

Management and Optimization of Enterprise Financial Risk under the Background of Big Data

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ABSTRACT

The rapid development of big data technology has changed the traditional business model of many industries and brought opportunities and challenges to the further development. During the period of rapid development of information technology, the concept of enterprise management is more conservative and the internal structure is unreasonable, which is incompatible with the tide of application of big data technology. Meanwhile, the arrival of the big data era requires financial management personnel to master the original basic vocational skills, and the ability to analyze and use data, which brings great challenges to the ability of financial management personnel. First, this paper analyzes the problems existing in enterprise financial management, then discusses the opportunities and risks faced by enterprises and financial personnel under the background of big data, and then puts forward the strategy of optimizing enterprise financial management under the background of big data. For the field of financial risk management, big data technology can improve the efficiency of management, reduce financial risk in time, and optimize the structure of enterprises.

Keywords: big data, financial risk, optimization strategy, corporate finance

1. INTRODUCTION

In the information age, big data technology guides the development direction of various fields of society, changes the traditional management mode of many industries, and brings great influence to people's daily work and life. Under the background of big data era, the speed of data self-generation is constantly improving, which requires enterprises to improve their ability to deal with financial data. In the cloud accounting system of computer platform, the ability of accounting information service is constantly improved. Under the background of big data era, accounting data has been processed quickly and effectively [1-2]. It can make use of the advantages of cloud platform to study and process accounting information data in depth, and effectively predict the future development of enterprises. And then improve the prevention of financial risks, early warning can also make decision-making more accurate. The external coordination ability of cloud accounting is strong, which effectively overcomes the limitation of space restriction to users without fixed place, and can realize accounting information sharing only with the help of network. This greatly improves the efficiency of financial work, and realizes the internal and external cooperation of information [3-4]. Big data technology can monitor and analyze massive information at any time, and enterprise managers often need to collect a large amount of data for analysis and processing in order to make correct decisions, predict the future development and manage financial risks reasonably, so big data technology is gradually applied in the field of financial risk management. Therefore, in order

to improve their own advantages, seize high-quality resources and improve decision-making accuracy, major companies pay more attention to the analysis and processing of data, and pay more attention to the information processing ability of financial personnel. Enterprises urgently need people familiar with big data processing technology to enhance the competitiveness of enterprises, which to some extent brings great pressure to the ability of financial personnel. Through big data technology, we can improve the efficiency of management, effectively reduce financial risks and optimize the structure of enterprises. However, there are also some problems in the application of big data due to the conservative concept of enterprise management and unreasonable internal structure.

2. CURRENT PROBLEMS IN MANAGING FINANCIAL RISKS

At present, Chinese enterprises pay too much attention to the current benefits in the process of production and operation, and are eager to make the enterprises bigger and stronger, and to maximize the profits in the shortest time. This approach does not consider the development of enterprises from a long-term perspective, ignoring the importance of the internal structure of enterprises, especially the importance of financial risk management, so as to make unreasonable decisions such as blind expansion and excessive price increase. Therefore, many enterprises are squeezed out of the value of enterprises in the short term. Although in the short term, a rapid expansion of the size of the enterprise can increase the market share of the

enterprise or a sudden increase in price can increase sales profits in the short term with a smaller impact on sales. On the surface seems to be very helpful to improve their competitiveness. However, from the point of view of financial management, excessive expansion of the scale of enterprises is likely to occupy too many resources of enterprises, making the funds invested in operating assets squeezed, and even causing the interruption of the enterprise capital chain. Unable to carry out normal production and operation, financial risk increased greatly [5]. In addition, the untimely increase of product unit price may affect product sales in the long run, lead to inventory pressure, affect the normal flow of funds, may affect normal production activities, but also affect the reputation of enterprises, the gain is not worth the loss.

Although many enterprises are more or less aware of the need to change the original financial risk control model, and actively promote their own internal management information, data, but more corporate financial personnel and even senior management did not realize the ideological adoption of advanced management

The importance of ideas, the management requirements of enterprises are still more traditional. As far as Chinese enterprises are concerned, the financial personnel of our country attach great importance to the control of the production scale of tangible assets in the process of daily management, but the consciousness of asset management with potential value such as goodwill and intangible assets is weak, and the consciousness of deeply excavating its intrinsic value is not established. Therefore, many enterprises in our country do not have long-term strategic plans, do not pay much attention to setting up a good image of the enterprise, more is to pursue the pursuit of profit maximization in the short term, can not be very good through marketing means for their own products the normal growth and development of enterprises. In addition, if the subsequent lax requirements for product quality and the maintenance of their own product patents, trademark rights awareness is weak, will make fake and inferior products flooded the market [6]. Therefore, in our country, enterprises can really become well-known trademarks or far-reaching brands few. At present, managers should change the traditional concept in time, adjust the enterprise development strategy seriously, and ensure the healthy and sustainable development of the enterprise.

