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Research on the Basic Framework and Development Model of Intelligent Finance in the Digital Economy Era

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SUMMARY: *With the vigorous development of the digital economy, intelligent finance, as a core link in the digital transformation of enterprises, is reconfiguring the traditional financial management processes and value creation models through the deep integration of technologies such as artificial intelligence, big data, and blockchain. Based on the background of the digital economy era, this study systematically sorts out the basic concepts, theoretical basis and technical implementation path of intelligent finance, and proposes a four-dimensional framework including the basic layer, engine layer, comprehensive application layer and financial intelligence layer. This paper summarizes and organizes the model of intelligent finance empowering high-quality enterprise development, and proposes management ideas that adapt to future financial optimization and transformation, with the aim of providing reference and inspiration for the construction of the basic framework of intelligent finance. This research provides a systematic reference for the theoretical construction and practical application of intelligent finance, emphasizing the crucial role of the two-way interaction between technological empowerment and management transformation in promoting high-quality enterprise development.*

KEYWORDS: *Digital economy Intelligent finance Basic framework; Development model*

1 Introduction

The vigorous development of the digital economy is profoundly reshaping the global economic landscape and industrial ecosystem. According to data from the National Bureau of Statistics, the national Internet penetration rate has continuously risen from 70.4% in 2020 to 78.6% in 2024 [1]. This digital leap not only indicates the improvement of technological infrastructure but also suggests that data elements are reshaping the logic of commercial value creation. Against such a backdrop, the traditional financial management model is facing unprecedented transformation pressure: enterprises need to capture the pulse of business operations in real time from massive data streams and achieve precise decision support through intelligent algorithms, which directly drives the paradigm shift of financial functions from accounting-oriented to strategic [2]. The digital economy, through the deep integration of digitalization and traditional industries, injects new impetus into industrial development. This transformation is reflected in the financial field as the deep coupling of data elements and intelligent technologies. The intelligent transformation in the financial field is essentially an inevitable outcome of the

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upgrading of productivity in the digital economy era. With the breakthrough progress of the "big data, artificial intelligence, mobile Internet, cloud computing, Internet of Things and Region" technology cluster, the efficiency of financial data collection has increased by more than ten times, and the cost of data cleaning has decreased by 40%. This technological empowerment enables the finance department to break through the linear shackles of the traditional accounting cycle and build a dynamic analysis system based on real-time data streams [3-5]. This transformation is not achieved overnight. At present, the process of financial intelligence in enterprises still faces three major bottlenecks: First, the phenomenon of data silos makes cross-system data integration difficult, and over 70% of enterprises have inconsistent data standards between business systems and financial systems; Secondly, the shortage of compound talents restricts the depth of transformation. The skill gap of traditional financial personnel in areas such as data analysis and system operation and maintenance reaches 60%. Thirdly, the risk management mechanism lags behind technological development. The ethical boundaries of intelligent systems in the decision-making process have not yet been established, and the data security protection system still needs to be improved [6]. These challenges force enterprises to restructure their financial organizational structures, liberating financial personnel from repetitive work and redirecting them to high-value areas such as strategic decision support and risk early warning and control.

2 Overview of Digital Economy and Financial Intelligence

2.1 The Concept of Digital Economy

The digital economy is a new economic form. It is a concept on par with the agricultural economy and the industrial economy. In recent years, it has gradually become a mainstream direction driving the development of human society. As early as 1996, American scholar Don Tapscott first systematically explored in his book "The Digital Economy" what kind of impact the Internet would have on the economic life of society [7]. In 2016, the Chinese government released the "G20 Digital Economy Development and Cooperation Initiative" at the G20 Summit in Hangzhou, clearly defining that "the digital economy is an economic form that utilizes digital knowledge and information as key production factors, and is based on efficient information tools to promote social and economic development." It was not until 2021 that the Institute of Informatization and Information Communication of our country relatively comprehensively put forward the meaning of the digital economy: The digital economy is a new type of economy that takes digitalized knowledge and information as key production factors, is based on efficient modern digital network platforms, and is mainly driven by the application of digital technologies. It continuously optimizes the informatization, networking, and intelligence levels of economic and social development, and creates new development methods and models. It includes contents such as the development of the digital industry, industrial digitalization, digital governance, and the assetization of data [8].

