

Financial Risk Management and Effectiveness of Enterprise Management

Xiaofang Huang^{1,a,*}, Jun Zhang^{1,b}

¹Philippine Christian University, Manila, Philippines

^axiazhixue1989@163.com, ^bjimjim15321690@gmail.com

*Corresponding author

Abstract: The rapid development of the modern market economy has led to a significant increase in the competitive pressure and intensity of enterprises in multiple industries. At this point, if a company wants to maintain a good development trend in the market, it needs to strengthen its risk and financial management, and at the same time, sufficient attention should be paid to the effectiveness of enterprise management. In market competition, financial risk usually comes from two sources. Firstly, it comes from normal external market competition behavior, which may cause fluctuations in the operating conditions of the enterprise, thereby directly affecting the financial situation of the enterprise. In addition, there are some risk factors caused by internal problems within the enterprise, mainly including abnormal decision-making or problems in the management process, which can directly affect the financial situation of the enterprise. At the same time, the effectiveness of management in the business process is a key factor affecting the operational efficiency of the enterprise. The improvement or reduction of the effectiveness of enterprise management directly affects the work enthusiasm of employees. This article analyzes the factors that affect the financial risk management and effectiveness of enterprises, and analyzes the factors that can affect the financial situation in modern market competition. Through this analysis, it helps enterprises improve their financial risk management models. At the same time, it also explores how to improve the effectiveness of enterprise management, and this exploration identifies the shortcomings through in-depth analysis of the existing management models of the enterprise. In the end, this article identified a model that can enhance financial risk management and management effectiveness. Through experiments, the effectiveness of financial risk management and the degree of improvement in enterprise management effectiveness of multiple types of enterprises under this model were analyzed. It was determined that the competitiveness and performance of enterprises using this model in various aspects increased by an average of about 19.6% compared to unused enterprises. This model further enhances the financial risk analysis and tolerance of enterprises by integrating various information technologies in the new era into their operation and management, and also improves the effectiveness of enterprise management.

Keywords: Financial Risk, Business Management, Risk Analysis, Management Effectiveness

With the rapid development of various modern information technologies, people have gained more convenience in their daily lives. At the same time, the development of this technology has also led to rapid socio-economic development, providing a good market competition atmosphere for the development of enterprises. In the current society, the development of enterprises mainly involves two aspects: capital risk and the performance of management models, which can have an impact on the market competitiveness of enterprises. Among them, financial risks of enterprises can have an impact on the status of the enterprise's capital chain, thereby reducing the operational efficiency of the enterprise. The effectiveness of enterprise management is a manifestation directly linked to the operational efficiency and effectiveness of employees or enterprises. The improvement of enterprise management effectiveness mainly lies in two aspects: the characteristics of enterprise operation and the construction of enterprise informatization.

At present, some researchers have analyzed the financial risks of various companies in different types of industries, hoping to determine the sources of risks by analyzing the influencing factors inside and outside the company. Eccles, Robert G analyzed the impact of environmental factors such as climate change on the finances of different companies in the new era of market development, and determined that a company's climate report would pose certain risks to its financial management [1]. Katarina, Valaskova conducted an analysis of the financial risk situation of a company in a certain region, using a regression analysis method to explore the internal and external financial risk situation of

the company [2]. Bai, Liu analyzed the correlation between risks in corporate financial management and innovation and social responsibility, which can identify the influencing factors of risks from external corporate financial management [3]. S. J. Ferreira analyzed the relationship between the analysis of individual or organizational conditions and financial management risks during the company's external investment process, and determined the important role of this method of analyzing individual and organizational conditions in the company's development [4]. Luis Otero, Gonzalez analyzed the impact of risks in the management model of listed companies on their performance, which can further determine the proportion of different risks in the company's financial management affecting the company's performance [5]. Hugo K.S. Lam conducted a separate analysis of the sustainable supply chain and financial management risks of cross-border enterprises, which can determine the effectiveness of sustainable supply chain in reducing financial management risks [6]. Tamanna, Dalwai analyzed the correlation between the business strategy, capital situation, and performance of a company in a certain region, as well as the financial management risks of the company, and determined its correlation [7]. However, most of this analysis is not sufficient to provide mature financial risk management and response plans for various types of modern companies, and further research is needed.

