

Problems and Countermeasures of Financial Risk Management based on Big Data Analysis

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Abstract: The development of financial market is closely related to China's economic growth. The rapid economic development not only brings advanced computer information technology, but also increases the probability of financial risks. At present, China is gradually entering the era of comprehensive big data. Under the background of big data analysis, the occurrence and management of financial risk also face new challenges. Therefore, it is more necessary to analyze the financial risk management problems under the big data analysis, and explore the solutions to the financial risk management problems in China, so that the financial risk management level of Chinese enterprises can use big data information technology to get effective promotion.

Keywords: Big data; Financial risk; Risk management; Financial market

1. Introduction

With the development process of economic globalization, the development of financial market has also ushered in more opportunities. In the process of comprehensive promotion of big data, there are many new forms of data acquisition and analysis, which make the financial market glow with new vitality. Data information technology integrates the information data related to the financial market, and establishes a unified relationship between the data, so as to fully grasp the application form of data information. On this basis, the derived big data environment makes the industry data information of the financial market more authentic and reliable, and the accuracy and value of the data are also improving day by day. And financial risks corresponding to the development of the financial market also have a new situation under the background of big data. Financial risk is an important indicator for enterprises to measure their own future development level. In order to better achieve the development goals, many enterprises will focus on measuring the development level of their own financial risk management. Therefore, it is necessary to actively explore effective strategies to effectively improve the level of financial risk management, and strictly control financial risks, so as to better deal with the adverse consequences brought by financial risks. The management and control of financial risks can not only help to build a harmonious and stable development environment for China's economic development, but also provide an environmental basis for the sustainable development of the economic level. It can also ensure that China's economic entities are

free from the interference of external environment in financial risks, ensure the safety level of economic entities in financial risks, and minimize the level of economic benefits of enterprises caused by financial risks.

2. Analysis on the Characteristics of Financial Risk Management

2.1. Instability

In financial activities, positive financial activities can effectively promote the level of China's economic development, while negative financial activities will bring adverse effects on economic development. The conventional way of examination cannot completely distinguish the positive and negative financial activities. Many financial risks gradually evolve into risks from the details, which can be seen from the control of financial risks is unstable. Once the financial risk occurs, it will affect the regional economy, or even the international economy. For example, the phenomenon of sharp rise in prices and vicious competition of enterprises on the verge of bankruptcy is caused by the uncertainty of financial risk management itself.

2.2. Challenges

The outbreak of financial risk is an accumulation process, which needs a certain period of time to become a clear risk hidden danger. When the frequency of financial activities is increasing, many financial problems will gradually penetrate and influence each other, and eventually lead to financial risks. In the process of continuous accumulation, the impact of this kind of risk will gradually

expand. When it can become a kind of risk, it will certainly bring financial management challenges to relevant personnel and enterprises. Therefore, in the face of financial risks, in order to control them, we must conduct in-depth analysis based on the current situation and potential influencing factors of financial risks, and formulate targeted response plans, so as to maintain the level of financial risks in a clear and controllable range to the maximum extent and reduce the losses caused by financial risks to relevant personnel.

2.3. Two sides

Everything has two sides, and financial risk management is no exception. Although the occurrence of financial risk will have a certain impact on enterprises and related personnel, in the process of economic development, the emergence of financial risk has its inevitability. Thus we must examine the occurrence of financial risk with a positive attitude. On the one hand, we should realize that the occurrence of financial risks will have adverse effects on economy and society; on the other hand, we should take positive and effective measures to control financial risks, so that financial risk management can play a role in the prevention of financial risks. Use solid financial risk management means as the basis for financial activities, so that financial activities can get a smooth operation in the process of social development.

3. Problems of Financial Risk under Big Data Analysis

3.1. At present, the financial industry lacks the mastery of core technology

At present, China is in an all-round information age. The big data information technology brought by the information age is the necessary premise to strengthen the development level of the economic field. If we want to apply the big data technology, we must realize the function value of information data in the background of big data, and use scientific and reasonable analysis methods to integrate data information into resources to promote the development of financial market. In this process, the core technology of data collection and analysis is particularly important. In China, big data information technology has not been popularized in the financial market. During this time, the development of the financial market is mainly to collect information and data in some industries, and to provide data reference for the development of the financial market through screening available data. However, this form of data extraction and analysis has great uncertainty. Not only the results of data analysis have low level of accuracy and credibility, but also the degree of exploration of the potential value is also unstable. The application of big data information technology is to integrate a large number of data and information, and con-

duct resource aggregation in different information structures, including customer transaction information, resource utilization information and personal information, etc. These kinds of information will build a unified relationship in the application of big data technology, and eventually interweave into a complex and close relationship network, which will play its own advantage value in the development process of financial market. However, due to the fact that there is still a certain lag in the current popularization of big data information technology and the application of core technology in China, the financial industry lacks of mastery and application level of core technology, which affects the application value of big data analysis in the development of financial market.