To quantify its growth, a regression model can be constructed as follows:

$$\mathrm{DE}_t = \alpha \cdot \mathrm{Tech}_t + \beta \cdot \mathrm{Invest}_t + \gamma \cdot \mathrm{Labor}_t + \epsilon_t \tag{1}$$

where, DE_t refers to the scale of the digital economy (such as the proportion of GDP); Tech_t refers to technology investment (such as big data and Al R&D investment); Invest_t is infrastructure investment (such as 5G base station construction); Labor_t is the number of digital skilled talents; $\cdot\alpha$, β and γ are the regression coefficient; ϵ_t is the error term.

2.2 Theoretical Development and Evolution of Financial Intelligence

The development of new technologies represented by big data, cloud computing, blockchain, mobile Internet and the Internet of Things is leading to the rapid arrival of a new era of digital economy and forcing us to comprehensively upgrade in all aspects such as social production methods, accounting work methods and thinking on transformation and development [9]. China's financial reform has gone through the process from manual record-keeping to electronic management and then to the construction of information systems, and has now developed to the current stage of informatization and digitalization. The majority of companies in China are in the early stage of development from informatization to digitalization.

(1) In the initial stage, accounting work mainly relies on manual bookkeeping. The main function of this stage is "Posting accounts", which can only provide simple statements of account and account balances, reflecting the cash flow situation, transaction activities and the relationships among all parties involved in the transaction, and initially form a networked association among customers, products and suppliers, with the most basic financial accounting control mechanism [10]. The accounting work at this stage is limited to transactional tasks such as filling out bookkeeping vouchers, reviewing accounting information and preparing reports.

(2) The primary stage of accounting electronicization refers to the transition and development from the original manual bookkeeping accounting model to accounting computerization. The initial stage of accounting calculation also transitions from a purely manual calculation model to a computer-dominated one-machine calculation model. The dominant factor at this stage was the emergence and development of computer technology, marked by the evolution of accounting information datafication to the use of accounting information management software. Taking the UFIDA system, K3 system and network financial processing system as examples, auxiliary tools for accounting information management are provided. At this stage, financial personnel extensively employ financial accounting systems based on computer networking terminals to collect and organize financial data, and complete the application of accounting informatization standards. This enables financial personnel to start from the original data source and conduct data reporting and financial report analysis from different perspectives, covering departmental responsibilities, data norms, and data monitoring, etc. The formation of a complete standardized model for accounting information data has also liberated financial personnel from complex repetitive calculations for the first time [11]. It has evolved from individual user accounting to local area network accounting and then to global accounting. Accounting business work is carried out using a simple financial information system, and a major leap has been achieved in management methods and technology.

(3) We are at a stage of financial integration and informatization development. Accounting has undergone a transformation from manual bookkeeping to computerized accounting, evolving from pure accounting computerization to the collaboration and intelligence of accounting information systems. Meanwhile, in the stage of applying big data technology for development, we can evolve into an intelligent financial shared service center based on intelligent accounting and shared services. At this stage, relevant information such as enterprise and finance will be integrated into the human resources, finance and materials integrated platform system (ERP), achieving full coverage of the entire financial management. With the support of cloud-based computing systems, we will innovate the sharing model and process, explore the potential of scientific and technological innovation, break through the conventional sharing of accounting, extend into multiple fields, greatly improve management efficiency and quality, and extend the collection and storage of financial data to the business end. Eventually, we will achieve financial sharing, promote the digitalization of business decisions, and realize the integrated control and collaborative optimization of business and finance. Constantly build

new organizational structures and improve the corporate governance structure to a certain extent to achieve the strategic goal of integrating business and finance.

(4) Against the backdrop of the Fourth Industrial Revolution, with the promotion and wide application of technologies such as artificial intelligence, automatic control, the Internet, blockchain, and the fifth-generation mobile communication technology (5G), China is fully committed to promoting the intelligent development of finance from the perspective of international consistency of Chinese accounting standards. By constructing a management environment integrating data collection, storage, analysis and transmission through the latest intelligent information technology, the data power, scene power and cloud computing visibility within it are integrated into the intelligent financial management architecture, forming the concept of an accounting digital system [12]. The company has achieved the transformation of financial management from informatization, digitalization, sharing to intelligence through new technologies, and expanded the reach of financial shared services into multiple business fields, forming a digital data management center for the company and realizing the digital transformation of the enterprise. During this period, it is necessary to follow the new requirements put forward by the development of The Times and technology for finance and enterprise management, and establish a brand-new intelligent financial empowerment strategy, which includes creating value through digital management and building the core goal of intelligent enterprise accounting through intelligent sharing.