Other researchers have conducted investigations and analyses on enterprise management, which can identify some shortcomings in the enterprise management model. Peter Gordon, Roetzel analyzed the role of various information technologies in enterprise management in the information society and determined that the combination of information technology and existing industry operation modes is beneficial for enterprise management and development in the field of enterprise management [8]. Ibrahim Salih, Mohammad explored the management models of small and medium-sized enterprises in a certain region during their business operations, and determined the management needs of these enterprises through analysis of their management models [9]. Umarhodjayeva, Muyassarhon explores the role of institutional reform in enterprise management effectiveness, and through literature analysis, confirms that institutional reform is beneficial for improving enterprise management effectiveness [10]. SUMIATI, Sumiati conducted research on how to improve the competitiveness and business performance of small businesses, and identified the importance of innovation [11]. Martin Hrabal conducted a study on the impact of employees' abilities in enterprise management processes [12]. The research results obtained by these researchers, although referring to various influencing factors, still cannot meet the development needs of enterprises in the new era.

This article first analyzes the financial risk management and management model of enterprises in the current market operating environment. By analyzing the business performance of the enterprise, it identifies some shortcomings in the existing multifaceted management model of the enterprise, and studies how to improve these shortcomings. In addition, an analysis was conducted on various emerging information technologies in the current society. Through the analysis of these emerging information technologies, the advantages of enterprise informatization construction in risk management and effectiveness improvement were determined, and a model integrating modern information technology risk management and enterprise management was determined. This model enhances the financial department's ability to analyze and tolerate risks during the business process through Big Data (BD) technology, and enhances the effectiveness of the management model of the enterprise's decision-making level, ultimately optimizing the operation and business model of the enterprise.

1. Enterprise Financial Risk Management

The risk in financial management of various enterprises in current society mainly refers to the impact on their financial situation caused by various unexpected events during the business process, resulting in a decrease in their competitiveness or profitability. After conducting in-depth analysis of the current market operating environment, it has been determined that the risks in enterprise financial management mainly consist of two categories. Firstly, controllable risks refer to events that can be expected to have an impact on enterprise operations during the business process, and these events can be easily foreseen and controlled. Another type is uncontrollable risk, which is generally composed of various types of unexpected events in the business process of the enterprise. These unexpected events may not be closely related to the business field of the enterprise, but can indirectly affect the financial situation of the enterprise, which is generally difficult to foresee.

The emergence of financial management risks in the process of enterprise operation is objective, but the reasons for such risks are diverse. Therefore, it is necessary for the management or relevant staff of the enterprise to develop emergency response plans in advance. This plan is generally universal and can undergo multiple types of changes based on different situations. At the same time, the occurrence of

financial management risks is generally directly related to the operating situation of the enterprise. The probability of financial management risks occurring in relatively good operating conditions of the enterprise would also increase. Therefore, through analysis of a large number of relevant literature, it can be determined that if the enterprise has high requirements for economic benefits, the probability of encountering multiple types of financial management risks would significantly increase. This situation also suggests that business operators or managers need to have a relatively balanced plan for the degree of profit pursued by the enterprise, which can scientifically and effectively prevent the emergence of multiple types of risks in the financial management process of the enterprise. The financial risks that enterprises may encounter in the process of operation and the existing response process are shown in Figure 1.

