STUDY ON IMPACT OF ENTERPRISE INDUSTRY FINANCE INTEGRATION ON PERFORMANCE IN THE CONTEXT OF DIGITAL TRANSFORMATION -- TAKE STATE GRID CORPORATION OF CHINA AS EXAMPLE

LIU TIANXIAO
6417195051

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LIU TIANXIAO

This Independent Study has been approved as a Partial Fulfillment of the Requirement of International Master of Business Administration in International Business Management

Advisor:.....

(Dr. Zhang li)

Date: 11/9/2025

.....

(Associate Professor Dr. Jomphong Mongkhonvanit)
Dean, Graduate School of Business Administration

Date 20/9/2023

Siam University, Bangkok, Thailand

Title:	Study on Impact of Enterprise Industry Finance Integration on Performance in the Context of Digital Transformation -- Take State Grid Corporation of China as example
By:	Liu TianXiao
Degree:	Master of Business Administration
Major:	International Business Administration

Advisor: ……

(Dr.Li Chun You)

……11 / 9 / 2023……

ABSTRACT

Traditional financial management has been unable to adapt to the development of modern enterprises, the key is to realize the integration of financial and intelligence, which is also an important development trend of enterprise management today.Hence, the study was concluded with four objectives: 1)To clarify the mechanism that affects the performance of state-owned enterprises at the strategic level has a significant impact.2)To confirm that from the financial perspective, the impact mechanism on the performance of state-owned enterprises has been significantly affected.3)To analyze the technical level has a significant impact on the performance of state-owned enterprises.4)To prove that the management-level analysis of the mechanism that affects the performance of state-owned enterprises has a significant impact.

This study focuses on the analysis of the impact of enterprise financial integration of State Grid Corporation on performance in the context of digital transformation,and based on domestic and foreign literature,the path of domestic financial integration and the factors that may affect financial performance were sorted out,and a theoretical framework was proposed.This academic research mainly focuses on capital preservation theory,value management theory, and principal-agent theory.The population and sample for this study is total of 306 questionnaires were collected in this survey, with an effective rate of 97%. Starting from the mechanism perspective of State Grid Corporation of China (independent variable), it analyzes the impact of four

variables: 1) strategy; 2) finance; 3) technology; 4) management;) to verify whether it has an impact on the performance of state-owned enterprises (dependent variable).Conclusion:The proposed model and assumptions are significantly positively correlated, that is, the four assumptions of the design are all valid, which proves that the four aspects of strategy, finance, technology, and management have indeed had a positive impact on the performance of state-owned enterprises, and to enable the State Grid Corporation to achieve greater benefits in development. Based on this research, it will have certain enlightenment significance for clarifying the future research and development trend of the integration of industry and finance in my country's enterprises in the future.

Keywords: industry finance integration,financial performance, enterprise performance impact,digitalize development

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Liu TianXiao

Declaration

I, Liu TianXiao, hereby certify that the work embodied in this independent study entitled "Research on the Impact of Enterprise Industry Finance Integration on Performance in the Context of Digital Transformation -- A Case Study of State Grid Corporation of China" is result of original research and has not been submitted for a higher degree to any other university or institution.

Liu Tian Xiao

(Liu TianXiao)
June 1, 2023

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Chapter 1
Introduction

1.1Background of the Study

The digital transformation of state-owned enterprises has opened a new chapter, entered the fast lane, and made breakthroughs. As the "pillar" of the socialist economy with Chinese characteristics, state-owned enterprises are responsible for promoting the high-quality development of China's economy. Advancing digital transformation can help state-owned enterprises to adapt to the development of the digital economy era to build new competitive advantages and achieve innovative driving force to ensure a high-quality product (Chen et al., 2019).

The State Grid Corporation of China has always adhered to the service purpose of "people's power industry for the people," established the strategic goal of "building an internationally leading energy internet enterprise with Chinese characteristics" and the overall development layout of "one industry first, four wings flying together, and all factors contributing," and committed to serving the "double carbon" goal and building a new power system, It is committed to meeting the need of "safe, green and economical electricity" for the whole society (Ajmal, 2017). In terms of financial management, the State Grid of China focuses on the purpose and responsibility of the enterprise. Its awareness of creation and service functions is more concerned. At the same time, the Finance Department mainly promotes the combination of management, accounting biochemistry, and digital economy to create more value. It supports the realization of a multi-dimensional digital transformation strategy of enterprises.

From the perspective of classification, the digitalization of state-owned enterprises of commercial categories I and II focus on economic benefits and high-quality development (Zhang et al., 2018). Public welfare state-owned enterprises focus on improving the quality and efficiency of public goods; From the perspective of hierarchy, the group level should strengthen the top-level design of digital strategy, subsidiaries should promote the combination of digital management and business operation management, and subsidiaries or third-level companies need to complete the implementation of digital transformation.Choose this topic, because after through the literature reading and actual research, it found in the development of modern enterprises, financial management occupies an important position, the traditional financial management can not adapt to the development of modern enterprises, lead to many problems more outstanding, so how to make enterprise value, promote the transformation and upgrading of financial management, the key is to realize the integration of financial and business, this is an important development trend of today's enterprise management.

The explosive development of information technology makes enterprises need to integrate information technology into their financial management mode, and financial

functions need to be changed. Only in this way can enterprises transition to the information system era in combination with information construction. It is against this background that the integration of industry and finance can not only enable enterprises to improve their value management ability and gain more competitive advantages but also engage in financial management and business management is no longer relatively independent, but also enable financial and business integration to play more goals with the help of information digitization. Therefore, most enterprises hope to achieve business operation and economic development through business color integration. Financial products can support business operations to achieve the ultimate goal of becoming more substantial and considerable for enterprises (Foukerdi & Talavari, 2021). In addition, in implementing industry integration, enterprises will affect the daily work quality and management method of financial activities and the internal process of business activities. With the continuous expansion of the business scale and scope of enterprises, it is easy to have limitations, such as cumbersome organizational structure, business, and financial separation, resulting in low overall management efficiency, which is precisely because of the current situation. It is necessary to ensure the efficiency of financial management and improve the quality of enterprise accounting information. Therefore, realizing the integration of industry and finance in enterprise practice has excellent complexity and comprehensiveness, which is worthy of further in-depth discussion.

On the other hand, to better solve the development problems of enterprises, it is necessary to carry out digital construction, especially to link the work of all departments and make the information and data of all departments more closely to better respond to the market crisis. Currently, the digital equipment of the business and finance departments built by enterprises is limited. It is expected that the digitalization of the combination of industry and finance can better grasp the information in the market. In contrast, business analysis and financial analysis are essential tools for the development of the company (Tang & Musa, 2011). However, at present, the digital construction of the integration of industry and finance of state-owned enterprises in China is still at the initial stage, and much work is still incomplete, especially in the external defense, which needs further improvement. The financial department is the core department of the company, playing a pivotal role in the company's business transformation process, and is also the "ballast stone" of the company's business transformation. In the cost optimization process, the financial department, as an essential information resource, provides guidance and support and is also a critical coordination department. Because of the different management objectives and assessment indicators of each department, traditional enterprises will always lead to "harmony" between the financial department and the financial department from different perspectives. Therefore, a critical link in the business transformation of enterprises is the integration of industry and finance. The integration of industry and finance can make the financial and business links of enterprises closer and can effectively guarantee the effect of strategy implementation (Lin & Liu, 2007). Secondly, through the integration of industry and finance, the enterprise finance can actively align with the enterprise, find out the problems in

operation in time, and take corresponding countermeasures to promote the improvement of the enterprise operation; However, due to various factors, enterprises have encountered many difficulties in the process of industrial and financial integration. Therefore, to promote the development of enterprises, it is necessary to actively explore the strengthening of industrial and economic integration in the new era.

Therefore, this study, based on the theoretical logic of state-owned enterprise classification reform, describes the status, characteristics, and development trend of state-owned enterprise digitalization (Prakash et al., 2018) by understanding and referring to the Report on the Characteristics, Paths and Policy Choices of Digital Transformation of State-owned Enterprises (starting now referred to as the "Report") and using the data of listed companies. The primary research process is analyzing the annual report of A-share state-owned enterprises of listed companies from 2015 to 2020. In the process of research and analysis, this paper reviews the literature and theories related to the integration of industry and finance, first introduces the basic idea of management accounting, process reengineering, management information system, the relationship between financial sharing and industry and finance integration, the path of industry and finance integration and the factors that may affect economic performance, And make a theoretical framework diagram. Secondly, taking the State Grid of China as the research object, combining the current situation of state-owned enterprises' digital transformation and integration of industry and finance, and aiming at the existing problems, this paper puts forward corresponding improvement measures, aiming at providing a set of practical industrial and financial integration solutions for the difficulties encountered by state-owned enterprises in the process of industrial and economic integration, and providing a reference for state-owned enterprises in the process of implementing digital transformation, We also hope to learn from the same industry.

1.2 Problem of the Study

As China's economic development has entered the "new normal", the overall economic growth has slowed. The continuous impact of information technology and big data technology has led to fierce competition in the entire business environment. In this context, further optimization of enterprise structure and improving enterprise operating efficiency become required. Finance is an essential part of enterprise operations.In the face of the current complex economic environment, the management hopes to timely grasp the information about the company's operating conditions, which requires the support of efficient financial data and business data (Alkire & Santos, 2014) .It is precisely based on the actual development of enterprises and the traditional financial management model that innovation can accurately and timely support the decision of managers, so as to meet the requirements of financial work, improve the internal control level of enterprises, enable the integration of business and financial work, and establish a financial information system, and further optimize the financial management process of the regime, It will improve the refined management ability and quality of the enterprise, and create more value for the enterprise. On this basis, it is

necessary to strengthen the integrity of financial data and give full play to the professional ability of financial personnel. In the process of improving the essential work, it is necessary to give full play to the understanding and operation of financial personnel for business knowledge so as to give full play to the critical functions of finance, improve the synergy between finance and business, and provide better process reengineering for relevant business departments (Bachmann & Hens, 2015). To obtain better economic benefits. This paper will take the State Grid Corporation of China as the research object, review the financial management mode adopted by the State Grid Corporation of China in recent years, and the new digital financial management mode characterized by "open collaboration and intelligent sharing". Therefore, this study mainly focuses on how to explain the reasons for the integration of industry and finance according to the management situation of the State Grid, and lead to the specific application of the integration of industry and finance of the State Grid.

1.3 Research Questions

At present, state-owned enterprises are relatively conservative in financial management, which makes it difficult to bear when the enterprises suffer from more drastic external changes (Hernandez & Roberts, 2018). However, after the innovation of industry-financial integration management mode, it can better reduce the asymmetry between business and financial information, make the risk identification and risk aversion ability of state-owned enterprises have been greatly improved, and improve the anti-risk ability of state-owned enterprises as a whole.Based on the former fact, this study aims to study four issues.

Q1:What is the strategic level have a significant impact on the performance mechanism of state-owned enterprises?

Q2:What is the mechanism that affects the performance of state-owned enterprises at the financial level that is significantly affected?

Q3:What is the technical level have a significant impact on the performance of state-owned enterprises?