2.3 Characteristics of Financial Management in the Digital Economy Era

2.3.1 Data-driven Decision-making

In the era of digital economy, data has become the core of financial management. Compared with the past decision-making models driven by experience or intuition, modern enterprises are more inclined to rely on data to make decisions. This transformation has brought revolutionary impacts to financial management. First of all, data-driven decision-making means higher accuracy. In the past, many financial decisions were based on historical experience and limited information sources [13]. However, in the digital age, enterprises can obtain a large amount of data in real time, which can be used to predict market trends, assess risks and optimize financial strategies. For instance, through real-time analysis of sales data, enterprises can promptly adjust their supply chain strategies to better meet market demands. Secondly, data-driven decision-making provides enterprises with a more comprehensive perspective. In a digital environment, data is no longer merely about financial figures and charts; it also encompasses comprehensive information about the market, customers, suppliers, and competitors. This enables enterprises to consider their financial decisions from a broader perspective, ensuring that they are consistent with the overall strategy and goals of the enterprise. Finally, data-driven decision-making enables enterprises to respond more flexibly and promptly to market changes. In the digital economy, both the market environment and consumer demands are changing rapidly. Through real-time analysis of data, enterprises can quickly identify these changes and adjust their financial strategies accordingly.

2.3.2 Three-dimensional and Cross-border Financial management

Traditional financial management is often linear and isolated, focusing on the collection and analysis of internal financial data. However, in the digital economy era, financial management has transformed into a more three-dimensional and cross-border process. This means that modern financial management should not only focus on the internal financial situation of an enterprise, but also take into account the conditions of the external market, supply chain, customers and competitors. For instance, when evaluating a new investment opportunity,

enterprises should not only consider the financial returns of the project, but also assess its impact on the supply chain, market competition and customer satisfaction. In addition, three-dimensional and cross-border financial management also implies stronger synergy. In the digital economy, the cooperation between the finance department and other departments (such as marketing, sales, research and development, etc.) has become closer. Through this cross-departmental collaboration, enterprises can better integrate their resources and ensure that their financial strategies are in line with the overall strategy and goals of the enterprise.

2.3.3 User-centered Financial analysis

As consumer behavior and demands continue to change, enterprises have come to realize that in order to remain competitive in the digital economy, they must pay more attention to users. Therefore, user-centered financial analysis has gradually become the core of enterprise financial management. The core of this analytical method is to start from the user's perspective, understand their needs, expectations and behavioral patterns, and then apply this information to financial decisions. For instance, by analyzing users' purchasing behavior, enterprises can more accurately predict their future sales and profits, thereby creating greater value for shareholders. In addition, user-centered financial analysis can also help enterprises optimize their products and services and enhance user satisfaction. By analyzing user feedback, enterprises can promptly adjust their product design and pricing strategies to ensure that they meet the actual needs of users. Finally, this analytical method can also help enterprises better understand market trends and competitive situations. Through in-depth analysis of user data, enterprises can identify new opportunities and potential threats in the market, thereby better planning their future financial strategies.

3 The Impact of the digital economy on the development of intelligent finance

The essence of the value of enterprise transformation lies in enhancing operational efficiency. The digital business model transformation can promote industrial upgrading and transformation, as well as improve the management efficiency and economic benefits of enterprises. The impact of the digital economy on the development of intelligent finance is shown in Figure 1.

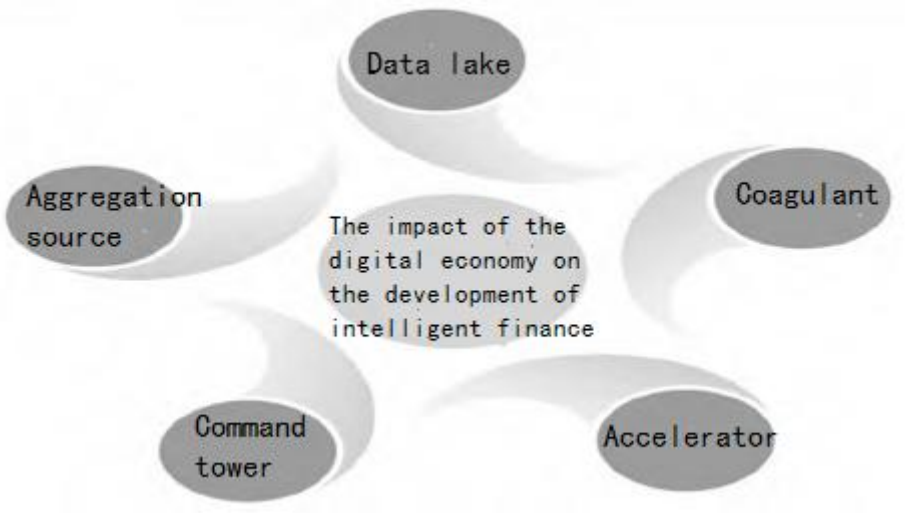

Figure 1: The impact of the digital economy on the development of intelligent finance[14]

