

# Study on the Agile Transformation of Data-driven Retail Business of Commercial Banks

Yunlong Ma

Macquarie University, Sydney, New South Wales, 2109, Australia

**Abstract:** *The agile transformation of commercial banks in China is still in its initial stage, and there are not enough achievements in practical experience, and the research on the agile transformation of commercial banks is mainly at the strategic level, and there is less research literature on the specific implementation of agile transformation in the banking industry; in addition, the existing studies on the agile transformation of commercial banks seldom take into account the differences of commercial banks, and less research is conducted on the agile transformation path of domestic urban commercial banks. In the digital era, commercial banks urgently need to transform to a direction that focuses more on customer experience, faster and more flexible organizational response, and more emphasis on team empowerment and embracing change.*

**Keywords:** *data-driven; agile Transformation; commercial banks*

## 1. Introduction

With the development of digital finance, more and more banking business is being handled online, thus resulting in an increasing rate of customers away from the counter. According to the China Banking Association, by the end of 2021, the away-from-the-counter rate of traditional banks has increased from 54.37% in 2012 to 90.29% in 2021, and currently, only about 10% of customers will go to banks for business, which puts a large number of bank branches at risk of transformation or even closure in the future.<sup>[1]</sup> On the other hand, after three years of the transition period of new regulations on asset management, Chinese commercial banks have broken the "rigid redemption" by netting their bank financial products and have opened a new retail transformation with wealth management as the core.

In the face of the above changes, agile transformation is the only rule for commercial banks to survive. The abundance of financial data provides a feasible upgrade path and rich scenarios for commercial banks to transform their retail business, and data-driven management change has become an important directional indicator for high-quality development in the banking industry. Through a case study of the agile transformation of commercial banks' retail business, this study aims to explore how to explore potential customers, accurately locate demand, and optimize retail performance based on data guidelines, thus realizing the agile transformation of commercial banks' retail business.

## 2. Concept of agile transformation of commercial banks

### 2.1 Origins of agile transformation

The concept of an agile transformation is a paradigm that enables companies to survive and succeed in an environment of unpredictable change by responding more efficiently and quickly to rapid market changes with customized products and flexible services. In summary, the core content of the agile transformation concept is focused on people oriented, rapid iteration, customer-first, and embracing change. Moreover, agile development originated in the software development field, where projects were inefficient due to the traditional fixed waterfall development process and strict documentation requirements. However, waterfall development is a plan-oriented, pre-defined process, and there are serious dependencies between each link, with the quality of the output of the previous link directly affecting the quality of the output of the next link. If the previous link is not up to standard, it can also cause stagnation in subsequent links, resulting in an inevitably long development cycle. However, with the rapid changes in market demand, the original development intention of the project can no longer

match the current market demand. Hence, people begin to think about how to improve the working method of software projects, and agile development gets attention.<sup>[2]</sup>

## ***2.2 Commercial banks' agile transformation***

For banks, "Agile" represents a method, an adaptive and empirical process control method in the context of complex systems that are "driven by people oriented." Moreover, agile requires a customer-centric method based on the customer's value needs. "Agile" is mainly reflected in the front desk marketing personnel can quickly insight into customer needs, and the back office systems and mechanisms can respond to customer needs promptly to provide customers with professional and warm financial services. With the advent of the data era, agile theory has been applied to the agile transformation of the banking industry. Compared with the traditional pyramid structure of commercial banks, agile banks break the traditional organizational lines, penetrate functional departments, focus on specific business scenarios, can quickly respond to external changes, and have five characteristics: shared vision, team empowerment, rapid iteration, people-oriented, and technology leadership. Based on agile development theory, agile bank breaks the traditional waterfall development model and uses agile tribe as a new form of product development, which alleviates the problem of inefficiency and resource waste caused by information asymmetry between business personnel and technology personnel.

## **3. Driving factors of agile transformation of retail business in commercial banks**

### ***3.1 Policy factors***

In recent years, the Chinese government has introduced policies related to digital transformation to support the digital transformation of the banking industry. Among them, in January 2022, the China Banking and Insurance Regulatory Commission issued the "Guiding Opinions of the Office of the China Banking and Insurance Regulatory Commission on the Digital Transformation of the Banking and Insurance Industry", which clearly pointed out that by 2025, the digital transformation of the banking and insurance industry will have achieved significant results. In terms of policy, in 2022, the Central Bank, in accordance with the Fourteenth Five-Year Plan, formulated and issued the FinTech Development Plan (2022-2025)<sup>[3]</sup>, put forward guidance on the development of FinTech in the new era and clarified the general idea of digital financial transformation, development goals, key tasks, and implementation guarantees.

