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# Research on Informatization and Intelligent Transformation of Financial Management in Financial Enterprises

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**Abstract:** This paper focuses on the financial management information and intelligent transformation of financial enterprises. Based on the analysis of the characteristics and challenges of financial management in financial enterprises, this paper expounds the application status of information technology and intelligent technology in financial management, and analyzes the driving factors of the transformation of information technology and intelligent financial management. At the same time, this paper focuses on the application of big data, artificial intelligence, blockchain and other key technologies in financial data processing, decision support, risk control, data security and other aspects. Finally, it puts forward the implementation path of financial management informatization and intelligent transformation, including top-level design, process optimization, talent training and so on.

**Keywords:** Financial enterprise; Financial management; Informatization; Intelligent; Big data; Artificial intelligence; Blockchain

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## Introduction

With the rapid development of information technology, the financial industry is facing unprecedented changes. In this context, the financial management of financial enterprises has also ushered in an important opportunity for informatization and intelligent transformation. Financial management information and intelligence can not only improve financial work efficiency, optimize resource allocation, but also provide strong support for enterprise decision-making and enhance risk prevention and control capabilities. This paper will deeply discuss the necessity, key technology and implementation path of financial management informatization and intelligent transformation of financial enterprises, so as to provide reference for related research.

## 1. Necessity analysis of financial management informatization and intelligent transformation of financial enterprises

### 1.1 Characteristics and challenges of financial management of financial enterprises

The financial management of financial enterprises has the characteristics of large amount of data, complex business and high risk. The traditional financial management model has been difficult to meet the needs of the rapid development of financial enterprises, facing many challenges such as low efficiency, lagging decision-making, insufficient risk prevention and control. Therefore, the exploration of financial management information and intelligent transformation has become an urgent need for financial enterprises.

### 1.2 Application status of information and intelligent technology in financial management

In recent years, emerging technologies such as big data, artificial intelligence, and blockchain have been widely used in the financial field, laying a solid foundation for financial management informatization and intelligent transformation. Taking a joint-stock commercial bank as an example, by introducing a big data analysis platform, the bank has realized centralized management and real-time analysis of financial data, effectively improving the efficiency of financial management. Another large insurance company used machine learning algorithms to build an intelligent expense review model that increased the accuracy of expense reviews from 85 percent to 98 percent of manual reviews. Despite this, the current level of financial management informatization and intelligence is still uneven, and the depth of technology application needs to be further improved.

### 1.3 Driving factors of financial management informatization and intelligent transformation

The transformation of financial management informatization and intelligence in financial enterprises is driven by many factors. Forced by changes in the external environment, the rise of financial technology, the diversification of customer needs, and the improvement of regulatory requirements, all put forward higher requirements for financial management of financial enterprises. Driven by the internal management needs, the scale of financial enterprises continues to expand, the business is increasingly complex, the traditional financial management model

is no longer sustainable, and it is urgent to improve the level of fine management through information and intelligent means. The new opportunities brought by technological progress and the maturity of new technologies such as big data, artificial intelligence and blockchain have provided strong support for financial management reform. Under the joint action of multiple factors, it is imperative to promote the transformation of financial management informatization and intelligence.

## **2. Key technologies of financial management informatization and intelligent transformation of financial enterprises**

### **2.1 Application of big data technology in financial data processing and analysis**

Big data technology can effectively solve the problems of large amount, diverse types and complex processing of financial data. Through the construction of big data platform, financial enterprises can realize the centralized storage, real-time processing and in-depth analysis of financial data. For example, China Construction Bank uses big data technology to mine and analyze massive financial data, accurately identify potential risk points, and effectively prevent operational risks. Ping An Insurance Group of China has also realized automatic identification of expense types and automatic matching of expense standards through big data analysis, which has greatly improved the efficiency of expense management. It can be seen that big data technology has great potential in financial data processing and analysis.

