Research on Innovation of Enterprise Financial Models under the Background of Big Data

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Abstract: Against the backdrop of rapid development of science and information technology in China, the era of big data has arrived comprehensively, affecting the social forms of various industries and becoming an indispensable and important part of people's lives and work. Under the background of big data, enterprise financial management has taken a new direction of development, and innovation in management models has become inevitable. Based on this, this article briefly describes the positive impact of big data technology on enterprise financial models, analyzes the challenges and basic principles of model innovation brought by the big data era to enterprise financial models, and studies effective innovation paths for enterprise financial models, hoping to provide a rich theoretical basis for various enterprises to innovate financial models under the background of big data.

***Keywords*:** big data; business management; financial management; pattern innovation

1. Introduction

In the context of big data, the application of information technology is becoming increasingly popular, and even artificial intelligence based on information technology and big data technology has to some extent replaced human labor. In the process of enterprise management, the participation of big data technology can comprehensively improve the management efficiency of enterprises, while effectively reducing the workload of enterprises. The innovative research on enterprise financial models can fundamentally reduce the difficulty of financial management work, thereby avoiding the occurrence of financial management risks and injecting new vitality into enterprise financial management work.

2. The positive impact of big data technology on enterprise financial models

2.1 Beneficial for improving the rationality of enterprise decision-making

The application of big data technology can comprehensively collect, analyze, and deeply explore financial data information of enterprises, find the future development direction of enterprises, understand potential business development opportunities, clarify financial management risks and socio-economic development trends, and provide sufficient reference for decision-making by enterprise management. In addition, big data technology can help enterprises timely understand the situation of market competitors and industry development trends, and based on this, formulate financing and investment plans that are more in line with the needs of enterprise construction, which is conducive to improving the rationality of enterprise decision-making.

2.2 Beneficial for optimizing the workflow of enterprise financial management

There are many problems in the existing enterprise financial management model that affect work efficiency and quality, which are not in line with the new era of social development. The application of big data technology can integrate and optimize the existing financial management workflow, merge decision-making and execution processes, not only comprehensively improve the efficiency of financial process work, but also effectively avoid work errors caused by human factors. In addition, the application of big data technology can achieve automated processing of financial data information, which is conducive to reducing operational management costs and promoting higher economic benefits for enterprises.

2.3 Beneficial for strengthening the effectiveness of enterprise financial risk management

Big data technology encompasses strong real-time monitoring capabilities, enabling accurate prediction of financial risks for enterprises. By collecting relevant data and information on enterprise operations and external society, it can enhance the effectiveness of financial risk management and avoid negative impacts on enterprise operations caused by financial risk

issues. Especially in the process of uncertain development in financial markets, big data technology can fully tap into the data information of other enterprises, summarize macroeconomic data of the industry, promote enterprises to obtain stronger risk response capabilities, and achieve effective response to financial risks.

2.4 Beneficial for improving the comprehensive literacy of financial personnel

In the traditional mode of enterprise financial management, the job responsibilities of financial personnel are limited to surface work, only requiring simple financial data organization and calculation, and classifying and summarizing financial data information. The application of big data technology has led to a shift in the job responsibilities of financial personnel. Computers have replaced a large amount of manual work, and financial personnel are more likely to use financial software to automate the processing of financial information. Therefore, financial personnel not only need to master comprehensive financial professional knowledge, but also learn advanced information technology, constantly strengthen their comprehensive literacy, to ensure that they can keep up with the changing needs of social development.

2.5 Beneficial for improving the ability of enterprises to collect financial information

In the context of big data, the collection and organization of financial information in enterprises is an important component of financial management work. For enterprises, the rapid acquisition of valuable financial information has always been regarded as an important research topic. The arrival of the big data era has fundamentally transformed the thinking of enterprise financial management, prompting financial personnel to actively use data-driven information technology to automate the collection of financial information and comprehensively improve the efficiency of financial management work. At the same time, the application of big data technology can directly realize the overall judgment of the value of collected financial information, which is conducive to improving the ability of enterprises to collect financial information.

3. The challenges brought by the background of big data era to the financial model of enterprises

3.1 The structure of corporate financial information is becoming increasingly complex

In the context of big data, the sources of enterprise financial information are becoming more complex and showing a diversified development trend, not only including the original structured data information, but also adding a large amount of unstructured data. Due to the increasingly complex structure of corporate financial information, it poses greater challenges to corporate financial management, requiring higher abilities in collecting, organizing, and analyzing financial information. Financial management has always been the project with the highest precision requirement in enterprise management. However, in the era of big data, financial personnel in enterprises are facing increasingly complex economic environments, constantly changing financial structures, and a surge in financial data information, which undoubtedly brings huge challenges to the smooth development of enterprise financial management work.