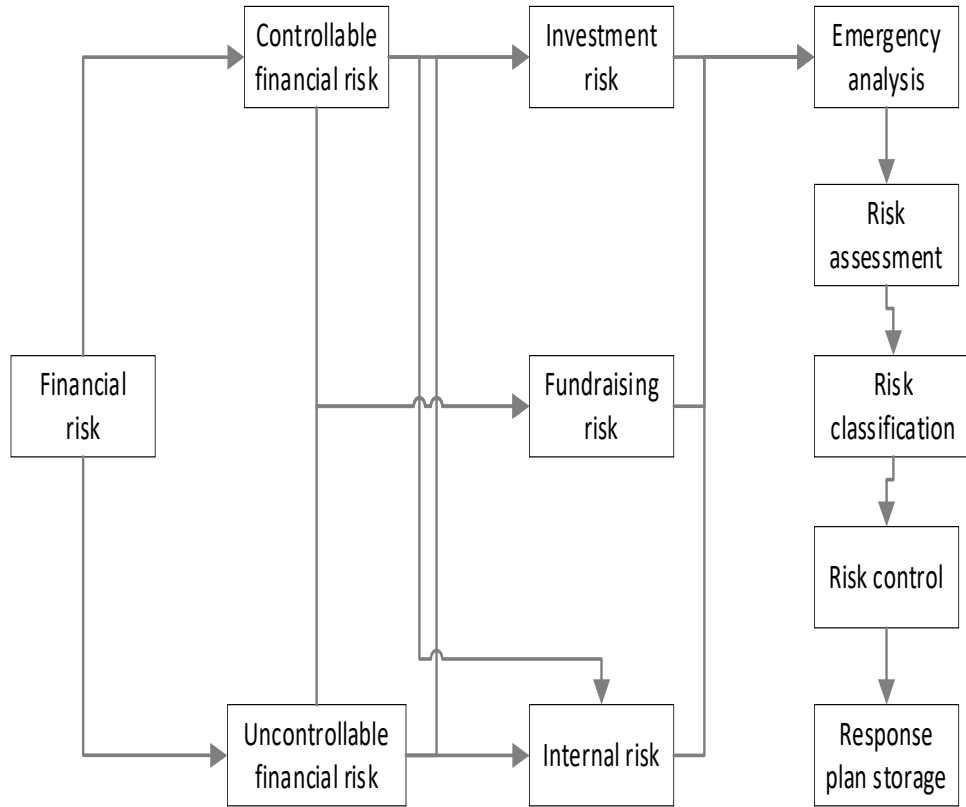


Figure 1: Schematic diagram of the financial risks that enterprises may encounter in the course of operation and the existing coping procedures.

At present, risk prevention in enterprise financial management is a focus issue that enterprises in multiple industries are concerned about, and how to predict and control this risk in advance is also a practical plan and theoretical model that these enterprises attach importance to [13]. However, with the rapid development of the market economy and the increasingly complex business environment, existing analysis models can no longer meet the growing multifaceted needs of enterprises. At this time, it is necessary to integrate some rapidly developing emerging information technologies to provide enterprises with more powerful data processing capabilities, among which the most commonly used is BD technology. At present, there are three main aspects of financial management risks in enterprises that have been divided in detail, namely the risks in the investment process, the risks in the fundraising process, and the risks in the operation and internal control process of the enterprise. The risk data analysis mode of enterprise financial management combined with BD technology can complete the collection, analysis, and processing of these three aspects of data within a given time. Next, experimental analysis would be conducted on the role of this risk data analysis mode of BD enterprise financial management in enterprise operation, as shown in Figure 2.

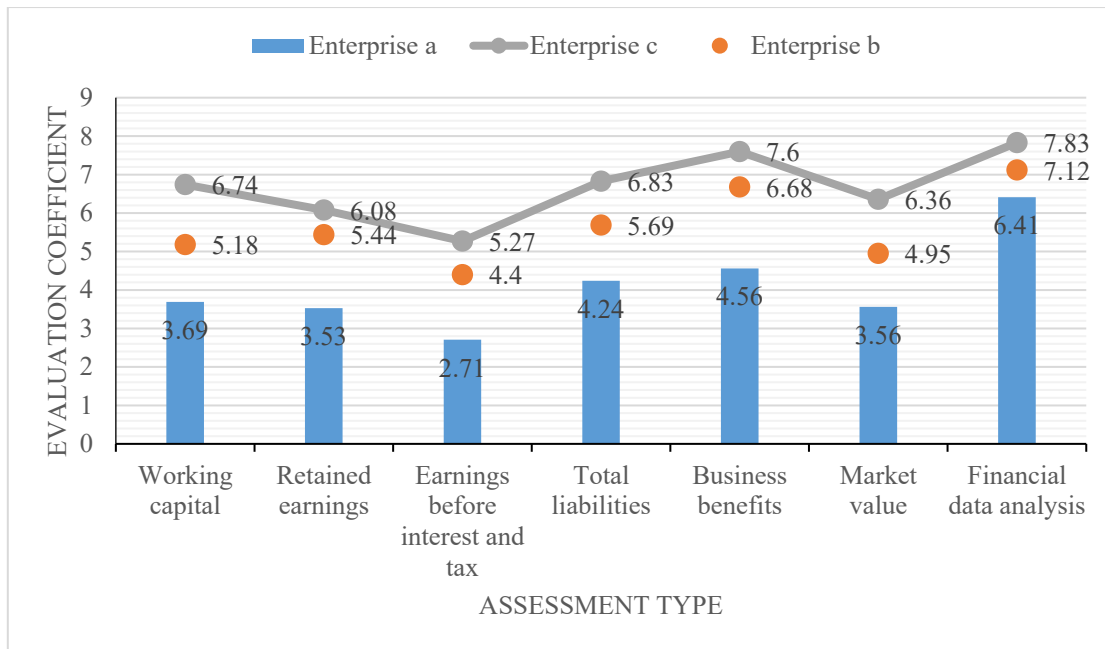


Figure 2: Schematic diagram of the effect comparison of the risk data analysis model of BD enterprise financial management in enterprise operation.

