Research on the Value Creation Path of Digital and Intelligent Financial Sharing in the New Energy Industry——Taking Longyuan Power as an Example

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Abstract. Against the global energy transition and digital-intelligent wave, the financial sharing model of new energy enterprises faces the transformation challenge from accounting-oriented to value-creation-oriented. This paper takes Longyuan Power as a case to study the value creation path of digital-intelligent financial sharing. Based on analyzing the development trend of digital-intelligent financial sharing, this paper deeply explores the "three-stage" practice of Longyuan Power's digital-intelligent financial sharing construction. The study reveals its specific value creation effects through three paths: cost optimization, business empowerment and risk management—specifically, technology-driven process automation, data center platform resource integration and standardization reduce costs; business-finance integration and data-driven support provide decision-making support and expand service scope; intelligent verification, centralized U-shield management and overseas business monitoring effectively prevent risks. The study shows that Longyuan Electric Power's practice of realizing value creation through intelligent financial sharing can provide a replicable and promotable operational model for new energy enterprises to support their "green transformation + internationalization" strategies via financial transformation. Moreover, this research offers certain theoretical references and practical insights for the intelligent financial transformation of the new energy industry.

Keywords: Digital-Intelligent Financial Sharing, Value Creation, New Energy Enterprises, Longyuan Power.

1. Introduction

Amid the deep integration of global energy transition and digital-intelligent wave, the financial sharing model of new energy enterprises is undergoing a key transformation from traditional accounting-oriented to modern value-creation-oriented.

Wang proposes that as a new financial management model, financial shared services change the content and service methods of financial work and reshape the role of finance in enterprises [1]. This transformation aligns with national policy orientation—In August 2024, the Accounting Department of the Ministry of Finance issued the Guiding Opinions on Further Strengthening the Application of Management Accounting (Draft for Comments), which clearly takes "digital-intelligent financial shared service centers" as the starting point to promote financial digital transformation and provide guidance for the financial reform of new energy enterprises. It also meets the industry's development needs: the new energy sector’s characteristics of large project investment, long cycle and complex green electricity transaction pricing make traditional financial models unable to meet dynamic decision-making requirements.

Regarding the value creation path of digital-intelligent financial sharing, existing literature has conducted relevant research focusing on three dimensions: technology empowerment, transformation stage characteristics, and industry adaptability. In terms of technology empowerment, Tian propose that intelligent finance achieves value creation through business-finance integration, data-driven approaches and intelligent tools, with its core being to use digital technology to transform finance from accounting-oriented to decision-support-oriented [2]. In terms of the characteristics of the transformation stage, the practice of Xiamen Airlines shows that the financial sharing transformation needs to go through four stages: data governance, operation optimization, algorithm application and

risk early warning, and achieve cost reduction and efficiency improvement through data integration and intelligent tools [3]. Longyuan Power's "three-stage" plan echoes this: the materialization stage establishes a data management mechanism, the domestic and overseas integration stage uses algorithms to optimize financing, and the business empowerment stage realizes full risk management and control, reflecting a progressive feature. In the dimension of industry adaptability, Zhang points out that new-quality productive forces empower financial transformation through three elements—talent, technology and data—and emphasizes that the new energy industry needs to cultivate interdisciplinary talents to promote the integration of technology and management [4]. Longyuan Power responds to the complexity of green electricity transactions and cross-border management needs, meets the requirements of new-quality productive forces with "full technology application" and "full risk management and control", and improves decision-making accuracy through the integration of business and financial data, which aligns with the industry's dynamic decision-making needs. Existing studies have revealed the value creation logic of digital-intelligent financial sharing, but there is insufficient research on the particularities of the new energy industry.

Therefore, this paper takes Longyuan Power as a research case and focuses on exploring the value creation path of its digital-intelligent financial sharing. In the past few years, Longyuan Power, integrating the practice of its "green transformation + internationalization" strategy, has provided a distinctive path reference for the industry. After systematically sorting out the theoretical foundations and industry status quo, this paper deeply analyzes the "three-stage" practice of Longyuan Power's digital-intelligent financial sharing construction—covering the innovation of platform technology architecture, optimization of business processes, construction of financial data center platform, and enhancement of intelligent verification and risk prevention—and reveals the value creation effects based on its actual operation. Mi has confirmed through cases that the establishment of a financial shared service center can significantly enhance the sustainable growth of enterprises [5]. Wang has verified through research that a financial shared service center can significantly promote enterprise value improvement, and digital transformation can drive the development of financial shared service centers to further strengthen the value creation effect [6].

