere of corporate financial risk management. It is a combination of changes in the external environment and positive adjustment of corporate funds.

(2) Improve management level and deal with internal risks

First, enterprises should allocate funds for investment and management reasonably. According to the customized short-term loans and long-term loans of market financial information science, they should invest in loan projects according to actual development needs, so as to avoid the financial risks caused by investment errors caused by repayment risks. Secondly, enterprises need to formulate scientific and standardized investment plan programs, and must conduct strict research and investigation on investment projects. When understanding the economic benefits and development prospects of investment projects, it is necessary to combine the actual development of the enterprise with high debts, and avoid the situation of incorrect investment due to insufficient understanding of the project [5]. Third, enterprises should establish an internal fund management structure, rationally allocate funds to ensure the liquidity of funds, and avoid imbalance of capital leverage. The development of economic globalization has strengthened the economic ties between countries. The development of global hedge funds affects the economic development of enterprises. According to the economic development of enterprises, combined with the global economic situation, the development of corporate economic development is in line with the development of market economy.

(3) Improve the risk management system

Enterprises to improve the risk management mechanism can start from the following aspects. On the one hand, the risk management early warning system is established, and the risk management early warning system combines modern information gathering technology to integrate the financial risk awareness, risk prediction, early warning and processing information management platform. This information management system can provide early warning and solution to the financial crisis of the company through changes in the external environment and the actual situation of the enterprise. The financial early warning system helps companies to develop financial plans that are in line with development, and the information management model improves the financial management level of enterprises.

(4) Using financial markets to pass on financial risks

In the process of financing, enterprises are prone to the situation that excessive capital loans cause corporate liabilities. Changes in interest rates during the fundraising process will result in loss of corporate profits. At this time, enterprises can issue loan pressures in the fixed income bond sector [6]. In the investment process, the investment of a single stock is highly risky. By purchasing the stock index to pass on the interest rate risk, the investment in the daily interest rate of the protective interest rate is concentrated. Through the stock market trend to determine the input of funds, in the case of ensuring the state of the stock market is good, increase the investment of funds. Pay close attention to the ups and downs of the stock market in a timely manner, and prepare your hands in the investment.

6. Conclusion

In view of the interaction between corporate value and financial risk, this paper explores the construction path of a corporate financial risk assessment system based on the perspective of enterprise value maximization, and provides a reference for enterprises to improve their financial risk

management. Further research is needed on the correlation analysis between the indicators, the data evidence of the risk assessment system, and the application of other methods such as the fuzzy comprehensive evaluation method to the financial risk assessment system.

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