3.2. Lack of awareness of financial risk prevention

In the process of economic integration, an important factor restricting the level of financial risk management in China is the lack of awareness of financial risk prevention in enterprises and markets. In the context of big data analysis, all things will be presented in the form of data information in the content to be analyzed, which will not only include data information to promote the development of enterprises and economic markets, but also contain some risk data information. In the current financial market of China, the lack of management mechanism construction and prevention awareness of financial risk has become the normal situation of market development. In order to improve their own economic benefits, many enterprises often choose a variety of data content to promote the economic development of enterprises. Only with a preliminary analysis of these data information, enterprises start to formulate industry development strategy based on the analyzed results. In this process, there is neither reasonable investigation on the current market situation, nor screening of the collected data content to judge the reliability of the data information. Some risk factors are infinitely reduced, while the huge benefits that may be brought are infinitely enlarged, which leads to the probability of financial risks greatly increased. Some enterprises only pay attention to the economic benefits in the process of investment, but do not pay attention to the risks and loopholes in the investment plan, or set up a certain financial risk prevention strategy plan before investment. When financial risks really occur, they are often unprepared. Finally, they have to adopt strategies that are not fully in line with the development status and problems of enterprises to deal with risks, and it will affect the harmonious development of the financial market.

3.3. Insufficient the construction level of financial risk management system

Since the reform and opening up, the development of China's financial market has been carried out with the development goal of high-speed and efficient develop-

ment, and the risk management system of financial market is also in the process of continuous construction and development. However, after entering the era of big data, the risk management system of traditional financial market does not adapt to the background of big data. Due to the lack of scientific solutions to financial risks, some remaining risk problems gradually become huge loopholes under the background of big data. Although many risk problems in the financial market have been reasonably avoided under the background of big data in China, there are still many disharmonious factors influencing the development of financial market in the era of big data in the current construction of financial risk management system. The regulations and policies issued by China Banking Regulatory Commission and China Securities Regulatory Commission have not been implemented in practice matched with the development background of big data era, which makes the construction of financial risk management system always be lagged behind the development needs of the times.

4. Strategies for Financial Risk Management under Big Data Analysis

4.1. Strengthen the mastery of core technology content

Under the background of big data analysis, the key content of financial risk management is whether to master the core technology. Only by mastering the application direction of big data technology in the field of financial risk management can we effectively avoid the occurrence of financial risk. The application of big data information technology provides a certain development opportunity for the development of financial market. Therefore, in the process of innovating financial risk management strategy, it is necessary to fully integrate big data information technology. Use big data analysis technology from all walks of life to analyze the development status of financial market, maximize the application of big data information technology in modern financial market, and deeply apply it in the process of financial risk management, which makes the integration and analysis of data in the financial market can have a more secure and reliable environment. For example, in the financial market, we can establish a big data information base, incorporate the data information in the financial market and the information related to the external environment into the information base, optimize the data information structure, and enable the development of the financial market under the background of big data to carry out financial risk management with the help of high-level information technology, so that the risk management level of the financial market can be continuously improved.

4.2. Enhance the financial risk prevention awareness of relevant personnel

The improvement of financial risk prevention awareness is the key content of improving the level of financial risk management. Only by establishing a strict awareness of financial risk management and integrating the development trend of enterprises and financial market in the era of big data, can we accurately formulate the financial risk management strategy, respond to the financial risk in the shortest time, and adopt targeted strategies to solve the risk problem. And for some loopholes that have not become financial risks, we can also effectively prevent and control them to change into risks. In the context of big data, the use of some data information can help relevant personnel in the financial market to explore the occurrence law of financial risks, and explore effective risk prevention and control strategies by building data information model. Therefore, in the development of the financial market, we can help the relevant enterprises and staff to establish a good awareness of financial risk prevention by strengthening the learning of excellent experience among enterprises and regularly launching the training course of financial risk prevention awareness. And with the help of big data information technology to enhance the awareness of financial risk and risk prevention, let everyone have a steelyard to measure the risk problems in the financial market, and improve the financial risk management ability of enterprises and financial market. With the help of advanced experience and risk control measures, reduce or eliminate the adverse factors of financial risk, and promote the positive development of financial market.

4.3. Building a scientific risk prediction and early warning mechanism

A sound enterprise financial risk prediction and early warning mechanism can help enterprises and financial markets to deal with various financial risks in the process of production and operation more efficiently. In the actual work process, we should first determine the management objectives, accurately calculate the risk management costs, strengthen the attention to the financial market security, collect and analyze data information, and maintain the stable operation of financial market. In the process of financial risk management, relevant personnel need to have a full understanding of the changes in market development and environmental background, and then integrate and analyze the existing data content by using big data information technology, so as to develop a scientific and effective risk prediction mechanism, and set early warning values for the contents that may lead to risks. Once the warning conditions are triggered, professional risk management and control personnel will immediately make respond and curb the further occurrence and spread of financial risk in the shortest time, minimizing the loss and impact caused by risk, and doing a good

job in forecasting and early warning for financial risk management.

5. Conclusion

In short, in the development of the financial market, financial risk is an inevitable phenomenon. In this context, it is necessary for relevant personnel in the financial market to strictly strengthen the control and management of financial risk, and timely understand the concept of financial risk and the related process of risk management, which mainly includes the identification of financial risk, the measurement of financial risk, the grasp of financial risk management, etc. Use big data information technology and related financial derivative work to manage and

control financial risks, and provide a solid foundation for the development and improvement of economic level.

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