3.2 Higher requirements for the professional level of financial personnel in enterprises

In the context of big data, advanced technologies associated with it have emerged, among which cloud computing technology and Internet technology are representative. The application of big data technology in enterprise financial management requires higher professional level of enterprise financial personnel. The existing knowledge reserves and professional skills of financial personnel are no longer sufficient to meet the needs of financial management in the new era of enterprises. Therefore, it is necessary to break the limitations of traditional financial models, which is a difficult challenge for financial personnel. They need to improve their long-term accumulated financial work experience one by one and find the optimization path of enterprise financial management under the background of big data in order to achieve the expected financial management goals.

3.3 Higher requirements for timeliness and relevance of financial reports

In the process of the development of China's market economy, the vitality of market entities has been fully stimulated, creating opportunities for the business development of enterprises while also prompting them to face increasingly fierce market competition. At the same time, due to the increasing complexity of the economic environment, enterprises have higher requirements for the timeliness and relevance of financial reports in order to fully utilize the guiding role of financial reports in enterprise decision-making. At present, most financial reports of enterprises are prepared on a regular basis, with annual or monthly units. In the context of big data, this regular reporting method can no longer meet the requirements of enterprise decision-making for the timeliness of financial report information. Instead, it can mislead the formulation of relevant decisions due to the lag of financial report information, posing a more severe challenge to the operation and management of

enterprises.

4. Principles for Innovation of Enterprise Financial Models under the Background of Big Data

The innovation of enterprise financial models under the background of big data should follow the following basic principles: firstly, the principle of intelligence. At present, many enterprises have recognized the advantages of information technology in enterprise management and started to adopt professional financial management software. When enterprises innovate their financial models, they should try to connect their financial management systems with their business systems and conduct intelligent analysis based on the development of the enterprise, in order to more accurately grasp the changing laws of the industry and market. Secondly, there is the principle of timeliness. Under the current financial management model of enterprises, financial statements are uniformly prepared according to fixed cycle requirements, which makes it difficult to meet the timeliness requirements of financial management and can easily lead to outdated business decision-making. The enterprise financial model supported by big data has strong timeliness advantages, which can achieve more efficient and convenient integration and management of enterprise financial data. Finally, there is the principle of verticality. Under the traditional financial model, a hierarchical management model is adopted, which makes it difficult to achieve real-time supervision of enterprise financial data information, resulting in loopholes in financial management work. Big data technology needs to transform financial management into a vertical model to facilitate centralized management of business operations at all levels of the enterprise.

5. Effective Innovation Path of Enterprise Financial Model under the Background of Big Data

5.1 Intensify the training of comprehensive financial management personnel

In the context of big data, combined with the current situation and future development trends of enterprise financial management, the innovation of enterprise financial models should start from the cultivation of comprehensive personnel, solve the challenges brought by the big data era to the innovation of enterprise financial management models at the source, and achieve a deep integration of financial management and big data technology. However, the integration and application of big data technology in enterprise financial management undoubtedly puts forward higher requirements for the professional ability and comprehensive appearance of financial management personnel. They not only need to master basic financial knowledge, but also have certain information technology capabilities. In the current social development situation, there is a serious shortage of comprehensive talent reserves that combine both. Therefore, the primary task of financial model innovation is to increase the training of comprehensive financial management personnel, actively carry out information technology training, strengthen the information technology level of enterprise financial personnel, and promote their awareness of the important value of big data technology application. In addition, under the background of big data, both enterprise managers and financial staff need to actively transform their traditional financial management concepts, fully recognize the advantages of big data technology application, and add vitality to the improvement of enterprise financial management level and long-term development from a conceptual perspective.