(1)Build a business data model and establish a management data pool. New technologies represented by industrial Internet, network new media and information transmission technology have enhanced the rate of digital information transmission. By leveraging these digital information and digital shared value to build a management mathematics database, the impact of digital transformation on management value can be further stimulated. By leveraging a global integrated enterprise digital information system and combining digital application of business and financial information, the economic structure of the enterprise can be optimized, and the digital transformation of enterprise development and finance can be promoted [15]. By leveraging advanced information network technologies, we can achieve standardized data flow, intelligent computing, scenario analysis, and traceability, thereby promoting the development of the digital economy. It also promotes the deep integration of the digital economy and the new industrial revolution, facilitates the industrialization of digital technologies and the digitalization of industries, thereby forming new business forms and models and ushering in a new era.

(2) The process of data standardization becomes the adhesive for management. The key lies in the digital-driven transformation of business and finance. In the current era driven by digitalization, with the development of AI technology, the strength of data as assets and the level of digital standardization endow financial transformation with potential energy. The finance department should proactively serve the business department to analyze and evaluate in an intelligent way, elevating the work of finance staff from business processing to human interaction and then to intelligent interaction, ultimately achieving the stage of intelligent interactive processing, thereby completing the transformation from the informatization of finance to digitalization and forming a management adhesive. Based on the current status of intelligent finance construction and the requirements of its development strategy plan, enterprises should provide an intelligent finance solution that combines the effects and benefits of intelligent finance to build an overall digital transformation process, maximize the mining of data value, enhance data integration capabilities, adapt to technological changes and industry patterns, and improve the ability to mine data value. Establish the basic database of the intelligent financial system to achieve the effect of streamlined financial processing and optimal resource allocation.

(3) Use intelligent means to build a management acceleration engine. The company should adhere to the strategic goal of focusing on the integration of business and finance and achieving simultaneous development of both wings, and build an intelligent, all-round and full industrial chain management acceleration engine. Specifically: Adhering to the design concept of unity, professionalization and integration, we comprehensively apply emerging technologies such as big data, blockchain and AI, and attach great importance to the integration of business and finance as well as value innovation. Give full play to the core role of financial data, strengthen the enabling role of data technology, and through the management means of information systems, automatically summarize and generate financial information data to assist data users in building the management front end. Strengthen the data interconnection, data analysis and data screening throughout the entire process, leverage the combined advantages of big data technologies, extend accounting information to the operational activities of enterprises, enhance the informatization and intelligence level of business, and improve the accuracy of accounting measurement. Identify data sharing points in the financial and business fields, selectively select and discard financial and business data, assist the enterprise leadership in multi-dimensional comprehensive analysis, and promote the integration of decision-making management rights and decision-making control rights as well as business collaboration throughout the entire industrial chain.

(4) An intelligent and visualized smart management approach. Establishing a management

control center is the most crucial step in financial digitalization. To achieve this step, it is necessary to build a set of digital control models based on the technical aspect. Specifically, it is to fully utilize and leverage the power of digital technology to utilize data resources. A platform that fully presents visualized methods driven by business scenarios and combines intelligent financial tools to achieve intelligent identification, intelligent services, and intelligent command. Further extend financial work to the front line of business, plan the digital development plan for the group company, deeply analyze the key points of the integration of business and finance, and thereby lay a solid foundation for the enterprise to build a data-driven scene visualization support system. The internal management of the group enhances the automatic operation capabilities and visualization of the enterprises under the group, further optimizes the process of information generation and transmission, and applies data-driven intelligent decision-making functions in real time, presenting the visualization degree of data services, so that the basic financial work of the group shows an intelligent effect. Ultimately, a visual management platform was formed, enabling the intelligent display of all work processes and data flows. At the same time, the management processes were transformed into shared service processes, and the group effectively utilized financial data to serve the strategic planning for the entire company's development.

