

# Analysis of Intelligent Financial Management Systems in Enterprises

Yumin Peng\*

Nanchang Institute of Science and Technology, Nanchang 330108, China

\*Corresponding author: Yumin Peng, pengyumin2019@163.com

**Copyright:** © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

**Abstract:** With the advent of the era of artificial intelligence, traditional corporate financial management cannot adapt to the rapid development of modern economic society and scientific and technological progress. Therefore, they need to pay more attention to digital transformation and artificial intelligence. Artificial intelligence is a new technology that has changed the business and operation models of various industries and has put forward new requirements for corporate financial management. This paper explores the concept of intelligent finance, delves into the principles underlying intelligent financial management, discusses the significance of adopting intelligent financial management practices, and proposes a roadmap for constructing a intelligent financial management system.

**Keywords:** Artificial intelligence; Enterprise; Intelligent financial management

**Online publication:** May 20, 2024

## 1. Introduction

In the context of the artificial intelligence era, the market environment for enterprises has become increasingly complex, and traditional financial management can no longer meet the developmental needs of enterprises. Therefore, the construction of intelligent financial management system has become an urgent need for enterprises. Enterprises can optimize the financial management process through big data analysis, artificial intelligence, and other technologies.

## 2. The concept of corporate intelligent finance

Corporate intelligent finance involves utilizing technologies like the Internet of Things and artificial intelligence to digitize financial data. This digitalization serves as a basis for corporate decision-making and facilitates the establishment of a financial sharing system. Through agile methods, companies can swiftly and accurately evaluate financial information, enabling them to take appropriate actions <sup>[1]</sup>.

Corporate intelligent finance is unique and belongs to the concrete embodiment of the new era, which is

vastly different from traditional financial management. Previously, enterprise financial management struggled to account for hidden costs and demonstrate the economic benefits of businesses <sup>[2]</sup>. Intelligent finance addresses these challenges by enabling remote control and facilitating communication between service providers and enterprises. Leveraging financial data effectively, intelligent finance transforms operational methods and yields tangible results, such as enhancing the precision of financial tasks and mitigating capital risks.

### **3. Principles of intelligent financial management system construction in enterprises**

The security of data transmission and storage is pivotal in corporate intelligent finance management. Data leakage or damage can be avoided through corresponding measures during data storage activities <sup>[3]</sup>. Establishing a rights management mechanism enables the division of rights among different roles, thereby restricting users' access to specific information and functions. This ensures that only authorized personnel can access confidential data, significantly reducing the risk of data leakage. Moreover, building backup and recovery mechanisms is essential for data security. Regular backup of financial data helps maintain data integrity, and in unforeseen circumstances, backup data can be utilized to restore operations. Furthermore, conducting staff training cultivates a strong security awareness among employees. Providing information security training guides employees in correctly using the financial management system, handling confidential data, and enhancing financial management security <sup>[4]</sup>. Additionally, fostering a safe corporate culture encourages employees to identify potential risks and take appropriate measures.

Secondly, crucial to design the technical framework of the system with scalability in mind. This means making sure that as the system grows, it can easily handle additional functions and adapt to changing business needs. This is achieved through modular design and open interfaces, which make the system more flexible and easier to maintain. Furthermore, enterprises need to standardize and ensure consistency in their data. By using unified data models and specifications, they can securely exchange data between different departments, making the process more accurate and reliable <sup>[5]</sup>. Moreover, as an enterprise expands, its financial management system will need to handle larger amounts of data. To cope with this, it is essential to consider upgrading the system's performance by using appropriate hardware and software. Finally, enterprises should align with industry standards and best practices to build a scalable financial management system. By doing so, they can meet both their own needs and industry requirements, facilitating effective communication and integration of information.

### **4. Significance of the construction of enterprise intelligent financial management system**

In the era of artificial intelligence, traditional financial management can no longer cope with the needs of enterprises, which necessitates a transformation of financial management methods. Through the construction of an intelligent financial management system, the value of financial management can be highlighted from multiple angles <sup>[6]</sup>. On the one hand, the intelligent financial management system can improve risk prevention and control measures by identifying anomalies in the data and hidden dangers. On the other hand, intelligent financial management systems can streamline standard operations and provide accurate accounting results, improving the quality of financial management.

