

Research on the Current Situation of Financial Early Warning System of Small and Medium-sized Enterprises

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Abstract

Small and medium-sized enterprises (SMEs) play an important role in the national economy, and with the development of the economy, they become a key factor in promoting economic development. And financial crisis plays a vital role in the survival and development of SMEs. Based on this, the article explains the impact of financial risk and the basic content of financial risk early warning system, by analysing the current problems of SMEs' financial early warning system, and formulating a perfect implementation path, we hope to provide reference for more SMEs to carry out financial early warning.

Keywords

Small and Medium-sized Enterprises; Financial Early Warning; Risk; Financial Management.

1. Introduction

In recent years, China's small and medium-sized enterprises (SMEs) have flourished, and their driving role and value to the national economy cannot be ignored. However, China's small and medium-sized enterprises are also facing brand new challenges and crises in the process of continuous transformation of the market system. The financial risk problems of most SMEs are very likely to lead to serious economic losses or even bankruptcy, so the creation of a financial early warning system is an urgent need for SMEs.

2. The Concept of Financial Early Warning

As the process of enterprise reform and innovation accelerates, the scope of business operations and activities of enterprises is expanding. However, any decision made by enterprises in the process of operation is often accompanied by more or less risk, especially in the financial aspect. Enterprises in the production and operation activities, will face a variety of risks, these risks are objective and can not be avoided. These risks can have a constraining effect on the sustainable development of enterprises. In the current economic environment, enterprises want to achieve long-term stable development, we must have foresight, timely adaptation to the overall trend of market reform, the establishment of a scientific and reliable financial early warning system, the enterprise's current and potential risk analysis, and develop corresponding risk prevention and control measures. Financial early warning, also known as enterprise financial early warning, is through the financial statements provided by the enterprise, business plans and other relevant accounting information, the use of financial accounting, statistics, finance, business management and marketing theory, through the ratio analysis, comparative analysis, factor analysis and other analytical methods, the way of business, management and other predictions, in order to find out the business management of the operating risks and financial risks, and put forward a warning and prompted the enterprise to operate and manage the risk. risk, and provide warnings and prompt corporate management to take action to prevent possible risks from becoming real losses. The company's financial

early warning system is a risk control mechanism combined with modern technology. Its role is to forecast possible financial risks and financial crises, and can play the role of early warning and alarm, and then warn the business operators and put forward measures and opinions to prevent or resolve the risks.

A financial early warning system has four basic characteristics, namely, sensitivity, predictability, precaution and reference. When an enterprise is equipped with a reasonable, appropriate and effective financial early warning system, it will be able to accurately search for all kinds of financial risk signals and analyse the causes, so as to accurately predict financial risks and provide enterprises with early warning and preventive measures. Enterprises deploy relevant staff, including financial personnel, senior management, functional departments, etc., to actively communicate and co-operate with each other, make reference to the information provided by the early warning system, and formulate scientific and reasonable countermeasures according to the possible financial risks.

3. Status of the Financial Early Warning System

3.1. Current Status of Domestic and International Research

Enterprise financial risk management, as a branch of risk management, has appeared in the developed countries in the West in the 1920s, but from the 21st century onwards, the work related to the study of enterprise financial risk has gradually been paid attention to by the governments of various countries around the globe, the financial sector and the field of academic research, and for the study of early warning of financial risk, it is now progressing gradually to realise the progress of systematization, standardisation and informatization.

3.1.1. Current Status of Overseas Research

Since the 1930s, some western scholars began to pay attention to the problem of early warning of enterprise financial crisis and launched relevant research work one after another. And put forward a variety of different financial crisis early warning methods and models, generally divided into qualitative analysis and quantitative analysis. The means of qualitative analysis include standardised questionnaire method, four-level sign analysis method, flow chart analysis method, management scoring method and so on. Among them, the four-level sign analysis method divides the company's financial crisis into four stages: latent period, outbreak period, deterioration period, and manifestation period. Since qualitative analysis is subjective, many foreign scholars have shifted their attention to the study of quantitative analysis methods and models, and have successively introduced a large number of quantitative analysis models for early warning of corporate financial crises, which include univariate determination model, multivariate linear determination model, multivariate logistic model, artificial neural network model and multivariate probability ratio regression model.

