Research on Banking Process Optimization Based on RPA in Financial Sharing Mode

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Abstract. In recent years, the ‘Internet+’ business model and the rapid development of big data have brought serious challenges to commercial banks. The emergence of online financial products has made the market competition increasingly fierce. China Merchants Bank, as one of the few joint-stock commercial banks in my country, the original financial business management model can no longer adapt to the development of the market, and the business process urgently needs to be transformed and upgraded. Based on the financial sharing center and robot process automation theory, the paper optimizes the accounting business process of China Merchants Bank, changes the old way of accounting, makes it more streamlined and unified, and realizes the timely, convenient and accurate accounting. The finance department can also make better use of accounting information resources to solve a series of financial problems in the process of business development, and achieve comprehensive control of business development through the shared central platform to improve the overall efficiency of banking business financial work.

Keywords: Financial sharing, robotic process automation (RPA), commercial banks.

1. Introduction
Since the new economic era of the 21st century, my country's commercial banks are facing new challenges. Since 2012, the rapid development of domestic big data, especially the development of Internet e-commerce, enables companies to use big data to conduct in-depth mining and analysis of data scattered on various e-commerce platforms, and the valuable information that can be brought to the Profit. Many domestic e-commerce companies have opened up Internet financial services, and traditional banks such as China Construction Bank and Minsheng Bank are also involved in the development and application of financial big data. Therefore, this article proposes that China Merchants Bank can, based on the idea of financial sharing, through the effective application of robotic process automation technology, use RPA to further optimize the financial workflow, accelerate the transformation of the financial sharing center to intelligence, and reduce the investment in human and material resources. Improve the work efficiency of financial personnel and reduce the rate of operation errors.
2. Related theories

2.1. Financial sharing

Shared service is to bring together the business of dispersed departments in an enterprise into a relatively independent department with a special management structure, and carry out the mutual integration of various businesses according to the overall strategy of the enterprise. The concept of financial shared services is based on an extension of shared services. The operation mode of the financial shared center is established in the shared service management structure, and the financial business processes of various scattered regions are unified management, which can improve corporate efficiency, reduce costs, and use more Fewer resources create higher value. In the initial planning of the financial sharing center, the group company usually has to test the simple and feasible business process first, and then weigh the other aspects as a whole, and make the non-core, repetitive, and achievable ones with high repetition rate and low added value. The accounting business of standardized processes is included in the business scope of the Financial Sharing Center.

2.2. Robotic process automation

Robotic process automation is a brand-new virtual robot concept. It is a way to automate traditional manual operations by performing complicated tasks based on computer coding and software based on repetitive rules. Designed to simulate the interaction between humans and the Internet and replace employees with cumbersome and high-repetition fixed tasks, so as to reduce labor costs and improve the overall work efficiency of the company. It can also further assist employees in checking redundant links in the business process of the company, Realize the optimization of accounting business process. RPA is one of the key technologies for the digital transformation of enterprises, and RPA financial robot is a new application of virtual robot process automation in the financial field.

With the use of RPA financial robots from accounting firms such as Deloitte, the value of RPA technology is increasingly demonstrated. This technology can promote the realization of automated financial business processes and delegate time-consuming, boring, complex and tedious tasks to financial robots. Based on the characteristics of RPA technology, its application scenarios are mainly divided into two categories: one is transaction processing based on traditional manual operation activities, and the other is business processing based on established programming rules. Therefore, the focus of RPA technology in the financial field is transaction Type accounting process processing and internal audit and risk two parts.

3. Current status and problems of banks

3.1. Current status of China Merchants Bank

Established in 1987, China Merchants Bank is the first joint-stock commercial bank in my country. According to the company’s 2019 year According to the report, China Merchants Bank has established more than 1,800 branches, with service outlets covering more than 130 cities and regions across the country, and 6 overseas branches. It has multiple functions such as commercial banking, fund management and financial leasing.