Q4:What is the management level have a significant impact on the performance mechanism of state-owned enterprises?

1.4 Objectives of the Study

It is precise because the current financial work of the State Grid Corporation of China closely focuses on the company's objectives and responsibilities, with the function of "supporting strategy, supporting decision-making, serving business, creating value, and preventing and controlling risks". To better promote the requirements of the State Grid Corporation of China on the company's strategic operation development and economic transformation with the new mode of digital financial management, in this way, we can, under the new economic conditions, Establish a new financial management system to enable the company to achieve better development in the new economic era (Hayat & Anwar, 2016). It is also a new business model and builds digital financial management characterized by "open

collaboration and intelligent sharing". This study compares the requirements of the Ministry of Finance to promote the deepening application of management accounting and the State-owned Assets Supervision and Administration Commission of the State Council to build a world-class financial control system. Based on carefully summarizing the financial management innovation achievements of previous financial leaders and employees over the years, we should thoroughly learn from the advanced theory and practice of financial management at home and abroad in China and further expand its connotation from both theoretical and practical aspects, hoping to provide reference and inspiration to other enterprises, and also hope to touch the accountants to break through their inherent thinking and pursue management innovation in the face of the new economic environment, help enterprises achieve high-quality development.

Specifically, the research objectives are:

1. To clarify the mechanism that affects the performance of state-owned enterprises at the strategic level has a significant impact.

2. To confirm that from the financial perspective, the impact mechanism on the performance of state-owned enterprises has been significantly affected.

3. To analyze the technical level has a significant impact on the performance of state-owned enterprises.

4. To prove that the management-level analysis of the mechanism that affects the performance of state-owned enterprises has a significant impact.

1.5 Significant of the Study

Based on the above background, combined with the research results of the academic community, this paper draws a practical conclusion. In today's increasingly fierce market, big data and intelligent technology bring new opportunities and challenges to various industries (Huston, 2010). In this environment, to speed up development, it is necessary to reform the business model to match it. In the development process of modern companies, financial management plays an important role, while the traditional financial management mode can no longer meet the requirements of modern company development. In order to maximize the value of the company and promote the transformation and development of the company's operation, it is necessary to achieve the combination of finance and commerce, which is also a significant development trend of enterprise management today. It is an inevitable requirement and trend of the times to explore the current theoretical framework of industry-finance integration. Therefore, this paper will elaborate on the significance of this research from theoretical and practical aspects.

1.5.1Theoretical significance

Through the research on the digitization transformation of state-owned enterprises, from the perspective of enterprise digitization transformation, this paper systematically combs the digitization transformation of state-owned China enterprises, and combs the actual operation of state-owned enterprises through the examples of

enterprise digitization transformation and constructs the concept of "big finance" by combing the definition of enterprise functions and the boundaries of responsibilities, so as to transform and upgrade the digitization and empowerment management system of enterprises (Kramer, 2016).Promote the deep integration of industry and property and the refined management of management. At the same time, the financial sector should take data as guidance, carry out in-depth design and construction of data centers, and promote business transformation with technological innovation as the core and data as the basis. At the same time, we will focus on the whole process of data collection, transmission, integration and sharing, strengthen the system design and gradually promote the "pain points" of all aspects of financial management, achieve online process, efficient information transformation, and flexible management docking, and promote the establishment of a data-driven, intelligent, efficient, distinctive and easy-to-use digital financial system to help the company achieve better development (Lusardi & Mitchell, 2011). The key elements of mining the path of industry-finance integration and the driving force of performance optimization are analyzed. In addition, the research in this paper can further enrich the relevant theories of state-owned enterprises' digital transformation based on the integration of industry and finance, provide some inspiration for state-owned enterprises' digital transformation and sustainable development, and also provide theoretical guidance for promoting the construction of "digital China".

1.5.2 Practical significance

In the current complex market situation, the company's managers are eager to understand the company's operation. Therefore, adequate financial and business data must be available to support them. In order to make the financial information of the company more accurate and more timely to provide a decision basis for managers, we must select the financial management method that is in line with our actual situation. A sound financial system can not only meet the company's business needs but also improve the company's internal control and promote the company's rapid development (Stolper & Walter, 2017). Promoting the integration of the company's operation and financial work is conducive to improving the delicacy of the company's operation and bringing more benefits to the company.

Therefore, this paper is based on the standard industry and enterprise characteristics of state-owned enterprises. At the same time, through the information construction of enterprises and the reconstruction of enterprise processes, enterprises' operation and financial work can be effectively integrated to maximize the development of the main functions of enterprises. Strengthen the accuracy and timeliness of accounting information, strengthen the cooperation between the company and the company, make the company's business activities more effectively play its guiding role in the company's business activities, and promote the company's rapid development (Gnizy, 2019). According to the future development needs of China's power companies and the actual situation of the industry and enterprises, this paper aims to discuss the countermeasures for the digital transformation of enterprises in view of the current problems. Implementing strategies and promoting the path and

performance of industry-finance integration are of great significance for accelerating the transformation of enterprises and promoting the high-quality development of state-owned enterprises, providing a reference for the specific implementation of relevant enterprises, and providing a reference for other industries.

1.6 Limitation of the Study

In the context of economic development and social change, the rise of e-commerce can well meet the living needs of current social groups, especially when meeting the immediate and immediate consumption needs of some consumers. However, due to the development of information technology, many networks and network platforms have spread throughout people's daily lives. Suppose there is no digital transformation and network development. In that case, enterprises will not only have their own individuality but also have certain limitations in integrating industry and finance (Yapa, 2017). Therefore, especially the State Grid Corporation of China, should adjust its financial management and digital transformation as soon as possible to fit in with social development to achieve long-term development.

Chapter 2
Literatures Review

2.1 Introduction

With the development of the new era of digitalization, the whole industry of society is constantly strengthening the application of digital technology. Digitalization has become an innovative driving force to promote the development of enterprises and society. Due to the change in the market environment, the operation and management mode of enterprises will also undergo corresponding reform, and the combination of industry and finance will be a new development trend (Levytska et al., 2020). It is a long time-span process for enterprises to realize the integration of industry and finance. It needs to constantly reflect on problems and continue to improve and improve during the development process. This part conducts research through CNKI, Google Academic, Researchgate and other resource websites, mainly reviewing and commenting on relevant documents to clarify the research's practical and theoretical basis.

2.2 Literature Reviews

(1) Literature Research on Enterprise Transformation

Foreign scholars Xia et al. (2014) believe that enterprise transformation is based on the transformation of organizational structure and organizational strategy, forming a new business profit model with its development characteristics, and realizing the transformation at a faster speed is more conducive to enterprises to adapt to the new requirements of environmental change. While studying the connotation of "enterprise transformation", Chinese and foreign scholars have carried out research on the realization path mechanism of "enterprise transformation". Gary (2009) believes that enterprise transformation requires enterprises to have the ability to adapt to the external environment and the ability to use their core competitiveness to create brands. Rouse and Baba (2006) believe that enterprise transformation is a state in which enterprises are redeploying their human, financial and material resources to cope with future environmental uncertainty and risks. Teece (2015) believes that enterprise transformation is a reform of enterprise management and operation mode with economic development.

(2) Literature Research on Enterprise Digital Transformation

The development of information technology promotes the development of digital economy. On the basis of enterprise transformation research, Chinese and foreign scholars further study the digital transformation of enterprises to promote the integration of enterprises and digital development. For the digital transformation of enterprises, the common expressions of foreign scholars are "digitization" and "digitization", while Chinese scholars usually associate the digital transformation of enterprises with the concepts of "Internet transformation" and "Internet plus", and their research focuses on the following two directions.

First, study the essence of enterprise digital transformation, and study a series of changes caused by enterprise digital transformation based on mastering its essence. Foreign scholars Gemini (2011) and Berman (2012) believe that the digital transformation of enterprises can make better use of advanced digital technology, produce digital products and transform the operation mode more efficiently; Christopher (2000) believed that the ability of enterprises to integrate specific resources and reconfigure them as their core competitiveness through digital technology within enterprises could promote enterprises to realize digital transformation. Liu et al. (2011) believed that the use of external resources of enterprises plays an important role in their digital transformation.

Promote the organizational reform of enterprises to adapt to the development of digital economy, form a digital business model, and improve the digital competitiveness of enterprises. Cha (2015), by focusing on "small and medium-sized enterprises", believed that the digital transformation of small and medium-sized enterprises should be driven by information technology, focusing on the digitalization of human resources and organizational capabilities, so as to realize the digital transformation of their action ability and team ability management; However, due to the limitations of their own development conditions, most small and medium-sized enterprises cannot establish their own digital platforms.

In the digital transformation process, they need the support of third-party digital operation platforms to promote the digital transformation of enterprise operation mode. However, Kramer (2016) linked digital transformation with the development of emerging industries such as the Internet. Moss (2019) believes that digital technology has no impact on the digital transformation of enterprises. What really plays a role is the enterprise digital strategy. They believed that enterprises should integrate Internet thinking to realize digital transformation, give full play to their own advantages and appropriately change their internal management mode and product sales mode to promote the transformation of traditional strategic thinking of enterprises.

(3) Research on the integration of industry and finance

Although the concept of industry-finance integration was put forward in recent years, the view of industry-finance integration can be traced back to "Management Accounting: An Introduction to Financial Management". The author proposed that financial personnel should not only pay attention to the post-event supervision and accounting of business but also make an advance prediction of the business front end of the enterprise from the perspective of value creation and then conduct a performance evaluation of the business activities that occur. The information full of management colour should be delivered to relevant business personnel in a timely and accurate manner. Nicolini et al. (2013) proposed that enterprises use information technology to improve their business processes, forming the basis for the development of financial and business integration. And proposed the redesign of enterprise process, which is based on the business flow and information flow in the enterprise and is re-planned to reduce costs and improve quality.

Related ideas include Core Process Redesign (CPR) proposed by the perspective of functional transformation of financial management, Wang (2019) discussed the role

of financial management in enterprise operation from the perspective of financial management in the context of new economic globalization. In addition, in the process of taking "industry-finance integration" as the key word, it was found that most of the relevant research focused on enterprise process reengineering.

In contrast, most of the relevant research on industry-finance integration combined it with enterprise process reengineering. Lusardi and Mitchell (2014) proposed that modern companies should combine finance and commerce. When carrying out organizational design, they must abandon the traditional labour division and function-oriented theory, apply BPR theory to production practice, and actively use information technology and network technology to improve the responsiveness of enterprises to the external environment under the conditions of market economy, taking customers as the centre. Martin (2011) concluded through empirical analysis that large enterprises should start with location selection, service level evaluation, process reengineering, change management, organizational construction and strategic planning when building financial service centres.

(4) Research on performance

Performance management is the most critical module in human resource management. After years of development and practice, the theory and tools have been relatively mature and perfect (Alkire & Foster, 2011). As an important means of improving the company's performance and evaluating employees, performance management plays a vital role in the company's operation. However, in some industries, there are also shortcomings and problems.The more obvious are technology-driven companies, such as the Internet, electronic technology and the financial industry. Among the large companies in these industries, although the performance appraisal is complete and improving daily, the effect often fails to meet the expectations of the enterprise. The most prominent thing is that enterprise management has shifted from the previous emphasis on material management to human-oriented management. In this way, how to mobilize the enthusiasm and creativity of employees has become an important topic in current enterprise management.