The study aims to clarify the specific ways Longyuan Power achieves value creation through paths like cost optimization, business empowerment and risk management, and summarize its transformation experience of relying on the "data + intelligence" system to support the "green transformation + internationalization" dual strategies.It provides practically meaningful theoretical references and replicable practical experiences for the digital-intelligent financial transformation of the new energy industry, thereby enriching the theoretical system of financial sharing models in the field of digital-intelligent transformation at the theoretical level and helping the industry as a whole enhance financial value creation capabilities at the practical level.

2. Practical Analysis of Digital-Intelligent Financial Sharing in Longyuan Power

2.1. Company Background

Longyuan Power is the earliest professional company engaged in wind power development in China; it took the lead in exploring China's offshore, low-wind-speed and high-altitude wind power fields, took the lead in realizing the "going global" of China's wind power, and has continuously led the industry's development and technological progress. Its "14th Five-Year Plan" clearly defines the "green transformation + internationalization" dual strategies. New energy projects have characteristics of large investment, long cycle and complex green electricity transaction pricing. These characteristics make traditional financial models unable to meet dynamic decision-making needs. Thus, there is an urgent need for financial sharing to provide real-time data support and global management capabilities. This need is consistent with the view put forward by Zhang that "under the background of a low-carbon economy, enterprises need to optimize their financial shared service centers to adapt to new operational and risk-related characteristics" [7].

2.2. Implementation Process

Wang points out that enterprises are prone to face difficulties such as personnel management and information system construction in the construction of financial shared service centers, and need to ensure operational value through problem analysis and optimization plans [8]. Facing new situations and tasks and centering on the company's strategic goals, Longyuan Power strictly implements the requirements of the group company's "1+N+S" financial shared management system construction, organizes internal and external experts to investigate the advanced practices of multiple shared centers, explores the optimization path of financial sharing, and clarifies the development direction of financial sharing. As shown in Fig 1, Longyuan Power has formulated a three-year (2023-2025) development plan for financial sharing in accordance with the concept of "intensification, agility, digital intelligence and empowerment". It deepens and upgrades around the ten typical characteristics of "Five Comprehensives and Five Modernizations". Through full entity coverage, full-process scenarios, full data connection, full technology application, full risk management and control, business automation, service self-service, business-finance integration, intelligent analysis and diversified models, it optimizes 18 financial sharing functions in phases. It realizes continuous improvement of shared operation efficiency, comprehensive expansion of shared business, continuous enhancement of innovation leadership, full play of value creation role, better improvement of risk prevention system and further increase of shared service satisfaction. It also achieves more prominent role in serving Longyuan Power's strategic development and initial emergence of industry leadership effect. Besides, it builds a new intelligent global financial sharing service model that matches Longyuan Power's leading position in the new energy market [9].