3.1.2. Current Status of Domestic Research

There are a number of constraints on the economic development of the country, which has led to a relatively late start in the study of financial early warning in the country. Specifically, this research was just started in the 1980s, and it was not until the late 1990s that perfect financial early warning models appeared, and these models are still evolving today. Domestic scholars are relatively lagging behind and making slow progress in the study of corporate financial risk early warning, and there are some shortcomings compared with foreign countries. It is only after arduous searching and accumulating a lot of experience and lessons that a set of risk management system suitable for China's enterprises has been gradually established. At present, China is still in the preliminary exploration stage in the research of financial risk early warning system. China's current financial risk early warning model is mainly a single-variable early warning model, multi-variable early warning model, financial early warning based on the

entropy value method, financial early warning based on the efficacy coefficient method, other early warning models and other models.

3.2. Problems in Financial Early Warning for SMEs

3.2.1. Insufficient Early Warning Awareness of Financial Risks

Cultivating the financial risk early warning awareness of enterprise personnel is a key prerequisite for enterprise financial risk management, and if there is a lack of awareness of risk early warning, it will easily lead to an unclear understanding of risk, or even ignore the existence of risk. When building a financial early warning system, enterprises need to be fully aware of the existence of risk. Now small and medium-sized enterprises have financial risk early warning management problems, the root of which comes from the lack of awareness of risk early warning of enterprises. The leadership of many enterprises do not have risk awareness, not the market operation of the valuable information generated into the power of data to assist enterprises to better seize the development opportunities, in advance of the existence of potential risks, to create a brighter future for the development of enterprises. Enterprises are likely to fall into serious difficulties if they lack awareness of dangers and financial early warning in the course of business. Therefore, in order to cope with the impact of financial risk, enterprises need to strengthen the understanding of financial risk and take corresponding preventive measures to reduce the negative impact of financial risk on enterprises.

3.2.2. Inadequate Enterprise Internal Control System and Low Degree of Information Sharing

From the internal point of view of the enterprise, the enterprise internal control system is a good construction is a prerequisite for the smooth sharing of information, at the same time, the enterprise information flow rate is high, then the industry in the early warning management of financial risk performance will be more prominent. But in fact, most enterprises have problems with the internal control system, resulting in poor internal collaboration, in financial management, there is a lack of information sharing and collaboration. This leads to poor information quality of financial accounting data, which in turn affects the application value of enterprise data analysis.

3.2.3. The Level of Relevant Professional Qualifications of Finance Staff Needs to Be Improved

The financial personnel of an enterprise is the main role directly responsible for early warning and management of enterprise financial risks, and their quality level plays a decisive role in the quality of work. In addition to solid financial management skills, data analysis capabilities, an excellent financial personnel also need to master information technology knowledge, legal knowledge, economic knowledge, with a strong sense of risk, while having a high degree of professional ethics. However, many enterprises still exist in the quality of financial personnel do not meet the standards of the problem, they need to have a great deal of professional ability to learn and progress space, in the financial risk early warning ideological awareness and concepts need to be updated, in the necessary ethical qualities should also be more prominent, on the financial risk early warning should be more and more attention, otherwise it is very unfavourable to the enterprise's financial risk early warning to carry out the work.