According to the research of Lusardi et al. (2017), a professor at Harvard University in the United States, in the absence of incentives, people's potential can only be brought into play by 20%-30%. When fully motivated, their ability can be improved by 80%-90%. In an environment of whole motivation, the potential of each employee in the enterprise is enormous. Due to the different understanding of the concept and connotation of performance at home and abroad, there is no unified definition. The research on performance management in foreign countries can be traced back to the 16th century. Hernandez and Roberts (2018) put forward the theory of scientific management to promote the development of performance management during the industrial revolution, taking the development of employees as the common development goal of enterprise managers and employees. Through the incentive mechanism and relevant assessment, employees can exert their abilities to the highest level. So this paper believed that performance management is to guide and support employees according to the organisation's requirements so that employees can

effectively complete their work more efficiently.

2.3 Theory of Reviews

2.3.1 Capital preservation theory

An important premise of enterprise performance evaluation is to maximize the company's capital value,therefore, the most important theoretical basis for the current performance evaluation of state-owned enterprises in China is the asset preservation theory (Alkire & Foster, 2011). Capital preservation has its legal basis as well as its economic source. In terms of law, in order to ensure the normal operation of the economy of the whole society, we must use law to protect the sanctity of property rights, while asset preservation is to protect the interests of the owners from being infringed; From the perspective of economics, the nature and nature of capital is its value-added in its operation. If you want to increase value, you must first maintain it. If you cannot maintain the value of assets, you cannot improve the value of capital (Leitao et al., 2021). Therefore, it is of great practical significance to maintain and increase the value of the company's assets. It is necessary to maintain social pure reproduction and expand reproduction, and it is also a prerequisite for enterprises to continue to operate.

2.3.2 Value management theory

Value Management, also known as Value Based Management (VBM), is a value-based enterprise management method (usually refers to maximizing shareholder value). It is to widely apply management behavior to enterprises. According to the company's vision, the company has established a series of values that are compatible with the vision and the company's culture, and put them into the daily work of employees. The advantage of value management is that it can not only inherit the company's vision, but also establish employee rules, work creeds, etc. Through communication at different levels, the goals of organizations, groups, groups and individuals can form a common belief, so as to improve the quality of life, sense of satisfaction, provide high-quality customer service, maintain the organization's competition and long-term career achievements.

2.3.3 Principal-agent theory

The principal-agent theory is an important theory in the study of modern corporate governance. Its core is to solve the problem of inconsistent interests between owners and managers. Foukerdi and Talavari (2021) pointed out that the separation of ownership and management rights has occurred in modern companies, and the principal-agent conflict has occurred due to the difference between the owner and the operator's objectives, which has resulted in agency costs. The agency theory, represented by Pellegrino et al. (2019), is a traditional classical theory to explain the operator's behavior distortion under the agency conflict. The theory holds that the owner enjoys the achievements of the operator, but does not bear the risk of the operator, which will cause the operator to deviate from the goal of maximizing shareholder wealth.

According to the principal-agent theory, because the operator is not the complete

owner of the enterprise, the operator lacks enthusiasm in managing the enterprise, so it is lower than the enterprise value when the operator is the complete owner. Nanayakkara and Colombage (2019) pointed that the difference between the two is the agency cost, which specifically includes three parts: supervision cost, compliance cost and residual loss. The cost of supervision refers to the cost paid by the owner to supervise the operator, the cost of compliance refers to the cost incurred by the operator to self-restraint in order to win the trust of the owner, and the residual loss refers to the loss suffered by the enterprise that the operator does not fully own the ownership when the operator fully owns the ownership. The best goal to solve the principal-agent problem is to minimize the sum of supervision cost, compliance cost and residual loss.

2.4 Research Relevant

Based on the relevant literature review and theories involved in this study, it is clear that by summarizing the previous research findings of relevant researchers from the analysis of the current research situation at home and abroad in China, foreign scholars put more emphasis on theoretical knowledge, supplemented by empirical research; Borowski (2021) focus on specific enterprises,so almost no new theoretical understanding has been put forward. This paper believes that "industry - finance" is the need for economic development. The development of the Internet era is the need for the company to continue to deepen the reform and adapt to the market, which is a way of operation to adapt to market demand, is the need of the company's development. In order to obtain sustained benefits and create value, enterprises must explore new development methods that adapt to the market and their development. Kass-Hanna et al. (2021) used to test the construct of their FL and DL indices.To realize the integration of "industry and finance", it is necessary to build a new type of enterprise and integration with the guarantee of information technology and shared platform and process reorganization.

Today, the rapid development of the Internet and information technology has had a considerable impact on all industries, as well as on the company's business process and organizational structure. But at the same time, it also brings opportunities and opportunities to companies at all levels and actively promotes the in-depth integration of industry and capital in this environment. In the new market economy environment, implementing "integration of industry and finance" can organically link enterprise operation and financial management, thus improving enterprise operation and management, freeing enterprises from tedious work, and achieving economic benefits. In addition, Lyons and Fontes (2021) used data collected from the organic unity of "industry" and "finance" plays an important role in reducing the operating costs of enterprises, deepening enterprise management and improving economic benefits. The combination of industry and finance is conducive to strengthening the company's finance and risk. The business and capital integration of enterprises is one of the essential links in the business activities of enterprises. Therefore, this paper aims to achieve high-quality digital transformation through the implementation of digital transformation from the perspective of state-owned enterprises' digital transformation and the integration of industry and finance on the basis of crucial path guarantee and

performance optimization to achieve the goal of state-owned enterprises' transformation.

2.5 Conceptual Framework

The research idea of this paper is to start from the theoretical basis and literature review, to trace and study the historical experience, and then analyze the theoretical problems (Alkire & Foster, 2011). And then carry out the analysis and research on the current situation of the integration of industry and finance, the status of digital transformation and the status of performance evaluation management of the State Grid Corporation of China, taking the State Grid Corporation of China as a case, and summarize the experience based on the performance changes and mechanism analysis of the local State Grid before and after the integration of industry and finance, find out the limitations and difficulties, and finally put forward the path optimization suggestions for the digital transformation and upgrading of state-owned enterprises from the perspective of more integration of industry and finance based on the actual market environment and personal understanding.

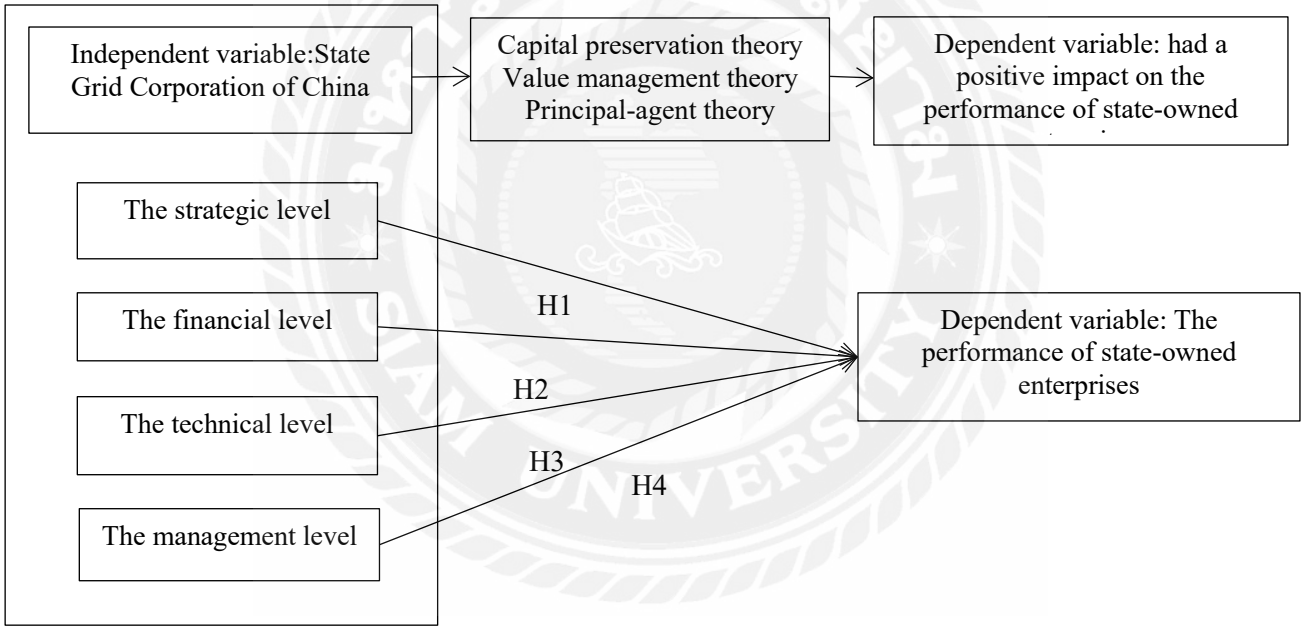

FIGURE 2-1 Conceptual Framework

2.6 Terms and Definition Used in This Study

There are many definitions to be clarified in this study.

Concept of state-owned enterprises: state-owned enterprises play a critical role in many fields in China, especially in the core industries related to China's economic development, such as communications, energy and military industry, which are monopolized by state-owned enterprises (Guo & Liu, 2020). Therefore, the operating efficiency of state-owned enterprises has a great impact on the direction of the

national economy. State-owned enterprises need continuous reform to adapt to the current economic development trend. Only in this way can they play an important role in economic development and maintain their unique status. The object of this study is the State Grid Corporation of China. As the first main body of China's socialist market economy, state-owned enterprises should seize the development opportunities brought by the digital economy, strengthen the integration between the real economy and the digital economy so as to do a good job in transformation and upgrading, and better deepen their own reform and development, so as to carry out analysis and research.

The concept of digital transformation: With the rapid development of computer technology and the rapid improvement of application level, the connotation of "digitalization" is increasingly rich. At present, in the context of the digital economy, it is of great significance for China's state-owned enterprises to strengthen transformation and upgrading, some state-owned enterprises do not have a thorough understanding of digital transformation, and the connotation and connotations of digital transformation are not thorough enough (Christopher, 2000). In the process of digital transformation, China's state-owned enterprises tend to focus on immediate short-term benefits while ignoring the overall consideration, resulting in the results of transformation and upgrading (Zeng et al., 2020).That is, the transformation of culture, strategy, organization, talent, finance and other aspects is not in place, resulting in the problem is not completely solved, the transformation and upgrading effect being poor, and it is difficult to achieve the real purpose of digital transformation.

