Coping strategies of financial work in the era of artificial intelligence

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Abstract—The emergence of artificial intelligence has accelerated the transformation of financial personnel's work function from bookkeeping accounting type to operation and management type. Financial personnel have ushered in important development opportunities, but also will face more severe challenges. Through the research on the financial work reform caused by artificial intelligence and the coping strategies of financial personnel, this paper believes that financial personnel should clearly understand the development trend of artificial intelligence, actively meet the challenges, comprehensively improve the ability of financial digitization and lean through learning, establish macro thinking, become the leader of industry and finance integration, and realize their own career transformation and upgrading.

1. BACKGROUND OF ARTIFICIAL INTELLIGENCE ERA

Artificial intelligence is the basic theory, method and technology to study the laws of human intelligent activities, to construct an artificial system with certain intelligence, and to study how to make the computer complete the work that human intelligence can be competent for in the past, that is to study how to apply the software and hardware of computer to simulate some intelligent behaviors of human beings. Artificial intelligence covers computer science, neurophysiology, psychology, linguistics, cybernetics, information theory and other disciplines.

In recent years, with the rapid development of 5g, big data, cloud computing, Internet of things, blockchain and other new technologies, artificial intelligence technology also rises rapidly. In order to seize the major strategic opportunities for the development of artificial intelligence, in July 2017, the State Council of China issued the development plan for the new generation of artificial intelligence, proposing a three-step plan to push the development of artificial intelligence industry to a new height[1]. In October of the same year, the topic of artificial intelligence application was written into the report of the 19th National Congress of the Communist Party of China. In August 2019, the Ministry of science and technology formulated the guidelines for the construction of national new generation artificial intelligence development experimental area. The first key task is to "carry out the application demonstration of artificial intelligence technology and explore a new path to promote the deep integration of artificial intelligence and economic and social development."

The integration and innovation of artificial intelligence and various industries will liberate human beings from the work with high labor intensity, low added value, high repetition rate, clear rules and high risk coefficient to engage in higher level mental work. The penetration of artificial intelligence into the accounting field has brought great changes and challenges to the financial work.
2. **FINANCIAL WORK REFORM IN THE ERA OF ARTIFICIAL INTELLIGENCE**

2.1 *Release repetitive work pressure, focus on analysis and evaluation*

The emergence of artificial intelligence provides technical support for financial personnel's work transformation. Artificial intelligence has the advantages of high computing speed, high accuracy and almost no fatigue. Enterprises can scan the original documents, audit documents, prepare accounting vouchers, cost accounting, invoice certification, filling in statements, simple tax declaration and financial data statistics. These tasks are heavy workload, high repeatability, low added value and high accuracy[2]. For example, Sinochem International Financial Sharing Center uses PricewaterhouseCoopers financial robot to obtain analysis information through interaction with computer software, and carry out data transmission, comparison and transaction processing. The main work content is to complete four parts: bank reconciliation, value-added tax verification, month end payment reminder and sales balance reminder. PwC financial robot helps Sinochem Group to realize financial process automation, reduce human time cost, and significantly improve the efficiency and quality of financial and tax work.

When the basic financial work is replaced by artificial intelligence, financial personnel can strengthen their own knowledge reserve, use the accurate data provided by artificial intelligence, and combine with their previous work experience, focus more on high-value return work such as data analysis, difference interpretation, cost control, capital budget, investment analysis, performance evaluation and risk control. Go deep into enterprise business, participate in planning and decision-making, implement enterprise strategy in financial management, and continuously improve management, analysis, decision-making and evaluation capabilities.

In addition, in terms of macro environment, relying on abundant natural and human resources, China has actively developed an export-oriented economy, becoming the second largest economy in the world, and has made remarkable achievements. However, with the continuous development of science and technology, the disappearance of demographic dividend and the destruction of natural resources, China's economy has been transformed from the extensive economy of "high input, high consumption and high emission" to the intensive economy of "technological innovation, human capital accumulation, resource transfer, scale economy and learning effect". In the changeable market competition environment, enterprises should improve their internal skills, constantly improve the level of internal financial management, and realize sustainable development[3].

It can be seen from the above that the macro-economic environment and the rapid development of artificial intelligence urgently need the financial personnel's work function to change from accounting type to management type.

2.2 *Improving the quality of accounting information*

Artificial intelligence technology can realize the whole process of intelligent financial management, reduce the deviation of manual processing of accounting information, avoid artificial falsification of accounting information, ensure the authenticity of accounting information, the quality of accounting information will be greatly improved, thus reducing the problem of wrong decision-making[4]. Taking reimbursement as an example, artificial intelligence can intelligently manage the process of invoice, circulation, reimbursement and entry. It not only undertakes the daily work of financial accounting, but also reduces the risk of errors in the manual entry process.