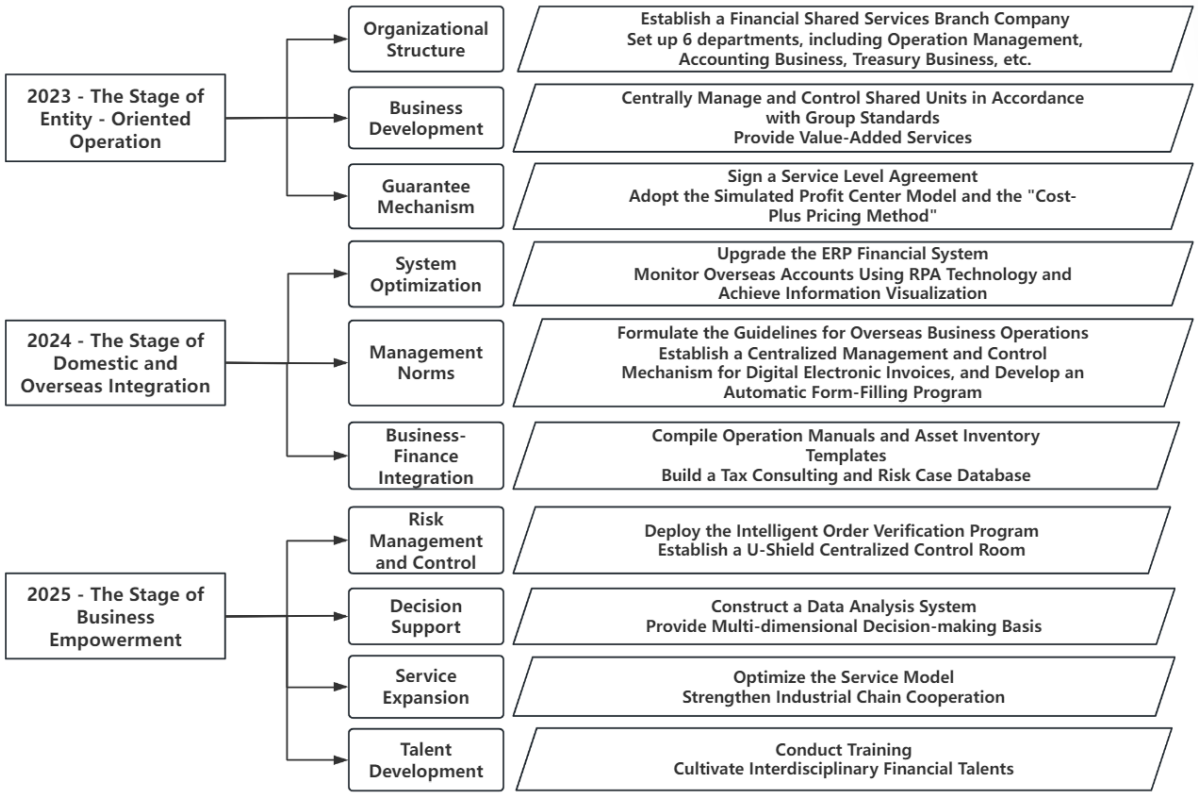

Figure 1. Longyuan Power's Three-Year Development Plan for Financial Sharing

2.3. Practical Application

2.3.1 Innovation of Platform Technology Architecture

It integrates cloud computing, AI algorithms and RPA technology to build a "data + intelligence" financial digital-intelligent system. Relying on the independently developed financial digital-intelligent shared service platform, it realizes centralized version management and hierarchical

permission authorization, and reduces operation and maintenance costs. It launches an intelligent robot module, promotes the integration of domestic and overseas technologies, and upgrades management efficiency and digital empowerment. It explores functions such as Leqi Direct Connection, establishes a centralized management and control mechanism for digital invoices, and improves the automation level of tax processing. Ma and Tian propose that the combination of financial work with RPA and AI can rely on the process automation capability of the former and the deep learning function of the latter to improve the efficiency and accuracy of financial sharing services [10].

2.3.2 Optimization and Expansion of Business Processes

Zhan points out that the cost module of intelligent financial sharing projects can significantly improve the project completion rate and provide effective support for enterprise project cost management [11]. Longyuan Power expands 18 functions including financial accounting statement preparation in accordance with the principles of "standardized process, expert think tank, and technology empowerment". It compiles operation manuals and templates through on-site research to promote in-depth integration of business-finance processes for new energy projects. It develops automatic form-filling programs, builds tax case databases, and optimizes tax processing. It upgrades the ERP system to achieve interconnection between domestic and overseas platforms, and monitors overseas business and account information with RPA technology.

2.3.3 Construction of Financial Data Middle Platform

It establishes a full-lifecycle data management mechanism of "collection-storage-governance-application", forms a standardized data asset system, and realizes intelligent data cleaning and hierarchical storage. It develops data visualization and intelligent analysis tools to promote the transformation of data resources into assets. It formulates standardized manuals, unifies business process frameworks, refines new energy business scenarios, and standardizes accounting standards and attachment requirements.

2.3.4 Intelligent Review and Risk Prevention and Control

Fang points out that although the financial sharing model can reduce enterprise costs and improve financial management standards, it may generate internal control risks due to staff turnover, job adjustments and other factors, which reveals the importance of internal control construction under the financial sharing model [12]. Longyuan Power deploys targeted intelligent document review programs, solidifies review standards for 31 documents, and automatically blocks abnormalities to reduce manual risks. Meanwhile, it realizes the separation of personnel and U-shields through "centralized U-shield management equipment + security system". It uses AI to manage overseas password devices to form full-process closed-loop control.It deepens the application of the treasury system to pilot the automatic position-transfer function, improves capital settlement efficiency, reduces labor input, and effectively prevents internal control risks under the financial sharing model.