The concept of industry-finance integration: There are many statements that are similar to the meaning of "industry-finance integration". Business and financial collaboration and business and financial integration are similar to the concept of industry-finance integration. "Industry", in a broad sense, refers to the operation of the company, that is, to carry out business activities in all departments of the enterprise; "Finance" refers to the content of financial accounting and related management work; "Integration" is the organic combination of enterprise finance and business activities, which breaks through the functional boundary of the two and embeds them into each other to achieve the common purpose.It can effectively improve the business performance of enterprises, accelerate the integration and interconnection of business information between enterprises, and realize the overall benefits of enterprises (Hanaysha & Alzoubi, 2022). Industry-financial integration refers to the use of information technology, under the guidance of strategic enterprise policies, to share financial information of enterprises and enterprises in a timely manner, to achieve the coordination of enterprises' finance and business so as to achieve the purpose of refined management, thus improving the operational efficiency of enterprises, allowing financial affairs to participate in enterprise planning, decision-making, control and evaluation and other business management activities, and achieve the maximization of enterprise value.

Corporate finance: corporate finance is an important basis for corporate strategic finance and corporate sharing. Corporate finance participates in all aspects of business activities before, during and after the operation, providing guidance and supervision for the development of enterprises (Jakubik & Uguz, 2020). Common Finance is

mainly responsible for daily business processing, preparation of financial statements, tax declaration and external audit. The implementation level of industrial and financial integration includes three levels: enterprise, department and individual. Among these factors, the enterprise level is the most influential. It plays a key role in realizing the integration of industry and finance. In the process of promoting the integration of industry and finance, the system and power barriers faced by the company level are relatively low, which can reduce the cost of communication so that the integration of industry and finance can be carried out smoothly, and the importance of the management level on the integration of industry and finance and the strength of leadership also determine the integration of industry and finance at the department level and individual level to a large extent.

Chapter 3 Research Methodology

3.1 Introduction

This article uses quantitative research methods to conduct quantitative predictions by collecting economic indicators, selecting appropriate models based on statistical data, analyzing changes, and making predictions. The predictions are divided into causal predictions and extended predictions, making the results more rigorous and accurate, and more persuasive and targeted towards quantifiable indicators.The research methodology used in this study mainly obtains relevant status information by sorting out quantitative research combined with financial data in order to further discuss,the financial data are all from the company's official financial report, which belongs to first-hand data.The research idea of this paper is to start from the theoretical basis and literature review, to trace and study the historical experience, and then analyze the theoretical problems, and then carry out the analysis and research on the current situation of the integration of industry and finance, the transformation of digital intelligence and the current situation of performance evaluation management of the State Grid Corporation of China, taking the State Grid Corporation of China as a case, and summarize the experience based on the performance changes and mechanism analysis of the local national grid before and after the integration of industry and finance, digital intelligence (Jakubik & Uguz, 2020). Find out the limitations and difficulties, and finally put forward the path optimization suggestions for the digital and intelligent transformation and upgrading of state-owned enterprises from the perspective of more integration of industry and finance based on the actual market environment and personal understanding.

3.2 Research Design

There are many statements that are similar to the meaning of "industry finance integration". Business finance collaboration and business finance integration are similar to the concept of industry finance integration. "Industry", in a broad sense, refers to the operation of the company, that is, to carry out business activities in all departments of the enterprise; "Finance" refers to the content of financial accounting and related management work; "Integration" is the organic combination of enterprises and financial activities, which breaks through the functional boundary of the two and embeds them into each other to achieve the common purpose (Lin & Liu, 2007). The integration of industry and finance means sharing the financial information of enterprises and enterprises in a timely manner under the guidance of enterprise strategic policies through the use of information technology so as to achieve the coordination of enterprises' finance and business so as to achieve the purpose of refined management, thus improving the operational efficiency of enterprises, allowing finance to participate in enterprise planning, decision-making, control and evaluation and other business management activities, and realize the maximization of enterprise value. The key to enterprise financial integration is the integration of business processes, financial accounting processes and business processes.

Because "industry finance" is based on business, it is necessary to combine the financial data and business data of the enterprise by using information technology such as databases in the design process (Leitao et al., 2021). The information of enterprise management level is scientific evaluation. The integration of enterprises and enterprises requires the process reorganization of enterprise finance to realize financial strategy, business finance and shared finance. Strategic finance, also known as professional finance, is the group's strategic planning, budget system construction, investment equity management, tax planning, risk control, and capital operation.The Finance Department is responsible for budget preparation, operation support, financial analysis and performance management. Corporate finance is an important basis for corporate strategic finance and corporate sharing. Corporate finance participates in all aspects of business activities before, during and after the operation, providing guidance and supervision for the development of enterprises (Zhang, 2020). Common Finance is mainly responsible for daily business processing, preparation of financial statements, tax declaration and external audit. The implementation level of industrial and financial integration includes three levels: enterprise, department and individual. Among these factors, the enterprise level is the most influential. It plays a key role in realizing the integration of industry and finance. In the process of promoting the integration of industry and finance, the system and power barriers faced by the company level are relatively low, which can reduce the cost of communication so that the integration of industry and finance can be carried out smoothly, and the importance of the management level on the integration of industry and finance and the strength of leadership also determine the integration of industry and finance at the department level and individual level to a large extent.

The main innovation of this paper mainly includes three aspects. The innovation of this paper is to integrate the thoughts and thoughts of domestic and foreign scholars. Based on the relevant theories of new institutional economics, value management theory, sustainable development theory, principal-agent theory, and management control theory as the theoretical basis of this study, taking state-owned enterprises as an example, through a more in-depth analysis of the current situation of state-owned enterprises in promoting digital and intellectual transformation and the current situation of industrial and financial integration. Establishing the concept of capital preservation can not only maintain the scale and production capacity of the company, but also reorganize and update the physical assets, thus improving the efficiency of capital operation and promoting the capital accumulation of the company (Bachmann & Hens, 2015). The company holds the asset capital. Maintaining the company's net assets means maintaining its owner's capital and its value-added ability. The maintenance and appreciation of enterprise assets is essentially the protection of shareholders' rights and interests, which is beneficial to the company's legal person property rights, the exercise of ownership, and the realization of the business responsibility of enterprise operators. In modern enterprises, after the separation of property rights and management rights, the relationship between owners and operators is a relationship of entrustment and agency (Liaw, 2020). This kind of principal-agent is a company in form and capital in essence. Therefore, maintaining and increasing the value of the company's assets is not

only the owner's interest, but also the operator's responsibility, and is also the theoretical basis for its performance evaluation. The business performance evaluation of an enterprise is to evaluate the preservation and appreciation of the company's assets, and take it as an important basis to measure the company's shareholders' equity.

At the same time, in the research of industrial and financial integration methods, The business and financial processes of the company are sorted out through the three levels of group level, subsidiary level, branch level and three-level company level. The subdivision level promotes the digital and intelligent transformation by focusing on the market demand, focusing on the main responsibility, and the integration of public welfare enterprises, fully supporting and serving the digital and intelligent transformation of all walks of life in society, from specialization to standardization, from process to systematization, from formalization to intelligence, improve the working efficiency of operators, broaden the internal and external communication channels of enterprises, improve the management efficiency and comprehensive level of managers, truly realize the full-process management of operation, and realize the long-term, stable and healthy development of enterprises (Zhu, 2020).And expand the relevant literature on the research and analysis of the current situation of state-owned enterprises promoting the digital and intelligent transformation and the current situation of industrial and financial integration, through this study, we can provide some reference value for enterprises in the same industry.

3.3 Hypothesis

H1: The strategic level has a significant impact on the mechanism of state-owned enterprise performance.

In the era of digital economy, state-owned enterprises must grasp the development direction of reform if they want to achieve stable transformation and upgrading. First, we should promote product innovation of digital technology. The State-owned Assets Supervision and Administration Commission of the State Council has put forward a clear requirement to promote the digital transformation of state-owned enterprises, that is, to achieve all-round and all-round coordination in the process of transformation and upgrading. To this end, China's state-owned enterprises must actively respond, introduce advanced digital technology, constantly improve the quality of products and services, and constantly develop new intelligent products according to market needs, so as to improve the market competitiveness of products (Gnizy, 2019). Secondly, in the process of digital transformation, we should strengthen cooperation with private enterprises, learn advanced experience, improve the value management ability of enterprises, quickly grasp the key points of digital transformation, formulate more feasible development strategies, improve our business capabilities, and provide better quality services for the people.

H2: The financial dimension has a significant impact on the mechanism of state-owned enterprise performance.

First of all, we should strengthen the construction of digital marketing network in China, grasp the needs of customers in time, and formulate corresponding marketing service strategies according to the needs of customers and customers. Secondly, in

order to facilitate the development of customer service, state-owned enterprises should strengthen the integration of service channels, establish a more flexible customer service system, realize the whole process from customer ordering to customer service, and achieve accurate and automated services to improve customer satisfaction (Liaw, 2020). At the same time, through remote technology, network technology and other means, the existing products and services are monitored in real time, and the existing products and services are accurately predicted, and corresponding countermeasures are formulated to improve the products and services to achieve better results.

H3: The technical level has a significant impact on the mechanism of state-owned enterprise performance.

At present, our government attaches great importance to the development of ecological economy, and the state-owned economy, represented by the state-owned economy, must vigorously promote the industrial ecology of state-owned enterprises and realize digital transformation in the context of digital economy. To fully implement the scientific concept of development, we must establish and improve the enterprise performance appraisal system as soon as possible. We should organically integrate the speed, structure and efficiency of development, maintain the sustained, stable and rapid development of the economy, and optimize the structure, improve efficiency, reduce consumption, save development, develop safely, and develop comprehensively and harmoniously. The State Power Corporation is the mainstay of the current state-owned economy and shoulders the important task of developing a strong national economy. Therefore, we should further play the guiding role of performance evaluation, promote state-owned enterprises to implement the scientific concept of development, comprehensively improve enterprise operation and resource allocation, actively promote strategic adjustment of industrial structure, strive to build resource-saving, environment-friendly and intrinsically safe enterprises, accelerate the transformation of economic growth mode, achieve better and faster development, and ultimately achieve sustainable development, Apply the theory of sustainable development into the integration of industry and finance and performance management, improve the ability of independent innovation and enhance core competitiveness.

H4: The management level has a significant impact on the mechanism of state-owned enterprise performance.

At present, the management level still needs to improve the human resource structure. After all, personnel are the basis of enterprise development and innovation, and also the managers of state-owned enterprises in the process of operation and management. In the process of improving the integration of industry and finance of state-owned enterprises, the number of personnel is constantly decreasing. By 2020, the total number of full-caliber employees of the State Grid is 1.52 million.

3.4 Population and Sampling

Enterprise performance is an important index to measure the results of an enterprise's business activities, and is an important basis to measure the value creation ability of an enterprise. This paper is based on state Grid Corporation Limited, With the

capital preservation theory, value management theory and principal-agency theory as the main theories, To understand the situation of digital intelligence transformation implemented by State Grid Corporation in recent years, A total of 306 questionnaires were collected in this survey, with an effective rate of 97%, From the strategic level, financial level, technical level, management level, whether the analysis has had a positive impact on the performance of state-owned enterprises,the data in this paper is based on the analysis of the current situation of state-owned enterprises' digital and intellectual transformation and the current situation of industrial finance. Research and put forward the promotion plan, key path measures, performance optimization and high-quality development digital suggestions for the path and performance of "open collaboration, smart sharing" digital, chemical, industrial and financial integration of the local national grid.