With regard to the application of information technology, China Merchants Bank uses handheld mobile apps as an intermediary to build a digital customer acquisition model, and promotes through brand advertising and self-media marketing to create new growth points for customer acquisition. In addition, China Merchants Bank is also committed to improving the intelligent risk control platform "Libra System". For the development of bank informatization in the future, China Merchants Bank is committed to creating a new retail finance 3.0 model, using "Internet + finance" as a means and informatization as the driving force. Taking MAU as the "Polaris" indicator, driving the future development of banks, optimizing new online business models, in-depth promotion of retail finance 3.0 information transformation, and enhancing user experience of banking services.

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In 2018, China Merchants Bank Shanghai Branch launched the new CBS6.0 system of the trading department and established a new financial sharing center platform. Up to now, it has been piloted in the subsidiaries of some pharmaceutical companies in Hubei, Xi'an, Jilin and other places. The better service of the Shanghai branch has also been recognized by the senior executives of these companies. The CBS system is a cross-bank cash management platform. It is a professional treasury management system created by China Merchants Bank based on its original process experience in the field of business and financial management to meet the needs of financial enterprises and groups and other institutional customers. This system is based on the "Internet +" intelligent data management, which can meet the coordination needs between China Merchants Bank and the internal management of the enterprise group.

3.2. Problems with the existing financial process of China Merchants Bank

With information as the main body, China Merchants Bank uses special CBS procedures to process, reflect and control business activities and financial information, and provide financial information for relevant needs. The output of information is completed through three key steps, from the beginning of data collection, through the processing and storage of information, to the final output in the form of financial statements. However, it has only been piloted in companies in some regions and has not been fully promoted. It is essentially based on traditional accounting business processes, and there is still room for improvement.

1) The traditional process is too concise: The information accounting system of China Merchants Bank has always followed the traditional accounting process-accounting and supervision. After the business is handled, the financial staff prepares the accounting vouchers based on the original vouchers, then performs the account book registration and the preparation of financial statements, and finally completes the simple departmental report-the financial department audit-the traditional process of leadership review.

![Figure 1. Current Status of China Merchants Bank's Accounting Process](image)

At the same time, the financial personnel of China Merchants Bank are basically not involved in the specific business content of the bank, but only transmit and enter the information system of the original bills of the business, without forming the concept of business and financial integration, and losing the most important responsibility of the financial department. The analysis of bank financial information only focuses on the data and indicators in the financial report, and rarely provides relevant financial analysis based on the needs of various business departments. It can be seen that the existing traditional accounting process of China Merchants Bank cannot meet the real needs of various business departments, nor can it help the bank respond to the complex and volatile financial market in a timely manner.

2) Accounting Informationization is not uniform: At present, the application of China Merchants Bank's financial sharing center is still limited to the level of connection between the trading department of the Shanghai branch and the company, and it has not been fully extended to regional branches. The
main reason is that the internal accounting software is not well integrated. For example, there is no complete business-financial integration system for corporate accounting, private accounting, foreign exchange accounting, mortgage accounting, credit card accounting, etc., and each set of accounting software may use different accounting systems, accounting title settings and the scope of computerization. They are not all the same, and the resulting data collection is also very different. Such inconsistencies bring huge challenges to unified accounting.

3) The client's accounting information is not deeply excavated: The banking industry is a traditional financial giant industry, but in the face of the "Internet +" era, it is slightly slow. With the application of big data, many Internet companies have used some new marketing models, and also used this to analyze and mine the preferences of old customers and potential new customers. However, for the banking industry, which has a large number of customer resources, there has not yet been a relatively complete way to classify original customers in detail and explore new potential customers. China Merchants Bank also copied the customer information storage model of traditional enterprises, and it was only a simple storage and reference. Although it has also developed mobile terminals in recent years, it has basically not made further use of customer collection resources.