3. Construction of Value Creation Paths

3.1. Cost Optimization Paths

As shown in Fig 2, Longyuan Power has taken various measures in cost optimization. In terms of technology-driven process automation for cost reduction, it integrates cloud computing, AI algorithms and RPA technology to automate repetitive financial work, reduce labor costs and potential error costs, and improve efficiency. It promotes cost reduction through data middle platform resource integration by establishing a full-lifecycle data management mechanism, integrates scattered data, unifies standards, and reduces data management costs with infrastructure projects as an example. Meanwhile, it achieves standardized construction to improve efficiency and reduce costs by building a standardized capability middle platform and formulating manuals to standardize financial work, and reduces operating costs through efficiency improvement amid growing business volume [9].

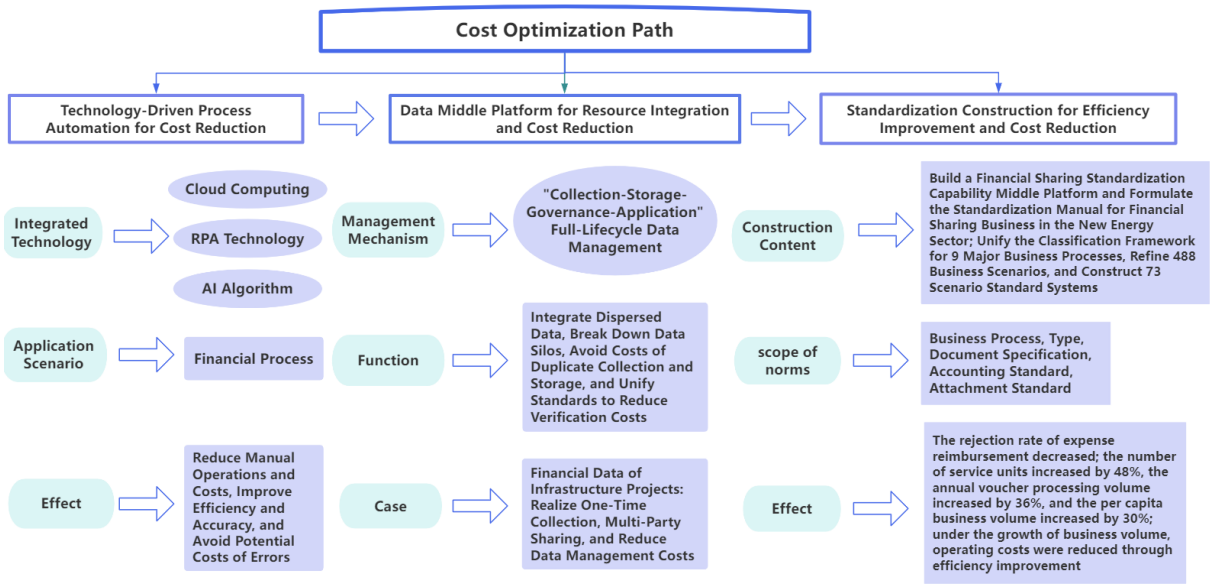

Figure 2. Path of Cost Optimization Measures for Longyuan Power

3.2. Business Empowerment Paths

As shown in Fig 3, Longyuan Power supports project decision-making through business-finance integration. It adheres to business-finance integration, conducts in-depth on-site research on new energy projects, compiles relevant manuals and templates, and promotes project process upgrading. The financial department deeply participates in the full-lifecycle management of projects to assist in the selection of optimal solutions and improve the success rate of project investment. It relies on the financial data middle platform and the "data + intelligence" system, uses AI algorithms to build analysis models and a decision cockpit, and provides support for intelligent operation decisions through data mining and analysis to improve overall operational efficiency. It expands the scope of financial sharing services around multiple categories, provides value-added services beyond basic functions, and offers more comprehensive financial support for business development [9].