3.5 Sample indicators Analysis

Due to the formation of several competitors on the power generation side, all power companies have become independent economic entities. Compared to traditional power generation companies, State Grid of China places more emphasis on long-term interests and seeks cooperation with power companies. For example, at a meeting in November 2019, State Grid Corporation of China announced the signing of a strategic cooperation agreement with China National Petroleum Corporation Limited (Jin et al., 2020).

From Table 3-2, the specific indicators to be identified before the collection of the study,according to the agreement, State Grid of China will cooperate in areas such as energy internet and digital construction. According to the agreement, both parties will establish a long-term and stable strategic partnership. Both sides will work together to build an energy internet. Building an energy internet that covers the whole country is the direction of China's future energy development and one of the key ways to solve world energy problems (Zhou & Hu, 2020). In this situation, State Grid Corporation of China will strengthen the construction and development of the energy internet. Pursuing the maximization of its interests . Therefore, power companies attach greater importance to cooperation with State Grid and its economic benefits.

In order to ensure the accuracy of the empirical analysis, the relevant data collected by State Grid Corporation of China from 2013-2020 are screened: (1) Excluding the data of ST, * ST and abnormal fluctuations of operating performance; (2) Years with more missing data were excluded; Then the questionnaire is mainly through the sample index, also known as the sample statistics or sampling index, which is a comprehensive index calculated by the different mark value of the sample place to estimate and infer the corresponding overall index (Yang & Kim, 2020). The sample index is known through the sampling survey.

TABLE 3-2 Specific indicators

Power plant	Unit coal consumption
	The new energy power generation capacity
	The purchase (sale) contract execution rate

	The rate of timely reply inquiries
	The Internet power timely settlement rate
	*The utilization rate of power generation equipment
	*Average utilization hours of generating equipment
Construction and investment benefit	The scale of under-construction project
	*The unit power supply load increase investment
	*The increase electricity per power investment
	Asset formation rate
	Investment income ratio
	The number of equipment and materials' defects for new production
Reliability	*Average customer interruption times (million users)
	Rural users average outage time
	City users average outage time
Economy	The average load rate
	*The average user outage loss (reduced income from outage)
State and society	Energy saving distribution transformer ratio
	*Elasticity Ratio of Electricity Consumption
	*The pulling effect of grid on related industries

3.6 Data Collection

Through a more in-depth analysis of the current situation of state-owned enterprises in promoting the transformation of digital intelligence and the integration of industry and finance (Xia et al., 2014). At the same time, using the company's official website to collect relevant data and news materials,the financial data are all from the company's official financial report. For details, please refer to the appendix data, which belongs to the primary data, sort out and calculate various financial indicators, and in the research of the integration of industry and finance, sort out the process of the company's business and financial links through the group level, the subsidiary level and the branch level (Liu et al., 2019). And the three-level company level, give academic in-depth theoretical suggestions.This study also designed a questionnaire to conduct enterprise performance research, resulting in more reliable and effective data. A quantitative study of financing efficiency of low-carbon companies: A three-stage data envelopment analysis. This study applies volunteer sampling strategy for survey. The questionnaire is a measurement tool for this study.Excel software and SPSS23.0 statistical software are used for data analysis and processing in this study.A total of 306 questionnaires were collected in this survey, with an effective rate of 97%.

3.7 Data Analysis

This paper based on the data analysis, it summarizes and summarizes, extracts opinions, summarizes and analyzes the research results, and draws conclusions (Wu, 2010).

Correlation analysis

Correlation analysis is a method to analyze two or more variables with correlation, which is used to test whether there is a correlation and the degree of correlation between

variables (Liaw, 2020). This study uses correlation analysis to further explain the causal relationship between variables and analyze the relationship between variables. The range of r value is between [- 1, 1]. The closer the correlation coefficient r value is to 1, the higher the correlation between the variables. The r value is 0.7 and above, indicating a high correlation. The r value is between 0.3-0.7, indicating a moderate correlation, and the lower the correlation is. If the value of the correlation coefficient is 0, it indicates that there is no correlation, while the positive and negative values indicate the direction of the relationship between the variables. When the correlation coefficient is too low but still significant, it indicates that even if the relationship is weak, there is still a correlation.

Chapter 4
Result of the Study

4.1 Introduction

As the data used in this institute, the annual reports of the official website are all first-hand data, and all the samples mainly select the financial report of 2013-2020 (due to the large amount of data, this report is not listed in this paper) as the research object, and the reliability of the data is guaranteed, and indicating that the study data meets the requirements. This article systematically analyzes the situation of the Information Department of State Grid of China, as well as the status of the company's network, platform, business application, information security and information operation and maintenance. In addition, this article analyzes in detail the development strategy of digital China, power market reform and "Internet plus" smart energy, as well as the development of comprehensive energy business (Bachmann & Hens, 2015).The focus of this chapter is on a detailed analysis of the data collected that meet the research criteria and on the analysis and discussion of the research questions and hypotheses presented in Chapter 2. This chapter will use the relevant software to derive the relationship between variables and variables, and then test the hypotheses presented in Chapter 2.

4.2 Description of statistical variables

The first topic in this chapter is a discussion of distributions, essentially pictures of populations (or samples). Second will be the discussion of descriptive statistics. The topics are arranged in this order because the descriptive statistics can be thought of as ways to describe the picture of a population, the distribution.Demographic, including gender, years of employment, and income using basic statistics is the frequency distribution. The number and percentage are shown as follows:

Table 4-1 Presents the number and percentage of personal characteristics factor data

Item detail	volume	percentage
Male	167	54.58%
Female	139	45.42%
Below 1 years	13	4.25%
1-3 years	76	24.84%
3-5years	135	44.12%
Above 5 years	82	26.80%
Below 5,000	89	29.08%
5,001-10,000	106	34.64%
10,001-15,000	101	33.01%
Over 15,000	10	3.27%
Total	306	100

There were 306 respondents in this study, classified according to the following variables:Gender: Most respondents were 139 females, representing 45.42 percent, and 167 males, representing 54.58 percent.Years of employment: Most of the respondents were employed below 1 years, 13 people, representing 4.25 percent, followed by employed between 1-3 years, 76 people,representing 28.84 percent ; 3-5 years 135 people with 44.12 percent, and final group is above 5 years, 82 people representing 26.80 percent.Income per year:Most respondents were below 5,000 Yuan,89 people,representing 29.08 percent.The second order is 5,001-10,000,106 people,representing 34.64 percent.The third range is 10,001-15,000,101 people,representing 33.01 percent and last group is over 15,000,10 people representing 3.27 percent.

At the financial level, five specific objectives have been determined: cost, profitability, solvency, operational capability and development capability (Kocaman & Tümen, 2020). At the national and social levels, the goals are environmental protection, resource protection, and social contribution. At the user level, as the State Grid of China is a power energy service provider, the specific goals are reliability, economy, and quality (Khodayar et al., 2020). At the level of power plants, power generation enterprises closely monitor the economic benefits generated by cooperation and cooperation with the State Grid, therefore the specific goals are environmental protection and power plant economy.

Comprehensively covering the "three sets and five major" management system related businesses, including smart grid power generation, transmission, transformation, distribution, power consumption, and scheduling (Mura & Hajduová, 2021).In addition, intelligent analysis and decision-making applications are built for the company's production and operation, operation management, and marketing services, achieving comprehensive coverage of the company's main internal application systems (Allen et al., 2016).The schematic diagram of its business application architecture is shown in Figure 4. It provides information support for the company's production and operation, comprehensive management and other business.

Table 4-2 Corporate Informatization Department Organization

Department	Responsibility
Corporate Informatization Leading Group	Leadership and decision-making body
Corporate Internet Department	Informatization work management department
Other departments of the corporate headquarters	Responsible for department business needs, project
Corporate City Company, Directly Affiliated Units	Responsible for own business needs, project

The company has established a complete organizational system for informatization decision-making, management, implementation (Alessandri & Pattit, 2014). And operation and maintenance, and a large number of employees related to

informatization have provided adequate organizational and human resource support for the construction and development of informatization.

In 2020, the Standing Committee of the CPC Central Committee proposed to accelerate the construction of new infrastructure such as 5G networks and data centers. In addition, the digital transformation of the energy industry also meets the requirements of national strategic development (Hayat & Anwar, 2016). It can be seen that China attaches great importance to data management and its role in production and operation, actively exploring the optimal allocation and regeneration of resources through the digital economy.

In order to better carry out digital development, the company has built a digital platform architecture consisting of data platforms, system components, and basic resources, providing the company with basic data storage, computing resources, and application environments (Frijns et al., 2014). Through relevant information, it can be understood that the current data platform is composed of a unified data center with basic resources and comprehensive services.

Developing the digital economy and promoting the digital transformation of enterprises has become a new direction of development in China and even the world (Huston, 2010). As an electric power enterprise within the State Grid, the State Grid is mainly responsible for the power supply business in the northern region of Hebei Province, ensuring the safety of power supply in Beijing, and conducting comprehensive energy service marketization business. Therefore, the digital transformation of the research object is of great significance to the development of the company and the exploration of digital transformation in the power industry.

The financial indicators of operating capacity reflect whether the enterprise can effectively manage its assets. This section selects the main business income of State Grid Corporation Limited for analysis, and studies the impact of the management of industry and financial integration on State Grid Corporation Co., Ltd.

TABLE 4-3 Main business income of State Grid Corporation Limited

A particular year	Income from main business
In 2017,	twenty billion, two hundred and nine million
In 2018,	nineteen billion, five hundred and ninety-eight million
In 2019,	eighteen billion, four hundred and sixty-four million
In 2020,	nineteen billion, two hundred and ninety-nine million
In 2021,	twenty-five billion, one hundred and ninety-nine million