3. OPPORTUNITIES AND CHALLENGES FOR ENTERPRISES TO MANAGE FINANCIAL RISKS IN THE CONTEXT OF BIG DATA

3.1. Opportunities for Enterprises to Manage Financial Risks Arising from Big Datas

The traditional financial risk assessment is mostly based on the variable model established by various financial data indicators, which takes into account a narrow range of

factors and relies heavily on structural data information. However, with the development of big data technology, enterprises can obtain more comprehensive, complete, multi-level and multi-faceted data information, including structural data and non-structural data, financial data and non-financial data. And now the enterprise financial risk assessment pays more and more attention to the value of non-structural data and non-financial data. Enterprises use big data technology to analyze the influencing factors of financial risk, formulate different solutions, evaluate and sort the risk, focus on the factors with higher risk level, and improve the risk assessment system.

Using big data technology, financial personnel can collect massive data more conveniently and process mining valuable information to enterprises. Compared with the traditional empirical and intuitive prediction as the basis of decision-making, the conclusion prediction obtained by sorting out the data will be more objective, scientific and targeted, and can provide more intuitive and effective data support for the management decision makers to make important decisions. To some extent, it can reduce decision errors. In addition, since entering the information age, all kinds of data information update speed up, through the traditional manual access to paper or electronic version of information mode can no longer meet the needs of information in the big data era. Enterprise managers use big data technology to track and analyze, so that they can grasp the future development trend, find out the abnormal situation of the enterprise in time, and take reasonable measures to avoid the risk immediately.

In addition, the digitization of financial information is more automatic processing, which to a large extent reduces the workload of financial personnel and liberates financial personnel from traditional and complicated manual operations. To a certain extent, it promotes the transformation and upgrading in the industry and the transition of financial personnel to management. At the same time, in promoting the formation of networks within enterprises, improving the scope of application of big data, the links between various departments are closer, further promoting the process of industrial integration and financial integration of enterprises. From the perspective of financial personnel, financial personnel can handle relatively complex and cumbersome financial data more easily, reducing a lot of repeated steps, and greatly reducing the workload. At the same time, financial personnel can be liberated from the heavy work, more opportunities to participate in vocational training, learn the latest theoretical knowledge, understand the latest industry development trends. In the process of participating in vocational training, for financial personnel, it is not only the process of understanding the latest theoretical results, but also the process of opening up the thinking and vision of financial personnel. By understanding the development trend of the industry, financial personnel can make timely adjustments, adapt to the requirements of the times as soon as possible, master more advanced analysis and data processing capabilities, ensure the smooth progress of financial work, and become the complex talents needed by the times. To ensure that they are not eliminated by the times.

3.2. Challenges Faced by Enterprises in Managing Financial Risks in the Context of Big Data

3.2.1. Capacity of finance staff

As the product of the information age, big data technology develops rapidly and the update speed of operating system is greatly improved, which brings some difficulties to the financial personnel to learn and master this skill and use it skillfully. On the one hand, the continuous updating of technology makes the traditional financial processing mode no longer meet the needs of the current work. In order to meet the needs of the new job, the financial staff must receive additional training, time and training costs are too high, which may lead to a dilemma for the on-the-job financial staff; On the other hand, because many operating systems are still in the stage of development and improvement, and many development companies have introduced system software with different operating requirements. Therefore, some systems may be deactivated or updated in practice due to their own shortcomings, resulting in many processing methods changing, which increases the difficulty of financial personnel to master the latest operating system and reduces the timeliness of learning. It is likely to discourage financial personnel from consciously participating in training and mastering the latest technology. With the deepening of enterprise production and operation data and information level, all kinds of information are further networked, and the field scale of using big data analysis is gradually expanding, and the data that needs to be collected and processed is proliferating. At the same time, the information users require more stringent analysis results, making the operation steps more complicated and the process more precise. Therefore, the traditional financial management skills can no longer meet the requirements of the work, financial personnel urgently need to master more advanced analysis and processing of data and other capabilities, in order to ensure the smooth progress of financial work, only the complex talents who meet the needs of the times can be avoided by the times. In addition, in general, the management concept of our financial personnel is more traditional, and the big data era subverts the traditional operation mode of many industries. Although it impacts the fixed concept of managers from the ideological level, it will be difficult to integrate. Will inevitably produce the contradiction, brings the inconvenience to the work.