(5) Enterprises should also optimize the construction of digital platforms by leveraging new technologies such as "big data, artificial intelligence, mobile Internet, cloud computing, the Internet of Things, and the Internet of Things", meet various information needs with image technology, and provide more intelligent and efficient services to various customer groups through financial shared service solutions. Specifically, it refers to the construction of a big data ecological financial system, using the Internet of Things to collect a large amount of data and share it, and then through the data processing function of this platform, converting business and financial data into each other, fully realizing the management accounting function, and thereby achieving value reengineering. By applying the theoretical framework of intelligent finance and the intelligent matching mode, data is entered into the database to achieve the optimization of traditional financial tasks and upgrade work, and to create a service process-oriented and process digitalized pattern. Utilize the existing data warehouse to implement analysis functions and achieve automated platform operations, thereby enhancing the efficiency of financial work and making the enterprise's value creation capacity more complete. Construct a virtual model of the financial shared service center, introduce mobile Internet technology and apply it to terminal devices. At the same time, utilize blockchain technology to ensure the real-time and integrity of information, thereby building an intelligent service platform centered on value creation.

4 The basic framework design of intelligent finance in the Digital Economy era

4.1 Intelligent Framework Structure of Financial Management

The financial management framework structure is divided into four parts in total, including: the intelligent layer, the comprehensive application layer, the basic layer, etc. Each part is interconnected and performs its own responsibilities, achieving intelligent management of the enterprise's financial business. As shown in Figure 2 specifically.

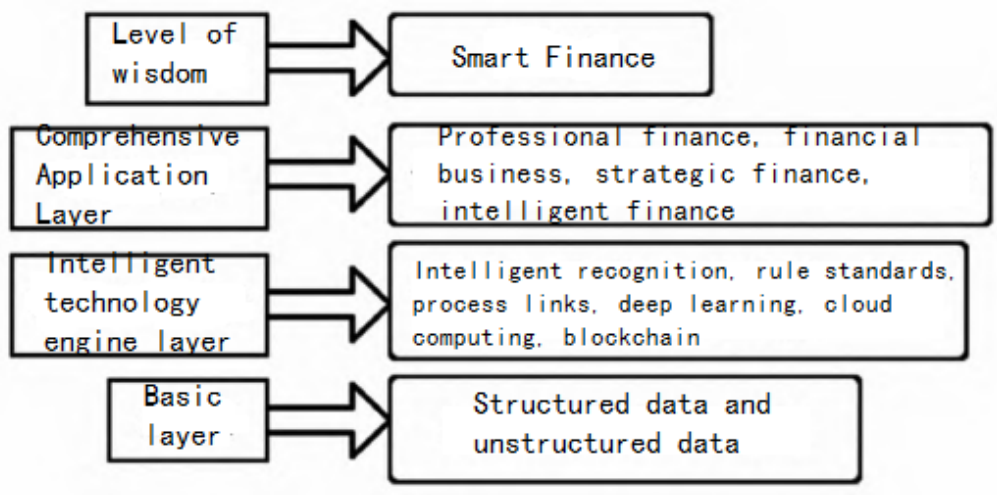

Figure 2: Architecture of intelligent Financial Management model

4.2 Analysis of the Operation Program of the Intelligent Financial Management Model

(1) Build a basic layer to achieve smart finance

The basic layer in the intelligent model of enterprise financial management, also known as the basic data layer, is the core of the operation of the intelligent financial management system. The constructed basic layer consists of two parts, namely the unstructured part and the structured part. In the basic data layer, the management and analysis of various data are realized to provide assistance for the decision-making of the decision-making department. Structured data refers to the data label content of various businesses in the system platform. When conducting financial business operations, the data with label content will be stored in the system database. Unstructured data refers to the extensive and valuable data information obtained through the Internet. In addition, the basic layer of the intelligent financial capability framework also has business integration capability and shared service capability. In order to evaluate the level of intelligent financial capability, a comprehensive evaluation model can be designed as follows:

$$\mathrm{IFI} = w_1 \cdot \mathrm{Data} + w_2 \cdot \mathrm{Tech} + w_3 \cdot \mathrm{Process} + w_4 \cdot \mathrm{Talent} \tag{2}$$

where, 'IFI' stands for Intelligent Finance Index; 'Data' is the degree of standardization of data (0-100 points); 'Tech' refers to the coverage of technology applications (such as Al and blockchain usage); 'Process' is the automation rate of the process (such as the proportion of RPA usage); 'Talent' refers to the proportion of composite talents (such as the proportion of employees who understand both finance and technology); w_1, w_2, w_3, w_4 are weight coefficients (which can be determined by Analytic Hierarchy Process).