4. Specific Paths for the Construction of a Financial Early Warning System

4.1. Selection of Early Warning Indicators and Application of Scientific Methods to Build a Financial Early Warning System

When a business faces a financial crisis, it usually undergoes a series of change processes. This process can be seen as a gradual shift from quantitative changes to qualitative changes. When an enterprise's financial crisis is worsening, we can observe and measure the extent of this deterioration through some relevant indicators. These indicators can reflect the changes in the financial situation of the enterprise, thus helping us to understand the difficulties faced by the enterprise. In order to effectively prevent the financial crisis of small and medium-sized enterprises and achieve accurate identification of financial crisis, it is key to select the correct financial early warning judgement indicators as the entry point of enterprise financial risk. When SMEs face a financial crisis, it is usually caused by a combination of internal and external factors. Internal factors lie in SMEs' business management decisions, capital utilisation, financing and borrowing, investment management, etc., while external factors lie in national policies, market changes, social preferences and natural disasters. Most of the internal factors are controllable, and the following points can be used as indicators for judging the risk of internal factors of SMEs: first, the profitability of the enterprise; second, the ability of capital turnover in line with the scale of the enterprise's operation; third, the ability to repay the debt when it is due; and fourth, the amount of realisable assets and undistributed profits held. External factors are mostly uncontrollable, and the following points can be used as indicators of the risk of external factors of SMEs: firstly, the trend of the growth rate of operating income, total assets and operating profit in each quarter and year; secondly, the reasonableness of the return on investment of SMEs; and thirdly, the difference between the opportunity cost and the actual income.

China's small and medium-sized production and business activities face different internal factors and external factors, so each enterprise needs to combine their own business needs to choose the appropriate financial early warning analysis methods for their own enterprises.

4.1.1. Quantitative Analysis Method

Univariate Discriminant Analysis is a prediction model that takes one financial indicator as a criterion to judge whether an enterprise is in a state of financial distress. This method can be chosen when the enterprise indicators are stable enough, but the selection of only one financial indicator is one-sided and cannot accurately predict the financial risk of the enterprise.

The multivariate discriminant analysis method analyses patterns in the context of multiple objectives or indicators associated with each other. The more indicators selected in constructing the financial early warning model, the more accurate the prediction of the possible financial crisis situation and the degree of crisis will be. Enterprises select the required indicators from the model indicators according to the actual situation and comprehensively analyse the problems of the enterprise.

4.1.2. Qualitative Analysis Method

According to the "four-stage symptom" analysis method, the development process of an enterprise's financial crisis can be divided into four stages: the latent period of the financial crisis, the onset of the crisis, the deterioration of the crisis, and the period of realisation. The latent period focuses on blind expansion; ineffective marketing, poor liquidity of enterprise assets, improper allocation of resources; irrational capital structure, negligence of risk management; disregard for major changes in the environment, and so on. The onset period is characterised by insufficient own capital, serious indebtedness and deferred debts. The deterioration period is centred on: difficulty in liquidity; default and non-payment of debts as they fall due. The realisation period is manifested as: liabilities exceeding assets, loss of

solvency; declared bankruptcy. Enterprises according to the above situation combined with their own business situation, timely detection of the crisis, as soon as possible to lift the financial crisis.

Flowchart analysis, through the dynamic extrapolation of the various stages of enterprise development, if it appears in a process of obstruction or risk will interrupt the process behind, the enterprise needs to find out this stage of the problem exists in time to deal with the problem, reduce future risks.

4.2. Strengthening the Early Warning Environment and Creating a Good Risk Management Culture

If the enterprise wants to carry out effective financial early warning, the enterprise management should take the lead to take it as an important guiding means and method in the enterprise operation and management, not only to make the financial personnel in the enterprise, but to make all the staff in the enterprise to pay attention to the content of the financial analysis, in the enterprise management, the risk management plays an important role in the enterprise management, to help the enterprise to reduce the financial risk. When all the staff of the enterprise can continuously maintain the sensitivity to the crisis, it will naturally form a corporate culture, that is, enterprise risk management culture. This culture is the highest level at which an enterprise can conduct financial early warning.

First of all, all the staff of the enterprise, especially the senior management should make use of various ways and channels to vigorously publicise the risk management culture of the enterprise, so as to make all the members of the enterprise set up the concept and consciousness of risk everywhere and risk all the time, and by deeply implanting the risk management culture of the enterprise into the heart of each staff, the risk management ability of the staff can be effectively enhanced, so as to achieve the goal of enterprise risk management. In addition, in fostering a risk management culture, enterprises need to pay attention to pre-service risk management training for managers and business operators of business processes, key management links and risk control points. Such training can help employees better understand and cope with potential risks and improve their risk awareness and coping ability at work. In this way, the enterprise can effectively reduce the likelihood of risk occurrence and protect the interests and reputation of the enterprise, so that they can systematically and comprehensively understand and comprehend the enterprise's risk management culture and corresponding measures.