The intelligent financial management system can integrate the industry and finance. It enables the integration of internal information systems with other businesses, such as resource planning systems, office automation systems, etc. In this way, the barrier between internal financial and business departments can be broken, facilitating the flow of information <sup>[7]</sup>. Procurement, production, and marketing data can be shared with

the financial management personnel through the intelligent financial system. By doing so, the use of funds and the progress of various businesses of the enterprise can be better monitored<sup>[8]</sup>. Smooth communication between the business and finance departments can not only aid the implementation of programs, but also prevent the problem of over-budget in business development, improve the utilization of funds, and help achieve the goals of business plans.

With the application of artificial intelligence in enterprise production management, enterprises are slowly becoming more digitalized. Technologies like big data and artificial intelligence are used to perfect intelligent financial management systems, promote the integration of industry and finance, and accelerate the digitalization of enterprises.<sup>[9]</sup> The lack of connection between the finance and business departments makes it difficult for financial managers to have an in-depth understanding of business details. Through the construction of an intelligent financial management system, data can be shared between these two departments. This system also allows a better record of business data and financial statements, which facilitates the auditing process. This system significantly reduces human intervention, allowing better standardization of enterprise financial management<sup>[10]</sup>.

## **5. Construction strategy of enterprise intelligent financial management system in the era of artificial intelligence**

### **5.1. Managing and optimizing financial work**

Enterprises should prioritize the recruitment of skilled professionals and the establishment of a robust information-sharing platform to streamline business operations. By bringing in experts with specialized knowledge and skills, companies can enhance their ability to manage finances effectively. Building an information-sharing platform can realize the timely transmission and sharing of information between departments and promote communication and collaboration, which in turn leads to better team cohesion and overall performance. Displaying managerial decisions on this platform allows employees to better understand relevant directives. Upon the construction of this platform, the communication between departments and the workflow of the finance department can be improved<sup>[11]</sup>. However, it is crucial for enterprises to implement sound management practices to ensure the platform's smooth operation and the accurate flow of financial information. This scientific approach not only safeguards data integrity but also boosts work efficiency and management proficiency.

### **5.2. Establishing intelligent financial concepts**

Financial management involves overseeing all aspects of a company's finances. On one hand, using technologies like big data and artificial intelligence makes organizing financial data easier<sup>[12]</sup>. On the other hand, integrating industry and finance helps improve management accounting and gives managers better control over various business aspects, enhancing overall financial management. Managers need to understand intelligent financial management, adopt intelligent financial practices, and keep learning to effectively manage finances. In addition, implementing intelligent financial management systems can boost a company's information capabilities. Companies can focus on integrating cloud processing and smart data transmission systems to support these efforts. They can also provide training to help employees use these systems effectively. For example, using cloud processing for financial data analysis and transmitting data intelligently through cloud platforms can be helpful.<sup>[13]</sup> Once an intelligent financial management system is in place, companies should establish evaluation criteria from the perspective of employees to ensure it enhances their ability to process information.

### **5.3. Developing standardized processes to improve work efficiency**

Enterprises can establish standards for their business and financial operations based on daily tasks, which include accounting, expense reimbursements, and asset management. Firstly, in accounting processes such as bill management, financial personnel verify bill information to ensure it meets standard requirements. After initial verification, the bill contents are assessed through financial validation. To ensure accuracy, another financial staff member often reviews the results to maintain consistency <sup>[14]</sup>. Secondly, standardizing the expense reimbursement process involves the handling of various employee expenses and material procurement costs. For example, in expense reimbursement, employees must follow strict procedures, including submitting reimbursement applications, obtaining department head signatures, and undergoing review by the finance director before final approval by enterprise managers. Lastly, the standardization of asset management processes, particularly for fixed assets, involves departmental procurement, financial confirmation, and asset allocation. By standardizing these business and financial workflows, enterprises lay the groundwork for implementing intelligent financial management systems. This promotes improved financial management efficiency and ensures management accuracy.