3.2.2. For business

3.2.2.1. Financial risk identification

With the development of big data technology, it has entered the era of information explosion. The information related to enterprise financial management and business activities is more and more extensive, and is no longer limited to the

traditional information data such as income, expenses, profits and so on. At present, many enterprises only pay attention to financial related data in the mining and analysis of financial information, do not further excavate different kinds of information, and do not analyze and consider different information from many angles. Secondly, the financial risk identification method is unreasonable. In big data environment, the importance of unstructured data and non-financial information in financial risk management gradually appears. Only through the comprehensive analysis of all kinds of data information can we effectively identify all the financial risks faced by enterprises. However, many enterprises only rely on financial statements to identify and analyze the risk, and the difficult information in the financial statements can not be identified, which leads to the underestimation of the financial risk of enterprises.

3.2.2.2. Data processing delayed

First, there is the problem of data processing lag. The development of big data technology brings high efficiency of data processing, but it also leads to the complexity and quantity expansion of financial information. The proportion of unstructured data and non-financial information in the whole data is increasing. This puts forward high requirements for the speed and efficiency of data processing. For the business activities of enterprises, it is likely that there is a huge difference in the amount of financial data processing information in the light peak season. Many enterprises have a wide range of business activities, but the various departments within the enterprise communicate with each other, integrate data and analyze data not closely enough to achieve efficient data sharing, resulting in inefficient data processing and even a large amount of data accumulation in the peak season of operation and sales.

3.2.2.3. Financial management function

The wide application of big data technology makes it more convenient for enterprise managers to analyze and process data, and provides more effective and timely information for information users. In order to seize the favorable position and enhance the competitiveness, enterprises must make corresponding adjustments to adapt to the impact of the wave of computerization of financial systems as soon as possible. The reason is that if competitors adopt advanced data processing systems earlier than they do, it is likely to cause fatal harm to enterprises by helping competitors avoid risks reasonably and effectively. At this time, if the enterprise is complacent, satisfied with the status quo can not adjust their own management model as soon as possible, it is easy to be surpassed by peers, or even eliminated. At present, a considerable number of enterprises also adopt the concept of traditional financial management, and consider the cost of introducing advanced technology and professionals. As a result, the financial information provided by the financial department is not enough to meet

the needs of information users, which brings great resistance to the further development of enterprises. In addition, the rise of big data technology needs close cooperation between various departments within the enterprise and with the outside of the enterprise in order to ensure the validity, universality and representativeness of information. However, the situation is that the financial department of the enterprise has less contact and cooperation with other departments, and the real integration within the enterprise is not much, which makes the information transmission between the departments inefficient. In addition, under the influence of traditional management concepts, the attitude of the whole industry to sharing information is ambiguous, and more enterprises are afraid that their trade secrets will be known to their competitors, so they are not excluded on the surface. But the enthusiasm and initiative of participation is not high. Therefore, the process of obtaining information from outside is not smooth, and the effect of exchanging information is not good.

4. OPTIMIZING STRATEGIES FOR ENTERPRISE FINANCIAL RISK MANAGEMENT

4.1. Improving the Financial Risk Early Warning System for Enterprises

First of all, sound financial risk early warning system must determine the content of risk early warning. In view of the complexity of market environment change and the explosion of data information, enterprises should not only focus on internal data information, but also consider the change of external factors. Focus on the entire industry and market. The construction of enterprise risk early warning system must include risk influencing factors, risk identification, risk early warning, risk plan formulation, risk response, risk mechanism feedback and so on. Secondly, the data mining technology is applied to the financial risk early warning system. The key of the enterprise's financial risk early warning system lies in the mining of data information. The enterprise should determine the data information demand according to the actual situation of its own management, mine big data according to the information demand according to the information demand.

4.2. Deepening Enterprise Information Sharing and Implementing Dynamic Data Analysis

In the information age, the access to information increases and the available information is updated and transformed, and the data is gradually changed from static to dynamic, but the controllability of financial data is reduced, and the quality of information is more difficult to evaluate. In addition, due to the low degree of integration of industry

and finance within the enterprise, the information exchange and collection between various departments is not enough, especially the financial department still maintains the traditional relative independence with other departments, which makes a lot of information can not be transferred to the financial department in time, but exacerbates the financial risk. Therefore, enterprises should pay attention to the collection and collation of data, encourage the cooperation and communication between financial departments and other departments, strengthen the degree of information sharing, and ensure the smooth development of follow-up work. Provide continuous and accurate data guarantee for data analysis platform. On the basis of timely access to relevant information such as production, sales and customers, financial personnel can carry out real-time tracking and monitoring, observe the operational dynamics of enterprises, so that they can process data more efficiently, mine useful information, calculate the future operating trends of enterprises, and provide data support for managers to adjust marketing models, prevent and manage operating risks and minimize financial risks in a timely manner. In addition, through the financial management information platform to audit the financial data, we can more effectively and intuitively evaluate all kinds of financial risk indicators, and put forward the corresponding solutions, so as to obtain greater income.