The basic layer of the intelligent financial capability framework is detailed in Table 1, which can achieve intelligent financial management for enterprises.

Table 1: Basic Layer of Intelligent Financial Capability Framework

Level I	Level II	Specific requirements
The ability to integrate business and finance	Process design and management capabilities	Financial process reengineering and business process reengineering
	Business cognition familiarity	The finance department needs to understand the people and support the business
	Business analysis ability	Offer suggestions on the core factors for business growth from a financial perspective
	Data fusion capability	Connect business and financial data and integrate internal and external resources
Shared service capability	The top-level design capability of the shared platform	The establishment of a standard formulation platform for model construction
	The ability to identify and set up positions	Clarify the boundaries of responsibilities. Set up positions at all levels
	Shared service operation and management capabilities	Performance management, risk monitoring and identification, quality management, information system management, etc

(2) Leverage the intelligent technology engine layer to enhance data processing efficiency

The intelligent technology engine layer under the intelligent financial management model encompasses multiple technologies. Through deep learning technology, cloud computing technology, regional chain technology, process technology, etc., it realizes functions such as effective identification of financial information and intelligent planning of financial management processes. For instance, the application of intelligent recognition technology is to enhance the efficiency and accuracy of text recognition. It has its own logical data processing mechanism to intelligently identify the required information and data. For instance, the process engine within it can scientifically manage the complex and cumbersome task paths in the background, simplify the overall process, and make it more operational. The application of cloud computing technology can effectively deal with complex calculation formulas and processes, thereby reducing the financial accounting pressure on financial personnel, achieving the automation and intelligence of financial accounting, and improving the overall work efficiency.

(3) Build an integrated application layer to enhance the efficiency of financial management

The construction of the comprehensive application layer is a key component in the entire intelligent financial management model. It can achieve data sharing and system interaction among financial management systems. For instance, data sharing means that the comprehensive application layer integrates data from different financial software, shares it and manages it uniformly, avoiding the problems of repeated data entry and inconsistency, and ensuring the accuracy of the data. For instance, the comprehensive application layer can effectively prevent the repetition and redundancy of business processes, enhance the efficiency and effectiveness of business processes, and improve the professionalism of business. In addition, at the comprehensive application layer, the potential value of financial data can be mined, helping the management of enterprises grasp the market development situation, understand their own business and financial conditions, and provide data support for the formulation of development strategies.

(4) Build a financial intelligence layer to enhance the comprehensive competitiveness of the enterprise

The traditional financial management process involves the management of funds, bills,

assets, payments and other aspects. The financial intelligence layer is an extension and expansion of the financial management process. Optimize the financial management process, enhance the value of financial management, and enable financial management to extend to aspects such as the enterprise's strategic development decisions, fund analysis, tax reports, and market trend predictions. Intelligent financial management places greater emphasis on interactive management, effectively promoting the intelligent upgrade of financial management. While enhancing the competitive strength of enterprises, it also provides vitality for their development.

5 Research on the Development Model of Intelligent Finance

5.1 The Development Model of Intelligent Finance in the Digital Economy

The 19th National Congress of the Communist Party of China pointed out that the digital economy is booming and full of vitality. We should accelerate the building of a manufacturing power, accelerate the development of advanced manufacturing, and vigorously promote the in-depth integration of the Internet, big data, artificial intelligence and the real economy. At present, it is even more necessary to closely integrate the digital economy with the real economy. As a major country in terms of digital economy, China needs to promote financial reform in large enterprises at the current stage, accelerate the application of intelligent technologies in the financial field, and help China's manufacturing industry achieve digital, networked and intelligent transformation.

(1) Innovate and develop to enhance the growth potential of intelligent financial management. We must resolutely place innovation at the core of the country's overall development, strengthen the national innovation system, and accelerate the building of a strong country in science and technology. The renowned American accountant Chatfield proposed the theory that "accounting has adaptability", which states that the greater the effectiveness of innovation, the more costs can be reduced, and the more corresponding innovation points there will be. For enterprises, intelligent transformation lies in promoting intelligence through data-driven transformation. Therefore, it is necessary to strengthen the implementation of work management standard models, business operation standard models, and financial information digital models, and make full use of management accounting. Based on these, it can promote the intelligent transformation of financial management. In addition, by leveraging online and big data technologies, information and data can be efficiently obtained and utilized, processed and filtered reasonably to activate the source of intelligent financial technology. At the same time, the thinking mode of big data analysis can be integrated into it to achieve the goals of intelligent and scientific management and intelligent and reasonable decision-making, further enhancing the internal driving force for the growth of intelligent finance.