## **6. Integrating corporate information to optimize financial decisions**

As artificial intelligence technology advances, enterprises utilize various information systems like enterprise resource planning (ERP), customer relationship management (CRM), etc., each serving distinct functions and tasks. However, these systems often operate in isolation, leading to data silos where related information remains disjointed. In traditional enterprise management, these independent systems hindered data exchange and collaboration. To address this issue, enterprises must focus on integrating information across systems to provide comprehensive data support for financial decision-making. Firstly, they can conduct a thorough analysis of existing information systems, identifying data content, functions, and correlations to lay the groundwork for integration. Maintaining data format unity is essential to address disparities between systems. Secondly, constructing data interfaces and sharing platforms facilitates information integration. Implementing standardized data and interface protocols supports seamless data sharing across different systems <sup>[15]</sup>. Subsequently, the financial department can extract necessary financial data from various systems for comprehensive analysis and decision-making. Leveraging artificial intelligence aids in data mining, processing large datasets, extracting valuable insights, and offering precise suggestions for financial decisions. Finally, ensuring information security and privacy protection during internal system integration is paramount. Implementing secure data transmission protocols and measures prevents unauthorized access to confidential information. By adhering to these practices, enterprises can successfully integrate internal information systems while safeguarding sensitive data.

## **7. Conclusion**

In summary, the emergence of the artificial intelligence era enables innovation in corporate financial management, reshaping traditional models and establishing data-driven intelligent financial management systems. These advancements cater to the evolving needs of the times, allowing for enhanced processing of financial data, mitigating financial risks, and fostering a conducive environment for enterprise development.

## **Disclosure statement**

The author declares no conflict of interest.

## References

- [1] Tong Q, 2023, Analysis on the Construction and Practice of Enterprise Intelligent Financial Management System. *China Management Informatization*, 26(24): 67–69.
- [2] Li F, 2023, Research on Enterprise Intelligent Financial Management System. *Zhutan of Qilu*, 2023(05): 23–24.
- [3] Sheng T, 2023, Connotation Definition, Extension Content and Innovative Application of Intelligent Financial Management in the New Development Period. *Public Standardization*, 2023(17): 148–149 + 152.
- [4] Yan W, 2023, Development and Innovation of Intelligent Financial System of Power Grid Enterprises. *Public Electricity*, 38(06): 70–71.
- [5] Zhang Y, 2019, Construction of Enterprise Intelligent Financial Management System Under the Background of Artificial Intelligence. *Chinese Agricultural Accounting*, 33(10): 66–68.
- [6] Yang J, 2023, Thinking on the Construction of Enterprise Intelligent Financial Management System Under the Background of Artificial Intelligence. *Journal of Finance*, 2023(05): 72–74.
- [7] Wang X, 2022, Research on the Plan of Improving the Intelligent Level of Enterprise Financial Management Based on ERP System. *Quality and Market*, 2022(23): 7–9.
- [8] Liu R, 2022, Research on Enterprise Intelligent Financial Management Model based on Artificial Intelligence Perspective. *Enterprise Reform and Management*, 2022(18): 148–150.
- [9] Lu Z, 2022, Research on Construction and Practice of Intelligent Financial Management System. *Management and Technology of Small and Medium-sized Enterprises*, 2022(08): 104–106.
- [10] Yao L, Chen S, 2021, Research on Construction of Intelligent Financial Management System of Zhanjiang Telecom Enterprises from the Perspective of Artificial Intelligence. *Journal of Certified Public Accountants*, 2021(20): 125–126.
- [11] Liu R, 2021, Discussion on the Construction of “Intelligent Financial” Management Model from the Perspective of Artificial Intelligence. *China Management Information Technology*, 24(20): 59–60.
- [12] Ren F, 2021, Application of Information Technology in Enterprise Financial Management: “Intelligent Financial Management” by Pingscience Press. *Price Theory and Practice*, 2021(02): 177.
- [13] Li K, 2021, Visual Analysis and Literature Review of Financial Management Based on Artificial Intelligence Vision Threshold. *Journal of Beijing Xuanwu Hongqi Amateur University*, 2021(01): 61–67.
- [14] Zhang H, 2020, Artificial Intelligence Era “Financial Wisdom” Pattern Innovation Research. *Journal of Accounting Study*, 2020 (26): 57–58.
- [15] Li R, 2020, Research on Intelligent Financial Management Model Based on Artificial Intelligence. *Wealth Life*, 2020(10): 82–83.

### Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.