4.3. Building an Information-based Data Management System to Enhance the Information-based Capabilities of Financial Personnel

The amount of information that decision makers can obtain in the context of big data is huge, but the useful data is only a few. It is not only time-consuming and laborious to process massive information only through traditional information processing system, but also affects the timeliness and reliability of data. Therefore, through the construction of information data management system, it provides a better platform for data analysts to analyze and process information, which greatly improves the working efficiency and ensures the validity and accuracy of data processing results. In addition, by judging, collating and analyzing the data, to a certain extent, the financial personnel can grasp the ability of judging and processing non-financial information as soon as possible, avoid the financial personnel's self-reliance, expand the knowledge of the financial personnel, and improve their information ability. In addition, the application of aggregated data to daily management decisions improves the insight, decision-making power and process optimization ability of decision makers, and further promotes enterprise managers to abandon the traditional untimely management concepts and accept new data management models. In this process, enterprises should adjust the traditional conservative management concept as soon as possible, integrate big data technology into management, coordinate the responsibility relationship between departments, optimize the internal

structure of enterprises, and speed up the process of industrial and financial integration as soon as possible. In addition, the ability to find useful information in a large amount of information, on the one hand, comes from the professional judgment and work experience of financial personnel; on the other hand, analysts are familiar with all aspects of the information system process based on decision-making objectives. At the same time, in order to enhance the motivation of financial personnel to participate in training, enterprises should organize financial personnel to participate in necessary vocational training in time. At the same time, enterprises can establish corresponding reward and punishment mechanism to help financial personnel adapt to the big data era as soon as possible, keep up with the development of the times, and help financial personnel to improve their ability of data analysis and application of technology. In addition, financial personnel should also improve their professional literacy, actively comply with the requirements of the times, ensure that in the management of financial risks can effectively combine professional skills with big data technology, improve their ability to deal with professional problems.

4.4. Improving the Level of Financial Management Functions

First, reposition financial management capabilities. Enterprises should pay attention to the position of financial management in the whole enterprise management. Starting from the system, the financial process management system is designed and developed according to the business process of the enterprise, and the standard of obtaining and collecting financial data of various departments of the enterprise is standardized to form a standard system. From the point of view of financial supervision, enterprises should set up professional and independent accounting supervision departments to supervise the business activities of financial management departments, regularly check the authenticity and integrity of inventory management, audit financial data, check and supervise internal control, and improve the importance of financial management in business decisions. Secondly, enterprises should speed up the training of comprehensive financial management personnel. Under the background of big data, talents with financial management ability and data analysis ability are important resources of enterprises, which greatly affect the financial management ability of enterprises. According to the current development of big data, enterprises should train the existing financial managers in information technology, and require the financial managers to be familiar with the means of information financial management to ensure the smooth development of financial management.

5. CONCLUSION

With the rapid development of big data technology, the connection between internal data and external data can be realized, and the traditional information island phenomenon can be broken. The actual value of big data technology for enterprise financial risk management can be fully excavated. In order to truly achieve the integration of enterprise financial and business data. In the coming development process, we should understand the current situation of enterprise financial risk management under the background of big data, find out the problems encountered in the process of financial management in time, carry out scientific analysis, and find effective countermeasures. In the era of big data, enterprises will change from the original heavy asset model to the light asset model to reduce the financing cost of enterprises. The financial managers of enterprises should also improve their own business ability and the application level of big data knowledge. Improve the application of big data technology in enterprise financial management.

The wide application of big data technology is both an opportunity and a challenge for enterprises. On the one hand, the use of big data technology in the daily operation and management of enterprises can provide dynamic financial data for enterprise managers, who can grasp the management effect and capital flow at any time, so that enterprises can adjust their management strategies more timely and effectively. In addition, big data technology needs the support of Internet technology. After the financial information inputting into the Internet, the confidentiality may be poor, which will also increase the related management expenses of enterprises. Therefore, the introduction of big data technology has advantages and disadvantages, but the overall advantages outweigh the disadvantages. Only by properly using big data technology, keeping up with the characteristics of the times, strengthening the internal management mechanism of enterprises, skillfully using the data management system, taking preventive measures and reasonably management of financial risks, can we effectively guarantee the development of enterprise management

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