5.2 Strengthening the level of intelligent modernization construction in enterprise financial management

The core goal of enterprise financial model innovation in the era of big data is to achieve intelligent and modern construction of financial management, maximize the liberation of financial management labor, reduce the workload of financial personnel, and improve the timeliness and accuracy of financial management. Firstly, enterprises should build financial information management platforms based on their own business needs, actively introduce advanced intelligent software and hardware equipment, improve the diversity and diversification of financial management methods, and achieve the goal of paperless and efficient office work. Secondly, enterprises need to continuously change their existing production scale, strengthen the decision-making support role of financial data information, help enterprises clarify their future development direction, and promote broader development prospects. With the continuous increase in the amount of financial information data in enterprises, the workload of information processing for financial personnel is showing a geometric growth trend. At this time, the application of big data technology is particularly important. For example, big data cloud intelligent technology can achieve automatic entry and information sharing of financial data, thereby reducing the workload of financial information entry. The modernization of intelligent financial management in enterprises does not mean completely abandoning

the original financial management model, but rather retaining the advantages of traditional models, achieving effective integration of the two, and establishing an intelligent platform that can provide high-quality services for enterprise financial management. Finally, the construction of intelligent platforms should be a gradual process, requiring the establishment of a basic framework. After the financial management personnel of enterprises adapt to the financial management mode in the era of big data, the transformation and upgrading of intelligent platforms should be carried out, and optimization and construction should be carried out in combination with the financial management needs of enterprises, providing assistance for the efficient development of enterprise financial management work.

5.3 Optimize communication and coordination between departments within the enterprise

Enterprise management must have a correct understanding of the important development opportunities brought by the big data era to the innovation of enterprise financial models, and use this as a basis to optimize communication and coordination between departments, promoting the orderly implementation of enterprise financial management work. Firstly, enterprises can establish an internal data information center based on their own business needs and configure it with professional software and hardware facilities to create a favorable environment for big data financial management. Secondly, enterprise managers should play a leading role as role models, assist in the implementation of big data financial models, and fully grasp the application value of big data technology in the innovation of enterprise financial models. Finally, it is necessary to standardize the internal financial information management process of the enterprise, clarify the principles of communication and coordination between various departments within the enterprise, optimize the internal information sharing process, accelerate the speed of information flow, and ensure that all departments can obtain the data information within their scope of authority in a timely manner, thereby improving the utilization efficiency of enterprise financial data and enhancing the effectiveness of enterprise financial analysis.

5.4 Establish a comprehensive financial supervision system for enterprises

The key to enterprise financial management is to carry out high-quality financial supervision work, in order to achieve effective monitoring of the financial income and expenditure of various business activities of the enterprise, identify financial risk issues existing in the enterprise's operation process, and develop risk prevention and control plans based on the actual situation of risk issues. With the help of financial information systems, advance warning of financial risks can be achieved. For enterprises, establishing a sound financial supervision system plays an irreplaceable and important role, and the establishment of a financial supervision system for enterprises under the background of big data is of utmost importance. At the same time, the financial regulatory system enables enterprises to optimize massive financial data information and select data information that meets the future development needs of the enterprise based on set algorithms, especially focusing on data that may cause financial risks. In addition, the establishment of a corporate financial supervision system can effectively mobilize the initiative of financial personnel, thereby significantly improving the efficiency of corporate financial management. For example, enterprises can integrate their human resource management system and business system database into their financial management system, enabling financial management personnel to comprehensively grasp various financial data of the enterprise's operations and achieve effective supervision of personnel, costs, decision-making, finance, and other aspects of the enterprise's work. This not only controls the operating costs of the enterprise, but also prevents the occurrence of financial risks and provides important basis for enterprise decision-making.

5.5 Strengthen the security protection of enterprise financial data management system

Under the background of big data, the innovation of enterprise financial models has more convenient data information search functions, which can provide convenience for enterprises to carry out financial data analysis work. However, not all financial data information can be disclosed to all employees, and some data content involves the privacy of organizational structure and individual employees. Once a data leakage problem occurs, it will pose a huge risk to the operation and management of the enterprise. If the core secrets of the enterprise are disclosed, with the help of the Internet, the business secrets of the enterprise will be intercepted by other competitors, which will not only cause irreparable losses to the enterprise, but also cause a devastating blow to the enterprise. Based on this, in the context of big data, it is necessary to strengthen the security protection of enterprise financial data management systems, improve the storage security of enterprise financial information data, and add software security protection systems such as firewalls to fundamentally prevent the risk of malicious tampering or theft of information data.

6. Conclusion

In summary, the arrival of the big data era has brought severe challenges to enterprise financial models, while also pro-

viding opportunities for innovation in enterprise financial models. Enterprises should innovate and optimize their existing financial models by increasing the training of comprehensive financial management personnel, strengthening the level of intelligent modernization of enterprise financial management, optimizing communication and coordination between departments, establishing a sound enterprise financial supervision system, and strengthening the security protection of enterprise financial data management systems. This will help to comprehensively improve the level of enterprise financial management.

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