Data source: Annual report of State Grid Corporation Limited

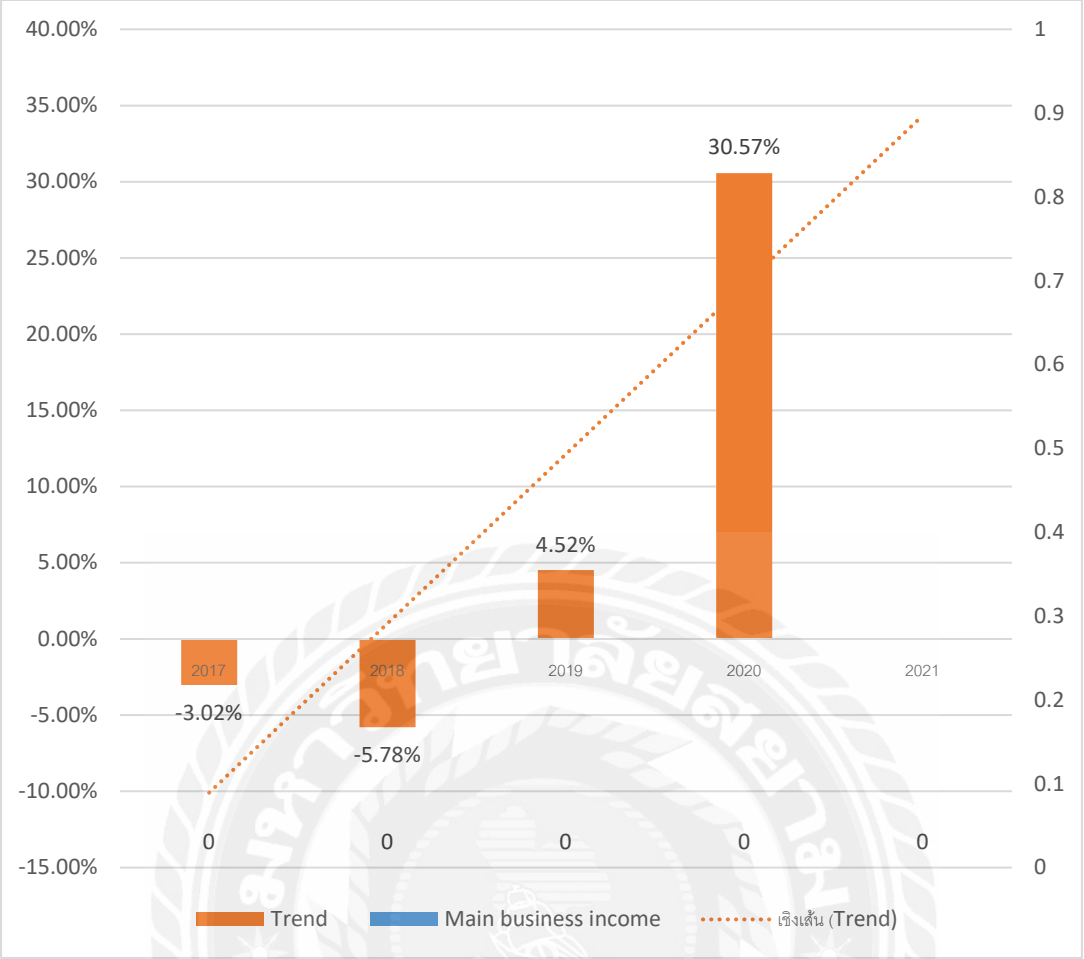

FIGURE 4-2 Revenue trend of State Grid Corporation Limited

By comparing the main business income from 2017 to 2021 in Figure 4-2 and Table 4-3, the operating income of State Grid Corporation of China in 2017 to 2021 increased steadily, from 20.209 billion yuan in 2017 to 25.19 billion yuan in 2021, and the operating income in 2021 increased by 30.57% compared with 2020. On the whole, the above data have improved the management efficiency of enterprise working capital under the management background of industry-finance integration (Kumar, 2022).

By applying the data analysis technology to the company's finance,strengthen digital transformation and improve implementation capabilities (Kolenikov & Angeles, 2009). Improve the automation level of financial management, human resource management, and material management business processes, and improve internal operational digital capabilities.This study analyzes the impact of strategy, finance, technology and management on the performance of state-owned enterprises, and the results are shown in Table 4-3.

TABLE 4-4 Relevant analysis of the impact of strategy, finance, technology and management on the performance of state-owned enterprises

		The strategic level affects the performance of state-owned enterprises	The financial level affects the performance of state-owned enterprises	Technology affects the performance of state-owned enterprises	The management level affects the performance of state-owned enterprises
The strategic level affects the performance of state-owned enterprises	Pearson's correlation	1	.069	.003	.592
	Sig.（2-tail）	.619	.168	.954	.000
	N	110	110	110	110
The financial level affects the performance of state-owned enterprises	Pearson's correlation	.403	1	.048	-.006
	Sig.（2-tail）	.168		.341	.906
	N	110	110	110	110
Technology affects the performance of state-owned enterprises	Pearson's correlation	.517	.048	1	-.086
	Sig.（2-tail）	.954	.341		.084
	N	110	110	110	110
The management level affects the performance of state-owned enterprises	Pearson's correlation	.592	.016	.086	1
	Sig.（2-tail）	.000	.906	.084	
	N	110	110	110	110

According to the correlation analysis results of the impact of strategy, finance, technology and management on the performance of state-owned enterprises in Table 4-4, it can be seen that the impact of strategy on the performance of state-owned enterprises is significantly positive correlation, and the correlation coefficient is r=0 619, significance probability p<0 001).On the other hand, the correlation coefficient of the results of the financial level affecting the performance of state-owned enterprises is r=0.403, and the probability of significance is p<0 001, showing significant positive correlation. However, the correlation coefficient of the impact of technology on the performance of state-owned enterprises is r=0.517, and the

probability of significance is p<0 001, showing significant positive correlation. However, the correlation coefficient between the management level and the performance of state-owned enterprises is r=0.592, and the probability of significance is p<0 001, showing significant positive correlation.

4.3 Results of the Study

The financial situation of State Grid Corporation of China is oriented towards value services, improving the information based operation and maintenance organization system, and optimizing the operation and maintenance process. In addition, the company has improved the standards of its information based operation and maintenance system, strengthened responsibility supervision, and deepened risk prevention and hidden danger management (Borowski, 2021).

The company has comprehensively improved its core capabilities such as scientific information control, in general to lean operation testing, and agile services, and strengthened the entire process control of its operational model, as well as the online and offline management of information equipment systems (Alfers, 2020).By deepening the application of intelligent scheduling and detection services, upgrading business monitoring tools, promoting automated operation and maintenance tools, and establishing an operation and maintenance full process audit platform, the company has achieved "intensive management, lean operation, intelligent disposal, and agile services.".

Therefore, at this stage, the company has established a complete information based operation and maintenance management system and a complete and efficient operation and maintenance tool system.The specific activities are shown in Table 4-5 below:

TABLE 4-5 Study hypothesis validation table

No	Hypothesis	Result
H1	The strategic level has a significant impact on the mechanism of state-owned enterprise performance.	Establish
H2	The financial dimension has a significant impact on the mechanism of state-owned enterprise performance.	Establish
H3	The technical level has a significant impact on the mechanism of state-owned enterprise performance.	Establish
H4	The management level has a significant impact on the mechanism of state-owned enterprise performance.	Establish

While carrying out comprehensive energy service businesses such as comprehensive energy supply and user equipment operation and maintenance,the content of the hypothesis was found to have a significant effect, and therefore H1-H4 were all valid.

4.4 Discussion

Analyze from the impact of labor costs: personnel participate in enterprise business management, reduce labor costs, and free financial work from low-value repetitive work. However, in the whole process of business management, because the labor cost is cumbersome, it is necessary to strengthen the construction of the financial sharing center, so as to improve the business process standards and structure, reduce the cost of labor costs, and make the business process path more standardized and guaranteed. Therefore, this time, through the analysis of the number of financial personnel and management costs before and after the financial sharing center of the State Grid Corporation of China, the impact of the integration of industry and finance on the cost structure of the State Grid Corporation of China is analyzed.

TABLE 4-6 Comparison of financial work efficiency

Stage	Total assets	Business financial personnel	Accounting personnel	Strategic finance	Closing date
Before the integration of industry and finance	About 13 billion yuan	200	100	0	10 Working days
After industry and finance integration	About 150 billion yuan	600	100	50	3 Working days

From the above table, it can see that although the business scale of State Grid Corporation of China has been growing and expanding, its financial workload and business have also been further improved. Therefore, it can be found that after the integration of industry and finance, financial personnel will be further transferred to strategic finance. And other financial management work. It also frees the financial staff from the more complicated work in the past. The efficiency of financial accounting has also been improved. Moreover, since the financial sharing centre gradually matured in 2011, the overall growth rate of management expenses has also been at a low level, indicating that while the business scale of the enterprise has increased, the cost is in a downward trend. It shows that with the continuous deepening of Haier's integration of industry and finance, the labour cost has been effectively controlled while expanding the business scale, and the efficiency of human resources has been improved. The integration of industry and finance not only reduces the management fee, but also analyzes the efficiency of manual income generation in the same period. Only by comparing the return on labour investment with the control level of management fee can we see whether the integration of industry and finance can effectively achieve the effect of cost reduction. If it is only the reduction of management fee level but not the improvement of artificial income generation, then it cannot be said that the integration of industry and finance will bring efficiency to enterprises. In this paper, the management expense rate is calculated by comparing the management expense of the current period to the main business income of the current period, and the return on labour investment is analyzed by the ratio of the current net profit to the total employee compensation.

From the perspective of the impact of management decision-making efficiency, management decision-making is to effectively organize and coordinate the internal management of the enterprise in order to achieve strategic decision-making, including the adjustment of labour organization, the use of funds, and the formulation of production and operation plans. The management mode of an enterprise determines the efficiency of management decisions, which affect the operation of enterprise assets (Jones& Comfort, 2020). The financial indicators of operating capacity reflect whether the enterprise can effectively manage its assets. The relatively low proportion of accounts receivable of an enterprise within one year indicates that the accounts receivable of the enterprise are older, and the possibility of bad debts is higher. If the proportion of accounts receivable is higher within one year, the possibility of bad debts is lower. The turnover rate of accounts receivable is the ratio of the net sales revenue to the average balance of accounts receivable to reflect the speed of the turnover of accounts receivable. The higher the value, the stronger the enterprise's operating capacity.

TABLE 4-7 Accounts receivable indicators

Index/Year	Total accounts receivable / total accounts receivable	Average accounts
2012	96.64%	20.93
2013	97.18%	20.29
2014	76.83%	18.45
2015	96.48%	15.69
2016	97.46%	12.94
2017	94.17%	12.89
2018	97.75%	15.98

Data source: State Grid Corporation, 2019

According to Table 4-7, the comparison of accounts receivable of State Grid Corporation Limited within one year shows that the receivables ratio has always remained stable. It shows that the receivables have maintained a high quality development in the process of improving the industry and financial integration of State Grid Co.,LTD. At the same time, the state grid co.,LTD., although the accounts receivable turnover is declining, but combined with state grid co.,LTD., operation mode, the state grid co.,LTD., accounts receivable recovery ability is stronger, less bad debts, has a strong liquidity ability, the data overall in the industry under the background of financial integration management to improve the efficiency of enterprise working capital management.

Chapter 5
Conclusion and Recommendation

5.1 Conclusion

In combination with the industry-finance integration and related research literature, the following conclusions are drawn from the study of the State Grid Corporation of China (SGCC) as a case. First, it is also said that the integration is people-centred and only attaches importance to the importance of talents. Only by integrating these resources can the structure of financial institutions change, the scope of operation of state-owned power companies become larger and larger, and a shared financial service platform be established. It will not decrease because of the number of employees.The use of digital technology for accounting information transformation can effectively improve the efficiency of accounting work or control the increase of costs, but also solve the use of employees and reduce unnecessary labour costs. Secondly, at the level of a business decision, the combination of business and finance can, in a sense, strengthen the control of accounts receivable, reduce the use of working capital, and improve the management efficiency of working capital. Although at the beginning of the development of the combination of business and finance, its total asset turnover rate is higher than the industry average, in order to better improve its core competitiveness, we should not only pay attention to and develop the continuous improvement of the leafy vegetable integration mode of enterprise innovation but also enable the State Grid Corporation of China to achieve greater benefits, thus improving the innovation of technology and technology. In addition, the combination of "industry and finance" can not significantly improve the company's debt level in a sense, but through digital transformation, an effective risk early warning system can be formed to better reflect the company's debt situation and reduce the losses caused by it.