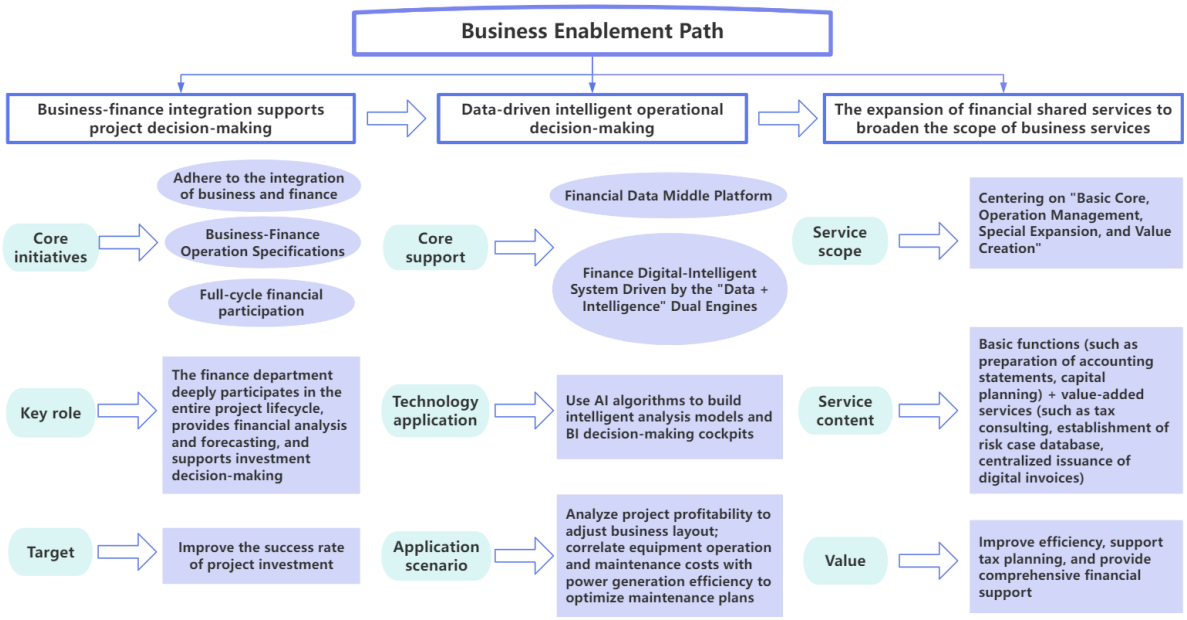

Figure 3. Path of Business Empowerment Measures for Longyuan Power

3.3. Risk Management and Control Paths

As shown in Fig 4, in terms of risk management and control, Longyuan Power solidifies the review key points and standards for 31 commonly used documents by deploying intelligent document review

programs, reviews financial documents in real time and automatically blocks risks, and effectively prevents capital risks in links such as expense reimbursement. It introduces the "centralized U-shield management equipment + security control system" to build a centralized control room, realizes the separation of personnel and U-shields and full-coverage management of domestic and overseas U-shields, and standardizes processes to ensure the security of fund payment. It upgrades the ERP system in accordance with domestic requirements to achieve interconnection between domestic and overseas platforms, dynamically monitors overseas account information and business processes with RPA technology, and responds to risks such as exchange rates and policies in a timely manner to ensure the stable development of overseas business [9].