(2) We can promote the balanced development of intelligent finance through coordination. As the macro management organ of the country, the National Development and Reform Commission of our country has accelerated the digitalization of industries and expected companies to enhance their political awareness, carry forward the thought of the socialist core value system, participate in social and economic development, and also promote the deepening of accounting research and play a guiding role in accounting reform. At present, the core socialist values have become a key factor for the economic balance of social development, highlighting the coordination of development and building a systematic intelligent framework. It is necessary to redesign the company's organizational model, create diversified and differentiated database units, and utilize big data to assist the development of environmental accounting and environmental accounting. Improve the fit between the circular economy and

the management accounting system, form a complete closed loop of intelligent financial transformation, and correctly guide the orderly progress of production management based on the results of data analysis, integrating business and finance management. Make full use of big data technology to optimize information distribution, strengthen the formulation and dissemination of accounting data standards, and integrate intelligence into enterprise operations and achieve benchmarking development for the entire industry. In the process of building intelligent finance, we need to take into account the impacts brought by multiple factors such as the environment and society. Especially in the understanding of the derivative nature of the economic system, we also need to understand the economic laws of the natural ecosystem in the material cycle, so as to achieve a balance between enterprises and the economy. This enables the intelligent financial system to integrate with society and the natural ecosystem.

(3) To achieve high-quality intelligent finance, the green concept is indispensable. Sustainable development has become the foundation and framework theory for the existence of green accounting. The integration of environmental protection technology, the concept of sustainable development, modern economic theories and the basic principles of traditional accounting becomes the foundation of green and intelligent development. Deepen research on green accounting, expand the scope of intelligent accounting, and form the basic rules and standards of green accounting. The management of intelligent finance is based on the core idea of integrating business and finance. The foundation for building an intelligent finance scenario is reflected in two aspects: on the one hand, the application of network technology and cloud computing thinking; on the other hand, the construction of intelligent digitalization also requires the classification of data. Based on the intelligent financial management platform, various intelligent predictions and associated data are carried out, making business and financial information more closely integrated. The technical support based on artificial intelligence enhances the processing and predictive capabilities of big data, thereby improving the utilization efficiency of data resources. Intelligent finance is a comprehensive large-scale project integrating management methods and business strategies. It can deeply explore consumers' demands and preferences based on the in-depth combination of financial processes and business control, and achieve the intelligence and integration of business and financial information. To further enhance the decision-making capacity of intelligent finance, improve the integration level of intelligent finance and performance assessment, achieve automatic analysis and processing of financial business processes, unified allocation and timely decision-making, and promote accounting reform to drive the high-quality growth of intelligent finance.

(4) Promote the development and integration of intelligent finance through openness. Changes in both internal and external environments can lead to new global action relationships in intelligent finance. According to the "Research Report on the Current Situation of Financial Intelligence in Chinese Enterprises" released by the Intelligent Finance Research Center of Shanghai National Accounting Institute, the most commonly used application scenarios of intelligent finance lie in the fact that the research and integration of core intelligent finance technologies are quite active. We need to explore intelligent technologies, intelligent financial management, intelligent services and intelligent analysis with Chinese characteristics, build a brand-new business intelligence model based on big data technology, and at the same time adhere to the principle of dynamic development to establish a brand-new financial intelligence system. Give full play to the role of big data elements, promote the interaction between the development of the digital economy and the real economy, and enhance the openness of the system. In the process of vigorously promoting the intelligent transformation of large enterprises, new alternative business operation models, open business operation models and innovative industry elements will emerge. They will move from traditional accounting aggregation processing centers to more open data centers, continuously expand their sharing

scope, optimize sharing results, and help enterprises achieve management improvement.