In Figure 2, Company did not use any financial management data analysis model, while Company b used the existing financial management data analysis model, and Company c used the BD financial management data analysis model. Working capital, retained earnings, profit before interest and tax, total liabilities and a series of other factors that evaluate the financial situation of the enterprise in the table are converted into evaluation coefficients. The highest value of these evaluation coefficients is 10 and can fully explain the performance of the enterprise in all aspects. Among them, the enterprise's working capital, retained earnings, pre interest and tax profits, total liabilities and other evaluation factors are the intuitive expression of the enterprise's financial management risk or the enterprise's resistance to risk. The higher these values are, the stronger the enterprise's financial risk resistance is. After analyzing the seven evaluation coefficients for comprehensive evaluation of the financial situation of the enterprise in the figure, it can be seen that enterprise c has performed well in various evaluation types using the BD financial management data analysis model. The average value of the evaluation coefficients for enterprise a on the seven evaluation factors is 4.1, while the average value of the evaluation coefficients for enterprise b is rounded to one decimal place and is 5.6. The average value of the evaluation coefficient of enterprise c rounded to the nearest decimal place is 6.7. Based on this value, it can be determined that the performance of enterprise c using the BD enterprise financial management data analysis model has increased by about 19.6% compared to enterprise b using existing financial management data analysis models [14].

2. Effectiveness of Enterprise Management

The effectiveness of modern enterprise management can not only evaluate the multifaceted management behavior of enterprise profits generated by the subjective abilities of enterprise operators, but also indirectly reflect changes in enterprise competitiveness. In current society, enterprise management mainly involves the management of internal business and various decisions of enterprises. Through enterprise management, a series of operations such as planning, controlling, and stopping the production and various business activities of enterprises can be directly carried out. At present, the factors that can affect the effectiveness of enterprise management mainly include the scale and competitive environment of the enterprise, the characteristics of the enterprise's employment, the professional competence of the enterprise management, and the internal construction of the enterprise. This article mainly proposes an enterprise management model that integrates BD technology, which can help decision-makers better plan the various behaviors of the enterprise in a scientific manner, as shown in Figure 3 [15].

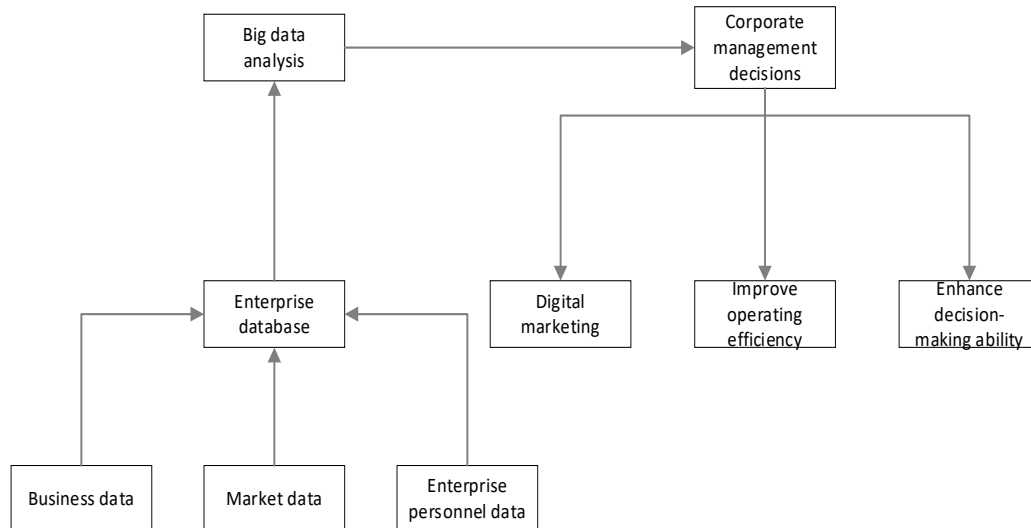


Figure 3: Schematic diagram of the enterprise management model process of BD technology integration.