UFIDA's e-invoice cloud service platform is seamlessly connected with ERP system to realize the whole process intelligent management from sales invoice, circulation, receipt, reimbursement, entry and filing. In the aspect of official account, the platform has realized electronic invoice one key opening, real-time push, and provides various ways of opening tickets, such as mobile Invoicing, two-dimensional code scanning and invoicing, public number self-help Invoicing, payment integrated Invoicing, etc., to help enterprises improve service quality, reduce operation costs and improve operational efficiency. In terms of receipt, the platform realizes the collection of e-invoice according to enterprises and individuals, and provides special e-mail boxes for enterprises and individuals to receive
e-invoice. The platform is also connected with the reimbursement system, providing the authenticity inspection service of paper and electronic bills and controlling the repeated entry, tracking and monitoring the status of invoices, which greatly reduces the work intensity of financial personnel in receipt and bookkeeping, and eliminates the financial risks caused by forged and abandoned bills[5].

Financial analysis and decision-making of an enterprise cannot be separated from accounting information. With the help of high-quality accounting information and intelligent decision-making procedures and methods, an accounting data model is established to observe and analyze the accounting data from different angles, which can effectively ensure the accuracy of financial decision-making and promote the healthy development of enterprises.

2.3 It is easier to realize financial information sharing and lean management

Artificial intelligence technology, big data technology and cloud computing technology have laid a solid foundation for the promotion of financial sharing service and accelerated the spread of financial sharing service concept. When dealing with a large number of enterprise financial information, the intelligent development can replace manual repetitive operation. In the process of sorting, processing, mining and creating data information, it can give full play to the computer's perception ability in the business process and financial process of the enterprise. With the help of human thinking, it can effectively realize the effective transformation of financial accounting from low-end to high-end intelligent. The construction of intelligent financial sharing service platform will be an important development direction of Financial Sharing Service in the era of artificial intelligence, so as to realize the lean management of financial information.

The 11th Bureau of China Railway has grasped the pace of the times and successfully carried out the digital transformation of enterprise financial information. In 2008, the management of China Railway 11th Bureau found that most of the accounting personnel of the enterprise are working hard in the work of financial data statistics and accounting, but they are not familiar with the company's business. In the process of sales and production of production personnel, they also know little about the company's financial situation. In order to improve the work efficiency of accounting personnel, break the information isolated island, and form an integrated management mode of industry, finance and taxation, in 2016, China Railway 11th bureau used big data artificial intelligence technology to create a financial sharing cloud platform, and input all financial, business and tax information of 13 subsidiaries and 1318 projects affiliated to the company into the cloud platform and share data, and the information management technology runs through the whole system Enterprise value chain. In the role of cloud platform data sharing, not only saves the investment of human and material resources, but also ensures the security of enterprise financial fund management.

3. COPING STRATEGIES OF FINANCIAL WORK IN THE ERA OF ARTIFICIAL INTELLIGENCE

3.1 Improve the ability of data analysis and highlight the function of value management

In the era of artificial intelligence, "big data" will become the invisible assets and core assets of the company. Artificial intelligence provides financial personnel with high-quality data information for strategic analysis and decision-making support. Financial personnel can better analyze and predict the operational and financial risks faced by the company. Artificial intelligence liberates finance from the ordinary accounting, undertakes the key role of value discoverer and value manager, and becomes the "value consultant" of the company. Financial personnel can highlight their value management function from the "lean" management and "digital" report[6].

3.1.1 “Lean” management:
The "lean" of financial work management includes the following contents, as shown in Table 1.

| Serial number | Contents                                           |
|---------------|----------------------------------------------------|
| 1             | Ensure that the focus of financial work is to serve the value management |
In the management process, streamline the financial functions to make them more professional and centralized.

Promote the company's business standards and establish process standards.

Design and optimize standardized management accounting reports.

Standardize KPI (key performance indicators) of the company.

### 3.1.2 “Digitization” reports:

The "digitalization" of financial work report includes the following contents, as shown in Table 2.

**TABLE 2: “DIGITIZATION” REPORTS CONTENT**

| Serial number | Contents |
|---------------|----------|
| 1             | Participate in the construction of digital platform of the company |
| 2             | Realize the integration of company data, industry data, benchmarking data and macro data |
| 3             | Through Bi and other data analysis tools to support the real-time display of KPI |
| 4             | Carry out multi-dimensional and multi scene analysis |
| 5             | Construction of management accounting report system based on decision |

In the era of big data, the more digital enterprise information is, the more likely it is to obtain lean information. In the era of artificial intelligence, financial work must be done thoroughly and carefully to provide detailed, complete and true reference data for the business activities of enterprise managers.