In addition, for the learning and growth of banking personnel, China Merchants Bank is also in a state of separation of business and finance. The assessment of accounting personnel only involves accounting and risk control, only training on financial level, and there is very little service and marketing training and assessment. This model of separation of business and finance makes it difficult for banks to broaden the scope of customers and the market, causing the traditional banking industry to face the challenges of emerging Internet finance.

4. Optimization of Bank Accounting Business Process
The establishment of China Merchants Bank's financial sharing center and the overall promotion of the integration of industry and finance need to promote the optimization of accounting and business processes.

4.1. Implement front-to-back separation and integration of counters with the help of RPA
Regarding the traditionalization of bank accounting business processes and the improvement of counter efficiency, we can choose to integrate the idea of big data on the basis of the original business system and introduce the RPA system. Under the premise of realizing the effective separation of the front and back of the counter, the big data RPA financial robot becomes the key link of the bank processing center is to move the accounting calculation from the front desk to the newly built head office data business and financial sharing center platform. So that the counter only needs to conduct preliminary business acceptance and legal certification Verification of sexuality and authenticity in order to focus the work on communication with customers and service to customers, increase customer satisfaction, and attract repeat customers and potential customers.
4.2. Optimize job responsibilities and conduct employee training

According to China Merchants Bank's 2019 annual report, about 60% of the bank's employees are engaged in accounting work, while less than 40% in marketing and services. This kind of personnel position arrangement is contrary to the current prevailing customer-centric management philosophy, and the understanding of accounting and business processes by personnel of various types of work is not comprehensive. For this, the bank can choose to use RPA financial robots to reduce the basic accounting labor intensity of accountants, training to strengthen the understanding and mastery of financial knowledge related to big data by back-end financial personnel, to cultivate the big data thinking mode of accounting staff, and to transfer mechanical work to the head office's big data industry. The financial sharing platform enables financial personnel to understand the storage of accounting information relying on the big data industry financial sharing platform, so that they can devote more energy to higher-end business, rather than simple repeated operations, so that the front desk work staff can better serve customers, enhance customer experience, and improve overall business handling efficiency.

4.3. Optimization of accounting information storage management mode

Under the traditional banking model, a large amount of data information is manually input by financial personnel. Although accounting information system software has been introduced in recent years, due to the instability of electronic storage of information and the possibility of manual errors, banks still require paper filing of original vouchers will inevitably increase the labor intensity of accountants, waste manpower and material resources, and reduce bank efficiency. With the development of the current online trend of financial business, banks can integrate existing accounting information systems...
to achieve unified management, and scan paper accounting vouchers such as customer information, business vouchers, and ID cards into OCR. Images are incorporated into accounting information management to realize imaging and paperless accounting information management, unify the accounting methods of various accounting information platforms, and realize data sharing. At the same time, it can rely on the financial sharing platform to realize quick query and read of accounting information at any time.

5. Conclusion
Taking a large commercial bank as an example, this article sorts out the current financial process of China Merchants Bank and the problems it faces, and starts from the three aspects of organizational structure, business process, and financial information accounting. Combined with the background of big data, it uses financial sharing the related theories of the center and RPA have sorted out a series of industry-financial integration measures, hoping to improve the difficulties it faces to a certain extent, and promote the sound development of commercial banks in the era of big data information.

The main conclusions are as follows: First, establish a financial sharing center platform under the background of big data, and improve the quality of electronic information of accounting documents through the application and upgrade of RPA financial robots. Secondly, train financial personnel to understand big data knowledge, cultivate accounting and business personnel's business-financial integration thinking mode, so that they can make better use of accounting information on the financial sharing center platform. Finally, integrate the accounting information system, integrate the previously dispersed accounting information systems, and realize unified management. The accounting paper vouchers such as customer information, business vouchers, and ID copies are scanned into accounting information management through OCR. Paperless accounting information management, and then relying on the big data industry and financial sharing platform to realize quick query and access to accounting information at any time.

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