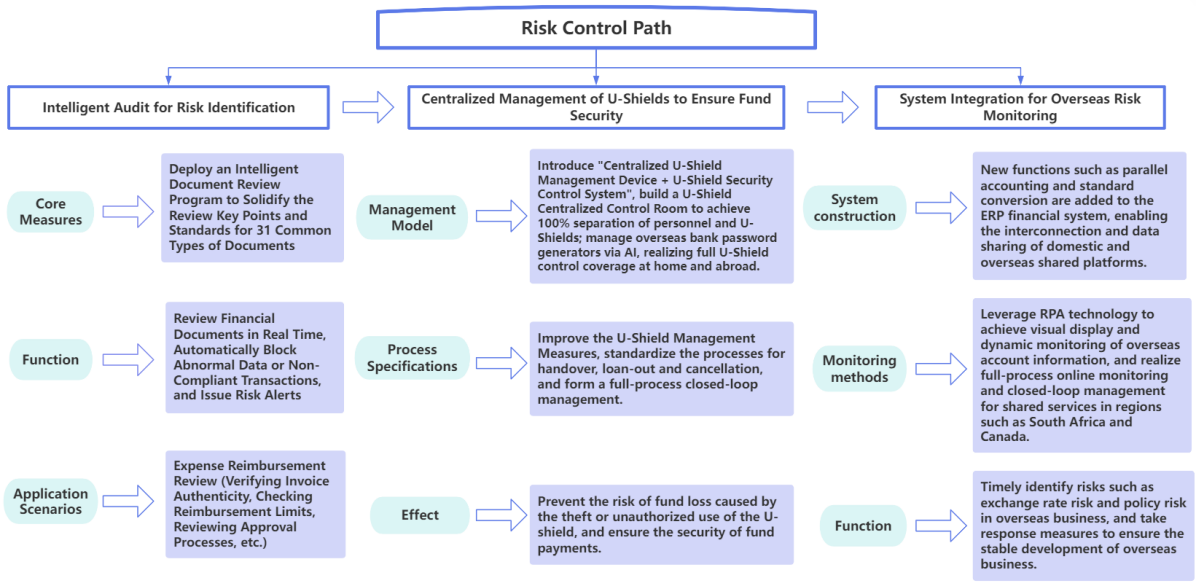

Figure 4. Path of Risk Management and Control Measures for Longyuan Power

4. Conclusion

This paper systematically sorts out the practices and effects of Longyuan Power in the construction of digital and intelligent financial sharing. It finds that through a series of practices—such as innovating platform technology architecture, optimizing business processes, building a data middle platform, and strengthening intelligent review and risk prevention and control—Longyuan Power has successfully constructed value creation paths for cost optimization, business empowerment and risk management and control. In the cost optimization path, the application of technology and standardized construction have reduced labor and management costs. In the business empowerment path, business-finance integration and data-driven approaches provide strong support for project decisions and operational decisions and expand the scope of business services. In the risk management and control path, intelligent review, centralized U-shield management and overseas business monitoring have effectively prevented various risks.

This study provides valuable experience for the digital and intelligent financial transformation of the new energy industry. For new energy enterprises, first, they need to keep up with the trend of digital technology, pay attention to the application of blockchain in financial data security and supply chain finance, explore innovative financial sharing models suitable for the new energy industry, and improve the intelligence level of financial sharing to maintain technological leadership. Second, they need to improve the data security management system, strengthen full-process data security protection, and strictly regulate data access permissions to ensure information security. Third, they need to deepen business-finance integration, strengthen collaboration between financial and business personnel, and cultivate interdisciplinary talents through training and job rotation to enhance the financial department's ability to support business operations.

References

[1] Wang Chaohua. New Mode of Financial Management: Financial Sharing Service. Accounting and Corporate Management, 2021, 3 (1).

[2] Tian Gaoliang, Zhang Xiaotao. On the Empowerment of Intelligent Finance to Value Creation in the Digital Economy Era. Finance and Accounting Monthly, 2022, (18): 18-24.

[3] Fu Xinhua. Practice of Digital Transformation in Financial Shared Service Center of Xiamen Airlines. Finance and Accounting, 2025, (01): 69-72.

[4] Zhang Qinglong. New-Quality Productive Forces Empowering Financial Digital Transformation. Finance and Accounting Monthly, 2025, (03): 89-91.

[5] Mi Rui. Problems and Countermeasures of Enterprise Financial Sharing in the Context of Big Data. Applied Mathematics and Nonlinear Sciences, 2024, 9 (1).

[6] Wang Zujingyang. Financial Shared Service, Digital Transformation and Corporate Value Creation. International Journal of Computational Intelligence Systems, 2023, 16 (1).

[7] Zhang Yanchang, Zhang Yule. Optimization of Financial Shared Service Center from the Perspective of Low Carbon Economy. Population, Resources & Environmental Economics, 2023, 4 (1).

[8] Wang Meng. Problems and Optimization of Enterprise Financial Sharing Service Center -- Take Order Group as an Example. Academic Journal of Business & Management, 2022, 4 (14).

[9] Sina Finance. Longyuan Power: Forging Ahead in the "Dual Carbon" Blue Ocean, Innovatively Building a New Financial Sharing System to Empower High-Quality Development. https://finance.sina.com.cn/stock/relnews/hk/2025-05-29/doc-ineyfqpy9570063.shtml, 2025.

[10] Ma Jianwei, Tian Qi. "AI+RPA" and the Intelligent Development of Enterprise Financial Shared Service Centers. Journal of Artificial Intelligence Practice, 2024, 7 (3).

[11] Zhang Yanchang. Design of Project Cost Module in Financial Shared Service Center from the Perspective of Intelligence. Information and Knowledge Management, 2022, 3 (1).

[12] Fang Changdi. Research on Internal Control Risk and Prevention under Financial Sharing Mode of Baosteel. Financial Engineering and Risk Management, 2023, 6 (4).