### ***3.2 Market factors***

As a result of the COVID-19 epidemic for several years, traditional industries led by the service industry have taken a hit. However, the "online platform" based on "cloudoffice," "online education", "online shopping," and other "non-contact services" are rapidly taking over people's lives. Moreover, the relative maturity of the online business of some Internet financial companies causes them to occupy a large market share, which makes commercial banks have to significantly expand their business scope and seize the market on the basis of the original business of mobile banking and online banking.<sup>[4]</sup> On the other hand, the change in consumers' consumption consciousness is also gradually affecting the development of the banking business. Firstly, since banks were authoritative in financial services in the past, more customers would choose to consult banks for financial products. However, with the gradual increase in market openness, users' financial consumption consciousness has also gradually changed, and they have a more subjective judgment to decide which financial products or investment decisions to make. Secondly, customers used to choose a bank for their business depending on geographical convenience, but with the diversification of financial services and convenient transportation, this consumer awareness has also gradually disappeared. This has made the traditional banking industry start to think about how to transform its business model to enhance user stickiness.(As shown in figure 1)

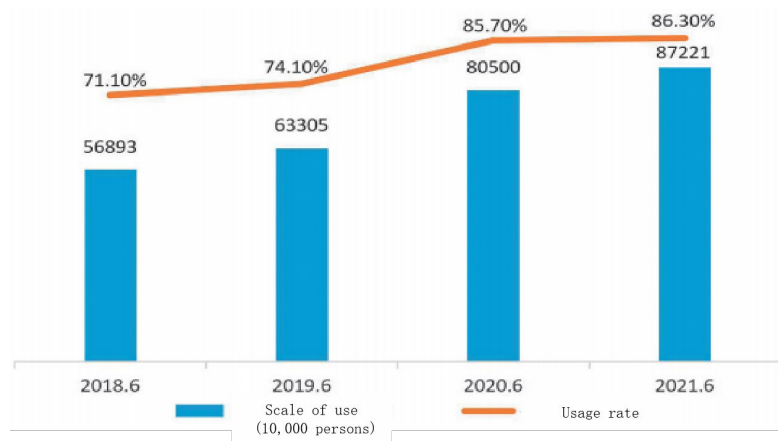


Figure 1. The trend of change in online payment users[5]

### 3.3 Technical factors

Firstly, the development of Internet financial companies has an impact on the payment and settlement business of traditional banks. Mode of payment, led by Alipay and WeChat, has gradually occupied the position of mainstream payment means in the market the development of more than ten years, which has directly impacted the payment and settlement business of commercial banks; secondly, the development of the Internet financial companies has impacted the scale of retail liability business of traditional banks. As the liability business of commercial banks is the main source of profit and the liability business, the deposit business is its most important business. However, in the past decade or so, with the development of Internet financial companies, the financial services they launched began to gradually divide the share of the deposit business in the banking industry; finally, the development of Internet financial companies resulted in increased difficulty in customer acquisition and reduced customer stickiness for commercial banks. Internet financial companies are in a leading position in the development of financial technology, and they can apply this advantage to achieve refined management of users, establish user portraits and provide users with a more personalized financial service experience, which leads to the traditional banking industry to increase the difficulty of customer acquisition and reduce customer stickiness.

## 4. Path analysis of the agile transformation of the retail business of commercial banks

### 4.1 Selection of paths for agile transformation

Most opposition to agile transformation in banks comes from the chronic problems of traditional bureaucratic organization and management, and it is difficult to overcome them from the bank's perspective. If we look at the path of agile transformation from this perspective, new construction is better than change. The "two banks" model can be an important option for the agile transformation path. Moreover, the "two banks," that is, "agile bank + traditional bank," refers to outside the traditional bank, with major agile projects as the starting point, according to agile principles and its elements to create a new parallel virtual system - agile bank. The agile bank does not change the existing organizational structure, does not affect the routine work, constructs the normal organization and task management system independently within the traditional organization system according to the underlying logic of agile, creates relatively independent human management, resource allocation, authorized examination and approval, assessment and incentive mechanism, influences and transforms the traditional bank through demonstration effect, and finally the "two banks" are integrated and unified in terms of values and performance results to achieve organization-wide agility. The "two banks" model is also a way to construct a new system, bypassing the difficult direct changes and allowing the traditional bank of conventional operation and the agile bank of short advancement to coexist and mutually achieve. It can avoid excessive impact on routine work and significantly reduce the opposition and risk of transformation, creating good conditions for traditional banking organizations to accept the agile and smooth transformation.(As show in table 1)

