An Examination of How Digital Inclusive Finance Affects the Lending Practices of Commercial Banks

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Abstract. This article examines how digital inclusive finance affects commercial banks' loan practices. It will first systematically review the literature available and summarize and analyze it. In this article, the author give an in-depth overview of the primary routes by which digital inclusive finance affects the commercial bank lending behavior, the qualities of the credit being lent out, the arrangement of the credit, and, finally, risk management and decision-making processes. It also provides a sensible account of its mechanism of action along with the conventional credit theory. It has been found that digital inclusive finance through the alleviation of transaction costs and information asymmetry has significantly contributed to the growth of commercial bank lending and has guided credit resources to small and medium-sized enterprises and groups with significant funding shortages, thereby enhancing the credit structure. Digital technology has succeeded in enhancing the capacity of the banks to detect potential risks, as well as the efficiency of the credit decisions. Nevertheless, as a part of enhancing financial efficiency, digital inclusive finance has also introduced new issues in such aspects as data security, protection of privacy, and financial regulation.

Keywords: Digital Inclusive Finance; Commercial Banks; Credit behavior; Digital Finance

1 Introduction

The prevalence of information technologies in recent years, the digital economy, and digital inclusive finance have grown rapidly as a result of technologies like big data and artificial intelligence slowly becoming one of the key factors of innovation and structural change within the financial system. Digital inclusive finance uses data technology to mitigate information asymmetry and transaction costs greatly compared to traditional financial models. It can efficiently increase the reach of financial services and enhance the effectiveness of capital distribution. It is against this backdrop that commercial banks have been challenged by many issues, such as tightening interest rate spreads, shifts in customer structure and more intense competition in fintech, which have resulted in a slow-moving lending model transformation towards digitalization and intelligence. Thus, there are significant

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practical ramifications to the study of how digital inclusive finance affects commercial banks' lending policies.

In the available literature, researchers primarily examine the economic impacts of digital finance through the lens of financial inclusiveness and the evolution of financial technology. Hence, Guo Feng et al. have recorded the level of development of online finance in China systematically by developing a digital inclusive finance index. This gives a significant database to be used in future studies [1]. In terms of international research, Demirguc-Kunt et al. pointed out that the development of digital finance has greatly improved the accessibility of financial services [2]. With the gradual advancement of research, some scholars have begun to focus on the specific impact of digital finance on the economy and society. Mishra et al. believe that the scope of financial services has increased thanks to digital finance.

services and will generate spillover effects on economic development by improving resource allocation [3]. Ozili and others analyzed the mechanism of digital finance in reducing transaction costs and alleviating information imbalance from a theoretical perspective [4]. At the micro level, the development of digital finance is considered to have an impact on corporate behavior and financial resource allocation. Lu et al. believe that digital finance affects corporate information disclosure behavior by improving the information environment. And to a certain extent, it has changed the way credit resources are allocated [5]. Due to the widespread use of mobile payment and digital financial tools. Significant changes have occurred in how financial services are accessed, leading to a further improvement in financial literacy.

Therefore, research on commercial bank lending behavior is still based on traditional financial theory. Stiglitz and Weiss analyzed the mechanism of formationof credit rationing from the viewpoint of information imbalance [6]. Bernanke and Gertler emphasized the important role of credit channels in the overall economic operation [7]. In the past few years, given the development of digital technology, the academic community has begun to combine digital inclusive finance with bank lending behavior for analysis. However, there are still some disputes in the relevant research on the mechanism of action and long-term impact, and there is a lack of systematic sorting. Based on this, this paper systematically reviews the research results on how digital inclusive finance affects commercial bank lending behavior from multiple dimensions, such as credit scale, credit structure and risk management, and summarizes the main viewpoints and shortcomings of existing research, in order to provide a reference for subsequent research.

2 Literature Review

Existing research has extensively explored the economic effects of digital inclusive finance from multiple perspectives, including financial development, fintech, and banking behavior. Overall, the relevant literature mainly focuses on three aspects: first, analyzing the development of digital inclusive finance and its impact on financial inclusion and resource allocation efficiency from a macro perspective; second, exploring the formation mechanism of commercial bank lending behavior

based on traditional financial theory; and third, studying the impact of digital inclusive finance on the concepts of risk management, scale, and structure of commercial bank lending in conjunction with the development of digital technology. Based on this, this paper will systematically review the relevant literature from these aspects and provide a comprehensive evaluation based on a summary of existing research findings.

2.1 The Evolution of the Concept of Inclusive Digital Finance

Over the past few years, the swift pace of the digitalization of technology like the internet, artificial intelligence and big data has transformed the manner in which financial services are offered considerably. It is on this background that digital inclusive finance has, over time, become a major area of concern among the scholarly community and policymakers. In comparison to the traditional financial models, digital technology has, to a large extent, decreased the information acquisition and transactional costs, increased the scope of the financial services, and enhanced the effectiveness of capital allocation, which allows the financial services to be enjoyed by a greater number of people. The transformation of the financial industry has also been given new opportunities by this trend. Thus, the encouragement of the creation of digital inclusive finance not only contributes to the enhancement of the financial system, but also to the overall economic development.