### **2.2 Application of artificial intelligence technology in financial decision-making and risk control**

Artificial intelligence technology, with its powerful learning and reasoning capabilities, empowers financial decision-making and risk control. Using machine learning algorithms, intelligent decision models can be trained through massive historical data to achieve sales forecasting, investment decisions, credit evaluation, etc. For example, China Merchants Bank uses artificial intelligence technology to establish a set of intelligent investment decision support system, which comprehensively considers macroeconomic, industry development, enterprise fundamentals and other factors to provide professional investment advice for investment managers. In terms of risk control, Everbright Bank applied deep learning algorithms to build a set of abnormal behavior identification model for employees, and conducted real-time monitoring of violations in counter operations, credit approval and other aspects, effectively preventing internal staff moral hazard.

### **2.3 Application of blockchain technology in financial data security and sharing**

As a decentralized, immutable distributed ledger technology, blockchain provides innovative ideas for solving the problem of financial data security and sharing. The introduction of blockchain technology into financial management can realize the full traceability of financial documents, digital storage, and effectively prevent financial fraud and other problems. For example, Zheshang Bank has built an accounts receivable financing platform based on blockchain, providing efficient and safe financing services for smes. Ping An Bank has also explored the application of blockchain technology in the field of supply chain finance, which has eased the financing problems of small and medium-sized enterprises through trusted data sharing.

## **3. Implementation path of informatization and intelligent transformation of financial management of financial enterprises**

### **3.1 Build the top-level design of financial management informatization and intelligent transformation**

Financial enterprises should systematically plan the transformation of financial management informatization and intelligence, and build top-level design. Define the transformation objectives, focus on the objectives of improving quality and efficiency, risk prevention and control, and value creation, and determine the strategic direction and key tasks of transformation. Improve the organizational structure, set up a special transformation leading group, coordinate internal and external resources, and promote the implementation. Optimize the technical route, based on the actual situation of the enterprise, rationally select key technologies such as big data, artificial intelligence, and blockchain, and implement them step by step for continuous optimization. Fourth, strengthen institutional construction, establish and improve a series of supporting systems such as data governance, system construction, and security guarantee to provide institutional guarantee for the transformation.

### **3.2 Optimize the financial management process and organizational structure to improve the adaptability of transformation**

Financial management process and organizational structure are important carriers of financial transformation. Financial enterprises should continue to optimize their processes and organizations based on the requirements of informatization and intelligence. On the one hand, it is necessary to sort out the traditional industry and financial integration process, and use process automation, RPA and other technologies to promote the integration and optimization of financial processes, such as optimizing the cost reimbursement, fund allocation and other processes, to achieve integration and coordination. On the other hand, it is necessary to adapt to the needs of transformation, adjust the financial organizational structure, rationally set up positions, enrich the professional team of data analysis and system development, and build a high-

quality composite financial team. At the same time, encourage financial personnel to change their thinking, embrace change, improve the participation of all staff, and create a good atmosphere for the transformation.

### 3.3 Strengthen the training of information technology and intelligent skills of financial management personnel

Financial management information and intelligent transformation, the key lies in people. Financial enterprises should attach great importance to the skill training of financial personnel and increase training efforts. Strengthen professional training, carry out special training on big data analysis, artificial intelligence application, blockchain technology and other topics in a planned way, and improve the cutting-edge technology literacy of the team. Broaden the training channels, use the resources of external professional institutions, and broaden the horizons of financial personnel by participating in industry summits, exchanges and seminars. Improve assessment and incentive, incorporate information and intelligent skills into performance assessment, establish a scientific incentive mechanism, mobilize the enthusiasm of financial personnel to learn new technologies and apply new technologies, and build a high-level and highly matched financial team.

## 4. Conclusion

Financial management information and intelligent transformation is the trend of The Times, but also a complex system engineering. Financial enterprises should accurately grasp the necessity of transformation, scientifically use key technologies such as big data, artificial intelligence, and blockchain, systematically promote key tasks such as top-level design, process reengineering, and talent construction, and continue to deepen financial management reform. Through informatization and intelligent transformation, we will continuously improve the efficiency and effectiveness of financial management, strengthen the ability of risk prevention and control, and empower the high-quality development of enterprises. Looking forward to the future, the information and intelligence of financial management of financial enterprises will surely enter the fast lane and open a new situation of high-level and high-quality development.

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