Table 1. Comparison of Agile Banking and Traditional Banking<sup>[6]</sup>

Features	Traditional banks	Agile banks
<b>Customer</b>	Focus on high-end customers, difficult to cover long tail customers	Long tailing: Better coverage of long-tail customers
<b>Channels</b>	Physical branch, mainly offline channels	Mobile: Mainly online mobile channels
<b>Business</b>	Low-frequency business and low stickiness	High frequency: Digital high-frequency business with high stickiness
<b>Product</b>	Traditional financial business products	Scenarization: Mainly scenarized financial services
<b>Data</b>	Autonomy with the boundary of the respective system	Platformization: Data sharing, data access, data-driven
<b>Design</b>	Designed for easy management, complex operation, and complicated process	Experiential: Designed for customer experience and convenient operation
<b>Technology</b>	IOE architecture, waterfall development, release by batch	Agile: Distributed architecture, agile development, continuous delivery

#### 4.2 Agile project system

The bank makes a unified identification of agile projects with simple criteria. Firstly, it is divisible from the bank's routine process work, which facilitates the agile team to run independently from the traditional organization; secondly, the task objectives are clear and divisible, which facilitates iterative optimization and parallel advancement; thirdly, the agile team is cross-functional and flat, and the key members can participate in full-time work with corresponding authorization. On this basis, agile projects at different levels are divided into three categories, including coordinated marketing class, institutional process class, and information technology research and development class according to their nature, and the hierarchical and classified management is implemented in a targeted manner. The entry of agile projects follows the principle of lenient entry and lenient exit in comparison with venture capital projects, while the historical performance of project initiators and project members is accumulated into word of mouth by creating a complete and public agile record and an objective and transparent evaluation public system, and agile teams are guided to self-restraint on their current performance through a two-way selection mechanism when forming teams in the future. In addition, the bank should also encourage employees to form their own informal organizations, such as interest groups around innovative activities, which will be incorporated into the agile category after standardization and transformation, and provide corresponding resources and unified management.

#### 4.3 Agile team construction

Agile teams adhere to the management principles of small size, flatness, and single leadership to reduce the complexity of organizational structure, avoid dispersing the energy of teams and individuals, and ensure agile internal communication. Moreover, the project manager relies on professionalism, service, and affinity to influence and unite employees and achieve equality within the team in multiple dimensions. Under the framework of standardized approval rules, the bank delegates the authority of employment rights, expense management, and performance assessment of the agile team to the project manager and the authority of risk and compliance to the agile support experts or team; by binding the interests of all relations on the agile project, the bank realizes the priority of efficiency; if necessary, it can make a breakthrough to the existing regulations. Furthermore, a loose due diligence exemption clause should accompany the delegation of authority to guarantee the agile team's performance, while word-of-mouth and honor should be used to drive the delegate's self-restraint, and the agile PMO and the delegation department should monitor the execution of the delegation with the necessary checks and balances.<sup>[7]</sup>

#### 4.4 Agile technology system

Currently, many Central Banks are issuing "digital currency" blockchain currencies. Banking technology needs to provide seamlessly interconnected financial currency services; future financial

institutions will provide decentralized services, and digitizing the financial system will enhance the demand for secure transactions. Therefore, agile implementation needs the strong support of technical architecture and infrastructure environment in addition to method and process assurance. Moreover, the key to constructing an agile technology system is to open up the interconnected systems within the bank and among the banking industry. For example, in the technical change of Postal Savings Bank, in the face of more than 30 interconnected systems within the bank, the acquiring system first collated the interactions and impacts of the interconnected systems within the system to know each other and establish a communication mechanism SOS (Scrum Of Scrum)<sup>[8]</sup> for interconnected iteration management, and the interconnected systems to set common iteration version and release target, team self-organization and self-adaptive iteration plan. The system adopts an extended architecture for external interfaces, which can quickly support regular and extended agile business requirements. Strengthening the construction of middle office capabilities, sinking public service capabilities, and focusing on business feature realization can better support agile business implementation. Furthermore, a good architecture system can help agile business implementation, but on the contrary, it will waste engineers' energy on production problems<sup>[9]</sup>.

## 5. Conclusion

After centuries of development, modern commercial banks have formed mature management systems and operational processes in risk prevention and control, compliance management, marketing, promotion, etc. However, the bureaucratic management model has also given rise to chronic problems such as poor coordination, rigid adherence, and inefficient decision-making. Hence, transformation to agile and effective stimulation of organizational vitality is an inevitable choice for commercial banks to break through the bottleneck of development and change to become stronger.

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