3. Conclusions

With the development of various modern technologies and the digital upgrading of the financial industry, a new economic model with integrated characteristics has gradually formed in current social economic activities. Under this model, the trend of global economic integration is rapidly advancing, and the business and competition models of enterprises in various fields have also undergone significant changes. In the current market operating environment, the way for enterprises to achieve stronger competitiveness has gradually shifted from external to internal. Only by upgrading the internal structure of enterprises in a short period of time can they adapt to the development of the times and gain stronger competitiveness in the new market economy environment. The two representative types of upgrading the internal structure of enterprises in this article are the risk control models and enterprise management models in enterprise financial management. The optimization of these two models can significantly improve the competitiveness and operating income of enterprises. This article mainly uses emerging technologies such as BD to optimize the operation and overall business model of multiple departments such as finance in existing enterprises. This optimization is reflected in the use of branch technologies in BD technology to collect and analyze data from three aspects: market operation data, employee work data, and enterprise status data. This type of data analysis can help the decision-making level of enterprises obtain real-time information on the development status of the enterprise and market, thus making better enterprise decisions. This enterprise financial management and operational management model that integrates BD technology further saves operating costs, improves operational efficiency and profits, and enables enterprises to gain stronger competitiveness.

References

- [1] Eccles, Robert G., and Krzus, Michael P. "Why companies should report financial risks from climate change." *MIT Sloan Management Review* 59.3 (2018): 1-6.
- [2] Katarina, Valaskova, Tomas Kliestik, and Maria Kovacova. "Management of financial risks in Slovak enterprises using regression analysis." *Oeconomia Copernicana* 9.1 (2018): 105-121.
- [3] Bai Liu, Tao Ju, and Simen Gao. "The combined effects of innovation and corporate social responsibility on firm financial risk." *Journal of International Financial Management & Accounting* 32.3 (2021): 283-310.
- [4] S. J. Ferreira, and Z. Dickason. "The effect of gender and ethnicity on financial risk tolerance in South African." *Gender and Behaviour* 16.1 (2018): 10851-10862.
- [5] Luis Otero, Gonzalez, Pablo Duran Santomil, and Aracely Tamayo Herrera. "The effect of Enterprise Risk Management on the risk and the performance of Spanish listed companies." *European Research on Management and Business Economics* 26.3 (2020): 111-120.
- [6] Hugo K.S. Lam. "Doing good across organizational boundaries: Sustainable supply chain practices and firms' financial risk." *International Journal of Operations & Production Management*

38.12 (2018): 2389-2412.

[7] Tamanna, Dalwai, and Mahdi Salehi. "Business strategy, intellectual capital, firm performance, and bankruptcy risk: evidence from Oman's non-financial sector companies." *Asian Review of Accounting* 29.3 (2021): 474-504.

[8] Peter Gordon, Roetzel. "Information overload in the information age: a review of the literature from business administration, business psychology, and related disciplines with a bibliometric approach and framework development." *Business research* 12.2 (2019): 479-522.

[9] Ibrahim Salih, Mohammad, and Chike F. Oduoza. "Lean-excellence business management for manufacturing SMEs focusing on KRI." *International Journal of Productivity and Performance Management* 69.3 (2020): 519-539.

[10] Umarhodjayeva, Muyassarhon. "The concept of development of management of small business based on institutional reforms." *Бюллетень науки и практики* 4.4 (2018): 416-428.

[11] SUMIATI, Sumiati. "Improving small business performance: The role of entrepreneurial intensity and innovation." *The Journal of Asian Finance, Economics and Business* 7.10 (2020): 211-218.

[12] Martin Hrabal, David Tucek, Viero Slav Molnar, and Gabriel Fedorko. "Human factor in business process management: modeling competencies of BPM roles." *Business Process Management Journal* 27.1 (2021): 275-305.

[13] Mohammed, Abusweilem, and Shadihabis Abualoush. "The impact of knowledge management process and business intelligence on organizational performance." *Management Science Letters* 9.12 (2019): 2143-2156.

[14] Li, X. T. , Wang, J. , & Yang, C. Y. .. Risk prediction in financial management of listed companies based on optimized BP neural network under digital economy. *Journal of Manufacturing Processes*. (2022), 3(4),56-70.

[15] Tagne, J. S., Ningaye, P., & Kobou, G.. *The Effects of Openness on Managerial Innovation in Cameroonian Companies. Journal of Organizational and End User Computing (JOEUC)*, (2021)33(4), 28-43.