Finally, the enterprise should combine the enterprise's remuneration system and personnel management system while establishing an enterprise risk management culture, which can improve the risk prevention awareness of managers at all levels, especially senior management personnel, and can prevent the enterprise from suffering significant or huge losses because of their blind expansion, over-achievement and neglect of risks.

4.3. Improvement of Early Warning Capabilities and Strengthening of the Overall Quality of Finance Staff

Whether the financial early warning system of SMEs can be effectively realised depends to a large extent on the professionalism of the financial staff, but SMEs, due to their small size and the weak attractiveness of the positions they can offer, often face certain difficulties in recruiting financial staff, as outstanding talents often prefer large enterprises. Despite the same conditions, job seekers are more inclined to choose large enterprises. Therefore, small and medium-sized enterprises in order to improve the financial early warning ability, build financial risk prevention, should pay attention to the original financial personnel training, improve their overall quality.

(1) Invite professional financial management experts to come to the enterprise site to give lectures in order to strengthen the education and training of financial personnel. As a qualified financial personnel, first of all, they should have a large amount of policy and theoretical knowledge, and get business improvement through continuous learning and training. The company can hire expert professors in financial management from universities or accounting firms to conduct on-site research in the company, and give lectures for the company's financial staff and put forward suggestions for solving problems according to the actual situation of the company. In this process, the company's financial personnel not only get the solutions to specific problems, but also gain ideas and methods to solve related financial problems, which will greatly improve the company's work efficiency and ability to prevent financial risks.

(2) Conduct financial business training and assessment to improve the practical skills of financial personnel. A qualified financial personnel in addition to having relevant accounting theory knowledge as the basis, but also should have skilled accounting skills. Therefore, the director of the enterprise should be taken by the enterprise's financial staff at all levels, phases, batches of short-term business training, and financial staff to carry out a serious assessment, the assessment of the staff can take appropriate incentives, while the assessment of backward employees should also be reflected in the salary treatment. Strengthen the business training and assessment of financial staff, not only can give financial staff a re-education opportunities, but also through the training of financial staff to produce incentives, and make them produce a sense of social identity, so as to enhance their self-confidence, more motivation to put into the work.

5. Conclusion

With the development of the economy, small and medium-sized enterprises (SMEs) are paying more and more attention to the prevention of financial crises. The financial crisis of enterprises is often caused by a variety of factors in the process of enterprise operation, and these crises can be detected and solved in advance. By selecting early warning indicators, constructing a scientific financial early warning system as well as continuously improving the quality and working ability of financial personnel, and creating a good corporate financial early warning atmosphere, we can better reduce financial risks and ensure the healthy development of enterprises.

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References

- [1] Julia. Research on early warning of financial risk in W company[D]. Hunan University of Technology, 2020.
- [2] Han Jie. Research on early warning management of enterprise financial risk in the era of big data[J]. Taxation,2019,13(14):85-87.
- [3] Duan Xiaocun,Huang Yuqing. A review of research on financial risk early warning at home and abroad[J]. Modern economic information,2017(11):230.
- [4] Gao Zhaoyi. Exploring the establishment programme of financial early warning system for small and medium-sized enterprises [J]. Investment and Entrepreneurship.2022(21):79-81.

- [5] Xiong Xi. Research on financial early warning methods of small and medium-sized enterprises in China [J]. Times economic and trade.2018(07):33-36.
- [6] Qiu Min. Research on financial management problems of private small and medium-sized enterprises [D]. Shanghai International Studies University,2014.
- [7] Chen Liu. Research on enterprise financial early warning system[J]. Flower Gun Technology and Market,2020,No.102(01):17-18.