Then,all four aspects of this research problem have been solved: 1. There are inefficient and lagging evaluation standards in the performance evaluation system of state-owned enterprises. 2. Lack of innovation in the performance evaluation system of state-owned enterprises. 3. There is information asymmetry in the performance evaluation system of state-owned enterprises. 4. The performance evaluation system of state-owned enterprises has a comprehensive evaluation to encourage the sustainable development of enterprises.

Therefore, based on the background of the development of the new economy, this study takes the technology and development of digital transformation and integration of industry and finance of State Grid Corporation of China as the research direction and analyzes it through relevant theories and concepts. After all, the financial work of State Grid Corporation of China needs to provide services and decision-making for all links, and with the help of information technology, big data and cloud computing and other information means, It can enable Yecheng integration to carry out effectively according to the strategic planning, create a new business

competition environment for the State Grid Corporation of China, and support the complexity of the operation strategy and financial management of the State Grid Corporation of China.

5.2 Recommendation

5.2.1 Intelligent sharing system platform for integration of construction industry and finance

Enterprise digitalization refers to the overall digitalization of enterprises, which is a typical project of "top leaders". However, the focus of this paper is how to make the digital transformation of enterprises based on corporate finance. Financial institutions must and should take measures to intervene in depth (Hayat & Anwar, 2016). In the process of digital construction and implementation of enterprises, the financial department should not only repair the existing financial information system, but also not carry out the digital design of enterprises in the way of "scene". This paper believes that while restructuring the "big finance", we should avoid "solo" and work together with the strategy, technology, operation, information and other departments to put forward a personalized digital overall design and implementation plan based on the business model, resource endowment, organizational management, cultural foundation and other characteristics of the enterprise.

When investigating the financial department of the State Grid Corporation of China, it was found that the data center is a powerful support that integrates the enterprise's operational data capabilities and product technology capabilities, ensuring that the front office business can adapt to the changing market more flexibly and quickly (Kumar, 2022). The essence of the data processing system is data collection, calculation, storage and processing, and the synchronization of data specification and release. The middle desk integrates all kinds of information and stores them uniformly to provide faster and more accurate information for different enterprises. Therefore, it is necessary to break through the "isolation" of data, unify data standards, caliber, model and storage, and form high-quality, high standard, high consistency, high precision and timely data, so as to gradually improve the efficiency of data use. The data center includes data models, algorithm services, data products, data management, etc. The establishment of a data center should have a priority: first, a data warehouse based on the management cockpit, second, a comprehensive data governance for all business entities, third, a big data platform with unstructured data and massive data acceleration, and fourth, a data center that converts data into personalized services.

5.2.2 Strengthen the financial center management application platform

Among them, application systems such as the State Grid Tourism Cloud, multi-dimensional lean management, full-process control of asset operation, intelligent completion settlement, and intelligent tax management directly face the "pain points" of enterprises and improve their management efficiency, but it is difficult to accurately predict or display their benefits (Moss, 2019). Although relevant industries and programs cannot be included in the core of cost, it can be determined that the operating efficiency of the enterprise has been significantly improved. Therefore, in order to

promote the development of the company's digital economy, the financial department needs to empower its entire process to improve the efficiency of the overall operation. At the same time, through the introduction of "1233" financing management system and "e-Financial Services" and other financial service systems, we can intuitively measure the company's operating conditions and create the most intuitive benefits for it.

5.3.3 Create excellent and efficient digital transformation financial department or financial personnel

In the process of promoting the development of digital economy in China's power industry, the finance department and finance department of the state-owned power group should be reformed from the following aspects. First of all, when the financial department raises professional questions, the financial application scenarios (each department of the financial department is constantly improving the current ten application scenarios, and the financial departments of each department have also developed their own application scenarios according to their own characteristics), and according to the intelligent financial management platform, internal audit, standard operating cost, expense control, financial management ability A relatively complete and systematic investigation has been carried out in terms of management communication ability and behavior ability (Jakubik& Uguz, 2020). Secondly, the "way of speaking" has been improved, and "budget management", "cost control", "fund management" and other aspects have been "adjusted and supplemented" in the textbooks. For example, "State Grid Tourism Cloud", "multi-dimensional lean management", "e-financial service", "1233" financial management system, etc., not only have powerful business scenarios, clear functions, catchy and easy to remember. The Finance Department should learn "innovative expression" and strengthen the "affinity" for the work of the Finance Department, especially for innovative business projects.

5.3 Further Study

This study hopes to improve the development prospects of State Grid Corporation of China and break through the bottleneck of development through analysis. However, due to my limited academic level, the content and scope included in the questionnaire design process are relatively small, which makes the research have certain defects. Therefore, in future research work, we can further analyze the macro and micro marketing environment and the industry competition environment of the State Grid Corporation of China, and evaluate it in combination with other theories so as to provide a complete marketing strategy. In general, it is hoped that this study can improve the market influence and sales purpose of State Grid Corporation of China Limited and bring experience marketing to consumers so as to promote the better development of State Grid Corporation of China Limited. In the future, we need to pay attention to this research.

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Appendix

Appendix A: Enterprise Performance Evaluation Questionnaire

Answer sheet description: 1. For the following question description, please answer carefully based on the current actual situation of your unit:

2. Please choose a suitable answer for each question and fill out the answer options in the answer table at the end of the questionnaire

3. For questions that require you to answer in writing, please write them directly in the designated answer area of the questionnaire

*1. Gender:

Male

Female

*2. Years of employment:

Below 1 years

1-3 years

3-5years

Above 5 years

*3. Income:

Below 5,000

5,001-10,000

10,001-15,000

Over 15,000

*4. Your medium to long-term planning for the enterprise

A. Very clear

B. Clear

C. Have some understanding

D. Not understanding

E. Never heard of it before

*5. Your responsibilities to this department

A. Very clear

B. Clear

C. Have some understanding

D. Not understanding

E. Never heard of it before

*6. Your annual work tasks for your department

A. Very clear

B. Clear

C. Have some understanding

D. Not understanding

E. Never heard of it before

*7. Employees in your department can work closely together to

complete their work

A. Always

B. Most cases

C. Sometimes

D. Never

*8. Your direct supervisor analyzes your work goals with you every year

A. Always

B. Most cases

C. Sometimes

D. Never

*9. Every year, you complete the tasks assigned to you by your superiors

A. Very relaxed

B. Completed on schedule but with difficulty

C. Difficult but able to complete on schedule

D • Unable to complete

*10. Job Description of the Enterprise

A. Very complete

B. Yes, but it's very simple

C. Yes, but it's just a decoration

D. No

*11. Your responsibility for your job

A. Very clear

B ` Basically clear

C. Not very clear

D. I'm not sure, what does the leader command me to do

*12. Your actual work and your job description

A. Very consistent

B. Basically consistent

C. Not very consistent

D. I don't know if it's consistent or inconsistent

*13. As a member of the enterprise

A. Very proud

B. A bit proud

C. No feeling

D. Afraid that others might know

*14. Enterprise employees can exchange and share new ideas and knowledge

A. Always

B. Most cases

C. Sometimes

D. Never

*15. What are the reasons why you think the company's current performance is good? [Multiple choice question]

A. Personnel quality

B. Advanced Management

C. Customer resources

D. Product and service quality

E. Support from the parent company and enterprise size

F. Other (please specify):

*16. Do you think the main advantage of the enterprise currently lies in the multiple choice question

A. Personnel quality

B. Advanced management

C. Customer resources

D. Product and service quality

E. Support from the parent company and enterprise size

F. Other (please specify):

*17. Violate corporate regulations and maintain good relationships with colleagues, who sometimes:

A. Very important

B. Important

C. Unable to determine

D. Not very important

E. Not important

*18. The issues you have reported to your superiors or business leaders can be properly resolved and promptly reported:

A. Always

B. Most cases

C. Sometimes

D. Never

*19. Rules and regulations of the enterprise:

A. Very complete

B. Yes, but it's very simple

C. Yes, but it's just a decoration

D. No

*20. Implementation of enterprise rules and regulations:

A. Very strict

B. Not very strict

C. Not following the system

*21. All employees of the company have the same goal and a strong

desire to win together:

A. Strongly agree

B. Agree

C. Unable to determine

D. Disagree

E. Very disagree

*22. Your supervisor is sometimes very bureaucratic and does not truly understand the specific situation of your work:

A. Strongly agree

B. Agree

C. Unable to determine

D. Disagree

E. Very dissatisfied

*23. In the next three years, enterprises can make a significant leap in sales and profit growth:

A. Strongly agree

B. Agree

C. Unable to determine

D. Disagree

E. Very disagree

*24. Establishment of enterprise organizational structure:

A. Very reasonable

B. Reasonable

C. Unable to determine

D. Unreasonable

E. Very unreasonable

*25. Main business processes of the enterprise:

A. Very reasonable

B. Reasonable

C. Unable to determine

D. Unreasonable

E. Very unreasonable

*26. Can you keep up with the company's dynamics and new policies in a timely manner

A. Always

B. Most cases

C. Sometimes

D. Never

Appendix B:Profit distribution statement

Indicators (US dollars)	21 / 22 annual report	20 / 21 Annual Report	19 / 20 Annual Report
Total revenue	25.199 billion + 30.57%	19.299 billion + 4.52%	18.464 billion -5.789%
Cost of sales (including depreciation and amortization)	9.605 billion + 24.05%	7.742 billion + 1.82%	7.604billion -14.829%
Cost of sales excluding depreciation	7.010 billion + 28.29%	5.464 billion + 0.57%	5.433 billion -17.21%
Depreciation and amortization expense	2.595 billion + 13.88%	2.279 billion + 4.94%	2.172 billion -8.18%
· amortize	391 million + 52.62%	256 million + 14.52%	224 million -2.68%
gross income	15.594 billion + 34.93%	11.557 billion + 6.42%	10.860 billion + 1.77%
Sales management expenses	8.710 billion + 38.909%	6.271 billion + 19.82%	5.233 billion + 9.31%
Other sales and management expenses	10.352 billion + 32.23%	7.829 billion + 16.05%	6.746 billion + 8.08%
Other operating expenses	1.642 billion + 5.38%	1.558 billion + 3.00%	1.512 billion + 4.01%
Profit before interest and tax (operating income)	5.242 billion + 40.61%	3.728 billion -9.39%	4.114 billion -7.11%
Non-operational net profit	589 million + 5734.96%	-10,446,900 -120.57%	50.8 million -12.03%
Interest income from outside operations	84.68 million + 96.51%	43.09 million -29.30%	60.96 million -13.99%
Subsidiary earnings, profit and loss			