### 3.2 Expand the vision, pay attention to the macro aspect of Finance

#### 3.2.1 The framework of Financial Macro Thinking

The company is not an independent market entity, it is a link in the industrial chain and supply chain, and a small unit in the global economic environment. Novel coronavirus pneumonia is a serious problem in the international environment. The macroeconomic downturn continues, and the global rampant outbreak of the new crown pneumonia epidemic has caused serious impact on our physical enterprises, increasing the risk of fracture in the enterprise's capital chain, industrial chain and supply chain. The severe situation of macro environment requires enterprises to establish "Macro Thinking" and "risk thinking" in time, improve themselves to adapt to the uncertainty and high-risk business normal, objectively assess business risks, timely adjust business plans, and minimize the impact and loss caused by the epidemic[6].

Financial personnel should examine the development of enterprises with an open attitude, an international vision and a global view, and plan, deploy and manage enterprises to achieve their long-term development goals. The macro thinking framework of finance should be based on the objective understanding of "global macro vs. domestic macro, domestic macro vs. domestic industry, and domestic industry vs. micro industry". Specifically, it should include business and finance of enterprises, leading and benchmarking enterprises, same industry and upstream and downstream industries, domestic macro-economy and policies, and global macro-economy and policies.

#### 3.2.2 The content of Financial Macro Thinking

Artificial intelligence provides financial personnel with new opportunities for strategic analysis and decision support. The macro thinking of finance can include the following contents:
3.2.2.1 What kind of risk does the global technology competition and trade barrier bring to the company's technology R & D and product supply chain? How should companies respond?

3.2.2.2 What is the impact on the investment, financing and profit distribution of industries and companies by continuing to deepen the structural reform of the financial supply side and other relevant policies? If the foreign-invested enterprises are the main body involved in foreign exchange, the financial department should pay close attention to the changes of the state's foreign exchange management regulations, and distribute profits in compliance with the state's foreign exchange management regulations.

3.2.2.3 What changes have taken place in the industrial policy, tax reduction and fee reduction policy and subsidy policy for the company? How should companies respond? Such as the relevant policies of high-tech enterprises, integrated circuit design enterprises and software enterprises, and the inclusive tax reduction policies for small and micro enterprises during the epidemic period. To change the default, adjust the template as follows.

3.2.2.4 What are the main concerns of the company's SWOT analysis? Can the company maintain good market competitiveness?

3.2.2.5 What are the new trends of customer demand? What are the regional, industry, scale and credit characteristics of customers?

3.2.2.6 Can the customer collect the payment in time according to the agreement? How to deeply analyze customer risk?

Combined with the macro-economy, industry development and the actual situation of the enterprise, the financial personnel can quickly adjust the company's strategy, financing, investment, procurement and sales decisions.

3.3 Participate in the process design of AI accounting and become the leader of industry finance integration

The integration of industry and finance means the combination of business operation and financial management. The integration of industry and finance can maximize the value creation. The goal of enterprise financial management is to maximize the enterprise value, that is to obtain the maximum efficiency of resource allocation. Value creation activities are always accompanied by the economic activities of enterprises. However, business departments often only focus on the results of business activities and pay less attention to the efficiency of business activities. The integration of financial departments can improve this problem. Financial departments can identify the costs and costs of various activities through scientific cost-benefit analysis and various estimates and budgets. In order to improve the way of cost management, to minimize the cost of procurement, and to maximize the value of each value-added link[7].

Financial personnel should take the initiative to integrate into the front-end of business operation, understand and master the business process and rules, participate in the process reengineering and value creation process of various fields, use the effective and accurate data under the artificial intelligence platform and the more convenient information exchange platform to analyze and track the value driving factors such as cost, profit, tax and profit, so as to provide guidance for production, marketing and procurement. The field provides in-depth analysis and judgment, integrates comprehensive budget control, cost management, internal performance evaluation, internal control risk prevention and other management accounting tools, explores the root causes of problems, provides support for enterprise strategic decision-making, and helps improve enterprise management[8].
4. CONCLUSION
In the era of artificial intelligence, the company’s financial function orientation will undergo profound changes. Financial personnel should clearly understand the development trend of artificial intelligence, take the initiative to meet the challenges, comprehensively improve the ability of financial digitization and lean through learning, establish macro thinking, and assume the key role of value discoverer and value manager. In the era of artificial intelligence, financial personnel with "global vision, macro thinking, innovation ability, deep thinking" and other professional qualities will become the trendsetters of this era.

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