(5) Promote the development of intelligent financial sharing. Intelligent financial reform is an overall and all-round reform of the financial organizational structure. Currently, exploring new breakthroughs in driving financial development through the integration of "big data, intelligence, mobile Internet, cloud computing and the Internet of Things" will form the main development trend. We should rely on the application of the intelligent financial accounting sharing platform, start from its business perspective, carry out the integration of intelligent management, and on this basis, pay attention to the application of intelligent financial sharing technology, and study the development model and roadmap of finance and accounting in the Chinese context. Attempt to adopt a new perspective for the formulation of financial collaborative intelligent audit planning, propose new ideas for data governance in intelligent accounting and finance, create an intelligent financial efficiency improvement control system, strengthen the application of risk control and indicator early warning, support the application of financial management sharing platforms and financial digitalization, and explore effective paths to achieve financial digital transformation through financial sharing platforms. Realize the effective integration of the database and the construction of an integrated business and finance system, and give full play to the significant role of the shared data platform.

5.2 Suggestions for Development Models

The choice of the path and approach for intelligent finance should be comprehensively determined based on the enterprise's asset resources, development strategy, and market orientation. Different paths imply different implementation plans and different resource allocation concepts. Under the self-creation model, the company should build an enterprise core competitiveness system oriented towards technological progress, that is, invest more research funds, hire high-end skilled talents and build an integrated innovation center of industry, academia and research, thereby forming a self-control technological barrier. It is suggested to set up a special research fund. The main breakthroughs are in the data management, algorithm improvement, and adaptation to the environment of intelligent financial systems. At the same time, a multi-level talent cultivation system can be adopted, that is, combining internal sharing and education with external recruitment, to cultivate a talent team that is proficient in both accounting and AI. Subsequently, long-term relationships can be established with universities or research institutes to achieve an integrated cycle of the output of cutting-edge technological results and the synchronous alignment of technological update speeds with market demands.

For enterprises that develop through a cooperative model, a complete management mechanism for partner selection and collaboration should be established. Select institutions with patented technologies, successful cases and industry experience in the field of intelligent finance as the cooperative entities. The main focus is on the maturity of their technologies, data security and the speed of service response. During the cooperation process, clarify responsibilities and the way of income return, and sign in-depth cooperation contracts to ensure property rights ownership and share risks together. It is also necessary to establish a dynamic evaluation mechanism to regularly review the effectiveness of cooperation and market feedback. Through joint research, resource sharing and environmental construction, the technical level of mutual integration and common development as well as the strategic goal of mutual supplementation can be achieved. This can help enterprises quickly make up for their development shortcomings by leveraging external technological resources, and at the same time, it can reduce the cost of innovation and trial and error, creating a circular and increasing path of "technology - scenario - value". For enterprises adopting independent innovation models, evaluating the economic feasibility of technology investment is crucial. The return on investment can be calculated as:

$$\text{ROI} = \frac{\text{Net Profit} - \text{Tech Cost}}{\text{Tech Cost}} \times 100\% \quad (3)$$

where, ‘Net Profit’ is the annual net profit increment after intelligent transformation; ‘Tech Cost’ refers to the cost of technology investment (such as Al system development expenses).

Enterprises that adopt the purchase of services should design a grading evaluation system for procurement service suppliers and a customized service management system. It is suggested to develop multiple evaluation criteria such as technical features, service levels, information protection capabilities and expansion capabilities, and select experienced service institutions (with mature solution ideas and implementation service cases in the industry) as service providers. During the signing process, it is necessary to clearly stipulate service standards, data ownership and responsibilities, etc., to ensure the continuation of services and system security. After entering the service, a service efficiency assessment mechanism should be established, regular system function tests and business applicability research should be carried out, and the service plan should be continuously optimized. At the same time, emphasis should also be placed on the digital transformation training of employees. Through the technical support and training provided by the service provider, employees' control over the intelligent financial management system should be enhanced. The external technological advantages should be fully utilized to achieve in-depth integration of the enterprise's business processes and maximize the application value of the system.

6 Conclusion

Conducting research on intelligent financial systems and institutions based on the actual situation of intelligent finance and industrial integration development in our country is a systematic project. This article proposes new development strategies for intelligent finance in terms of its development and the problems it faces, providing a new perspective for promoting the intelligent transformation of finance. Based on the research findings, we must optimize the existing business operation methods and management processes of enterprises, promote their intelligence and digitalization, and also facilitate the integration of enterprise financial management and scientific management. We must also create a shared service model, clarify the primary goal of enterprise digital transformation, and design the basic structure of intelligent finance, so that enterprises can eventually truly embark on the path of financial digital transformation and development. We still need to further explore the model of Chinese-style intelligent finance, boost the digitalization and intelligence of enterprises, and better promote the high-quality and efficient development of enterprise digitalization, thereby safeguarding the intelligent construction of enterprises.

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