Other income (expenses)	504 million + 1041.349%	-53,540,5004 27.01%	-10,159,200 + 22.59%
capital charges	1.400 billion + 23.51%	1.133 billion 8.92%	1.245 billion + 2.30%
Total interest expense	1.608 billion + 23.23%	1.305 billion -6.78%	1.399 billion + 0.41%
Capitalized interest	208 million + 21.36%	171 million + 10.42%	155 million -12.559%
Non-normal net expenses	-143 million -138.75%	60,069,800 -107,47%	804 million -11.36%
Consolidated net profit	2.982 billion + 39.14%	2.143 billion + 32.45%	1.618 billion -17.92%
Attributo the parent owner.	2.980 billion + 39.16%	2.142 billion + 32.48%	1.617 billion -17.829%
Terminate business earnings	two hundred and thirty-four million		-22,858,300 -245.15%
dividend on preferred stock			
Net profit attributable to the common stock	3.214 billion + 50.07%	2.142 billion + 34.38%	1.594 billion -19.639%
earnings per share			
Basic earnings per share	4.31 +45.17%	2.97 -4.34%	3.10 -19.459%
Basic issued shares	720 million + 2.16%	705 million + 1.79%	692 million + 2.22%
All outstanding shares	729 million + 2.71%	710 million + 1.16%	702 million + 2.87%
diluted earning per share	4.44	3.02	2.29

	+46.91%	+32.02%	-21.419%
Diluted outstanding shares	723 million + 2.15%	708 million + 1.78%	696 million + 2.26%
All outstanding shares	729 million + 2.71%	710 million + 1.16%	702 million + 2.87%
Earnings persistence			
Dividend per share	3.22 -4.72%	3.38 +10.81%	3.05 -0.24%
Payment rate	72.12 -35.14%	111.19 -16.06%	132.47 +26.88%
Profit before interest, tax, DeTTDA			
Profit before interest, tax, DeTTDA	7.837 billion + 30.47%	6.007 billion -4.44%	6.286 billion -7.489%
Profit before interest and tax	5.242 billion + 40.61%	3.728 billion -9.39%	4.114 billion -7.11%
Depreciation and amortization expense	2.595 billion + 13.88%	2.279 billion + 4.94%	2.172 billion -8.189%

Balance Sheet

Indicators (US dollars)	21 / 22 annual report	20 / 21 Annual Report	19 / 20 Annual Report
property			
Cash and short-term investments	4.409 billion + 27.89%	3.448 billion + 34.27%	2.568 billion + 26.09%
ready money	269 million + 24.00%	217 million + 139.31%	90.52 million -72.439%
Total short-term			

investment			
Short-term receivables	4.466 billion + 24.55%	3.586 billion + 7.91%	3.323 billion 31.30%
Net receivables	2.571 billion + 22.94%	2.092 billion + 8.76%	1.923 billion-22.289%
· Total accounts receivable			
. bad debt			
accounts receivable-other	1.895 billion + 26.80%	1.494 billion + 6.74%	1.400 billion -40.749%
stock	673 million + 11.08%	606 million -11.02%	681 million + 41.19%
finished product			
raw and processed material	517 million + 8.08%	479 million -7.19%	516 million + 39.88%
Project progress payment and others	155 million + 22.40%	127 million-23.03%	165 million + 45.47%
other current assets	14.103 billion + 132.25%	6.072 billion + 877.45%	621 million-79.28%
preaid asset	565 million + 5.79%	534 million + 5.54%	506 million + 63.82%
Miscellaneous current assets	13.538 billion + 144.45%	5.538 billion + 4702.58%	115 million 95.71%
Total current assets	23.651 billion + 72.49%	13.711 billion + 90.62%	7.193 billion -30.539%
Net assets of the plant and equipment	75.750 billion + 16.71%	64.905 billion + 7.33%	60.472 billion + 5.68%
Total room and equipment	96.563 billion + 5.96%	91.132 billion + 6.15%	85.854 billion + 4.46%
Machinery and equipment	82.978 billion	77.347 billion	74.697 billion

	+ 7.28%	+ 3.55%	+ 5.41%
construction in process	7.356 billion + 2.12%	7.203 billion + 42.91%	5.040 billion -12.58%
Other plant buildings and equipment	141.1 billion + 0.49%	-	
Operating the leased property	665 million -23.50%	869 million + 2.49%	eight hundred and forty-eight million
accumulated depreciation	20.814 billion -20.64%	26.227 billion + 3.33%	25.382 billion + 1.65%
Machinery and equipment	19.014 billion -21.17%	24.120 billion + 2.59%	23.511 billion + 1.40%
Other plant buildings and equipment	703 million -21.72%	eight hundred and ninety -eight million	
Total investment and advance payments	3.124 billion + 4.65%	2.986 billion -13.60%	3.456 billion + 14.31%
Subsidiary for a long-term investment	1.630 billion + 36.27%	1.196 billion -3.04%	1.234 billion + 21.86%
Other long-term investments	1.494 billion -16.49%	1.789 billion -19.47%	2.222 billion + 10.51%
Long-term notes receivable	391 million yuan + 0.51%	389 million + 16.22%	335 million + 817.599%

immaterial assets	16.858 billion + 102.609%	8.321 billion -10.86%	9.334 billion + 3.03%
goodwill	12.550 billion + 98.27%	6.330 billion -18.10%	7.729 billion + 1.06%
Other intangible assets	4.308 billion + 116.39%	1.991 billion + 23.99%	1.606 billion + 13.689%
Deferred income tax assets			
other assets	5.123 billion + 111.22%	2.426 billion + 1.20%	2.397 billion + 2.02%
defer assets	5.115 billion + 111.61%	2.417 billion + 4.36%	2.316 billion + 13.44%
Other tangible assets	7,899,900 -4.57%	8,278,200 -89.73%	80.6 million -73.79%
total assets	124.9 billion + 34.68%	92.738 billion + 11.48%	83.187 billion + 1.39%
Shareholder equity and liabilities			
Short-term and long-term debt	15.959 billion + 209.53%	5.156 billion + 2.12%	5.049 billion -13.35%
debit balance in suppliers'account	4.099 billion + 37.22%	2.987 billion + 9.25%	2.734 billion -12.72%
Income tax payable	42.13 million -59.28%	103 million -2.96%	107 million -49.17%
Other current liabilities	12.513 billion + 167.46%	4.679 billion + 71.43%	2.729 billion + 0.12%
Miscellaneous liquidity liabilities	12.513 billion + 167.46%	4.679 billion + 71.43%	2.729 billion + 0.12%
Total current liabilities	32.613 billion + 152.33%	12.925 billion + 21.72%	10.619 billion -10.73%

long-term debts	43.902 billion + 15.78%	37.918 billion + 14.44%	33.134 billion + 4.82%
Long-term debt except for lease obligations	43.309 billion + 16.70%	37.110 billion + 14.67%	32.361 billion + 3.25%
Capital and operating lease obligations			
Risk and expense reserves	4.093 billion -1.07%	4.138 billion-34.67%	6.334 billion + 32.51%
Deferred tax liabilities	8.907 billion + 34.08%	6.643 billion + 28.05%	5.188 billion + 0.41%
other liabilities	3.971 billion + 6.96%	3.713 billion + 2.30%	3.629 billion + 8.21%
Other liabilities (except for deferred income)	1.596 billion + 3.36%	1.544 billion-5.39%	1.632 billion + 6.76%
gross liabilities	93.487 billion + 43.08%	65.337 billion + 10.92%	58.904 billion + 3.69%
Preferred stock (book value)			
Non-redeemable preferred stock			
common stock	31.380 billion + 14.64%	27.372 billion + 12.85%	24.256 billion -3.79%
Book value of the common stock stock	639 million -2.36%	654 million + 12.22%	583 million -2.35%
Additional capital premium	1.712 billion -4.28%	1.788 billion + 10.84%	1.613 billion 5.78%
Additional capital premium	1.712 billion -4.28%	1.788 billion + 10.84%	1.613 billion 5.789%
earnings retained	28.237 billion	24.832 billion	20.515

	+ 13.71%	+ 21.04%	billion-5.44%
Other reserves	-12.5 million -61.89%	-77,263,200 + 35.09%	-119 million -183.059%
treasury stock	-	-	
Total equity of shareholders	31.380 billion + 14.64%	27.372 billion + 12.85%	24.256 billion -3.79%
Cumulative minority shareholder equity	30.28 million + 4.52%	28.97 million + 6.21%	27.28 million + 4.67%
total equity	31.410 billion + 14.63%	27.401 billion + 12.84%	24.283 billion 3.79%
Total liabilities and shareholders' equity	124.9 billion + 34.68%	92.738 billion + 11.48%	83.187 billion + 1.39%
earnings per share	-	-	-
book value	43.04 +11.62%	38.56 +11.55%	34.57 -6.48%
Tangible book value per share	19.92 -25.79%	26.84 +26.21%	21.27 -10.20%

Cash flow statement

Fixed assets and commercial sales	35.51 million + 239.93%	10.45 million -99.60%	2.582 billion + 5076.899%
Other cash flow	-755 million + 49.31%	-1.490 billion -16.75%	-1.276 billion -1.51%
Other purposes	-337 million 218.95%	-106 million + 62.65%	-two hundred and eighty-three million

Other sources	23.22 million -92.10%	294 million + 3,756.19%	761940096.28%
Investment cash flow	-19.417 billion -185.28%	-6.806 billion -60.32%	-4.245 billion -2.05%
financing activities			
Cash dividend already paid			
common stock dividends			
dividend on preferred stock			
Changes in equity	40.98 million + 124.13%	18.28 million + 43.96%	12.7 million -35.499%
Ordinary and preferred stock repurchase			
Ordinary and preferred stock sales	45.07 million + 115.72%	20.89 million + 2.83%	20.32 million -8.93%
Income from stock sales	45.07 million + 115.72%	20.89 million + 2.83%	20.32 million -8.93%
Net debt issuance or reduction	15.127 billion + 259.41%	4.209 billion + 512.62%	687 million -45.64%
Changes in current debt	-15,024,300 + 98.48%	-991 million -84.08%	-five hundred and thirty -eight million
Long-term debt change			
Long-term debt issuance			
Long-term debt reduction			
Other cash flow	-755 million + 49.31%	-1.490 billion -16.75%	-1.276 billion -1.51%
Other purposes	-337 million	-106 million	-two hundred

	218.95%	+ 62.65%	and eighty-three million
Other sources	23.22 million and 92.10%	294 million + 3,756.19%	76.1million 96.28%
Financing cash flow	12.050 billion + 482.16%	2.07 billion + 351.14%	-82.4 million -39.56%
Net cash change	49.17 million -57.21%	115 million + 150.55%	-22.7 million -124.95%
free cash flow			
Free cash flow per share	-1.12 +70.32%	-3.79 -24.50%	-3.04 25.61%
Free cash flow yield			

Accounting standards: US-GAAP United States General Accounting Standards; Q: Quarter quarterly report, of which Q1/Q2/Q3/Q4 is a single quarterly report with a span of 3 months; Q6/Q9 is the cumulative quarterly report, Q6 is 6 months, Q9 is 9 months; H: Half semi-annual report, H1 is the first half of the year and H2 is the second half of the year; FY: Financial Year Annual Report.