To be more precise, in the particular case of China, Guo Feng and other researchers have systematically evaluated the level of development of digital inclusive finance in China by building a digital inclusive finance index. They have also detailed its development status along three aspects: coverage, level of usage and level of digitalization [1]. Not only does such research present a valuable database to be utilized by future researchers in their analysis of the economic impacts of digital inclusive finance at the empirical level, but it also serves to facilitate the future evolution of research on the same.

From an international perspective, the advancement of digital finance is also considered to be of great significance to the inclusion of finance. Demirguc-Kunt et al. relied on the Global Financial Inclusion Database. Considering how commonplace digital accounts and mobile payments are, Basic financial services are becoming more and more accessible. Financial services are now much more accessible [2]. Sahay et al. pointed out that the development of financial technology has provided a new technological path to promote financial inclusion. And to a certain extent, it has improved the efficiency of the financial system[8]. The continuous development of digital inclusive finance has made its impact on the behavior of financial institutions a growing focus of research. As a crucial intermediary in the financial system, will the lending behavior of commercial banks change due to the development of digital technology? This question is increasingly becoming a key concern for academia.

Existing research shows that the development of digital inclusive finance has brought new technological support to financial services and, to some extent, improved the coverage and efficiency of financial services. However, existing research focuses more on the development level of digital inclusive finance and financial inclusion

issues, while research on how it specifically affects commercial bank lending behavior remains relatively limited. Therefore, it is necessary to further review relevant research from the perspective of bank lending behavior.

2.2 Analysis of Commercial Bank Credit Behavior

In traditional financial theory, information imbalance is often considered to be a very important reason affecting bank lending behavior. Stiglitz and Weiss pointed out in their landmark research that under the condition of incomplete information, it is difficult for banks to accurately target and judge the risk level of borrowers, so they will control the risk by restricting the amount of loans rather than raising interest rates. This phenomenon is called credit rationing[6], which provides a very important theoretical foundation for explaining bank lending behavior. Bernanke and Gertler proposed the credit channel theory from the perspective of the macroeconomy, showing that bank credit plays a crucial part in the transmission of monetary policy. They also emphasized that bank lending behavior is affected by the overall economic environment and will also have a feedback effect on economic instability[7].

In addition, some studies have analyzed the economic role of bank credit from the perspective of the connection between corporate conduct and digital inclusive finance. Lu et al. found, based on Chinese data, that the advancement of digital finance has affected corporate information disclosure behavior to a certain extent and indirectly affected the allocation of credit resources by improving the information environment[5].

The above studies demonstrate that traditional financial theory provides an important analytical framework for understanding commercial bank lending behavior. However, most of these studies are based on the traditional financial environment and pay insufficient attention to the context of the rapid development of digital technology. Thus, when the process of creating digital inclusive finance is ongoing, there is a need to reconsider the shift in the behavior of commercial banks in lending under new conditions of technology. The initial research primarily described the commercial bank lending behavior in the light of information asymmetry, the financial intermediation role and the macroeconomic environment. Nevertheless, as digital technology is being extensively applied in the financial sector, the bank lending models are also changing, which has prompted academia to re-evaluate the bank lending behavior through the lens of digital finance.

3 The Impact of Digital Inclusive Finance on the Volume and Composition of Commercial Bank Loans

As the use of digital technology in the financial sector continues, there is an increasing number of studies that have started to examine the influence of digital inclusive finance on bank lending. There is a view among scholars that the issue of information asymmetry can be mitigated to some degree with the emergence of digital finance, which will increase access to financial services. Ozili pointed out that digital

finance enables more groups to access financial services by reducing transaction costs and information costs, which is of great significance for expanding the coverage of financial services[4].

Against the backdrop of the development of financial technology, it has prompted traditional financial institutions to carry out digital transformation work, as Gomber et al. have emphasized in their comprehensive analysis of financial technology research. Digital technology is gradually changing the traditional financial service model and prompting financial institutions to continuously adjust their business models in many aspects, such as product innovation, risk management and customer service[4].

Against this backdrop, the emergence of digital inclusive finance has given relevant research a broad empirical foundation. Guo Feng et al. created the digital inclusive finance index, which shows that there are significant differences in the development level of digital finance in different regions of China. However, the development of digital inclusive finance has a positive effect on expanding the coverage of financial services[1].

Overall, many existing studies generally agree that the advancement of inclusive digital finance can alleviate the problem of information imbalance. It can significantly expand the scale of bank lending, prompting credit resources to be directed towards small and medium-sized enterprises (SMEs) and long-tail customer groups. This improves the allocation of credit resources. However, different studies still differ in the detailed extent of the impact and the mechanisms of action. Therefore, a concise analysis of the relevant research conclusions is necessary.

4 The Impact of Inclusive Digital Finance on the Methods used by Commercial Banks to Manage Risk and Make Credit Decisions

Beyond impacting the scale and structure of credit, the development of digital inclusive finance has prompted commercial banks to improve risk management and change their credit decision-making models. The application of artificial intelligence and big data technologies in the financial industry allows financial institutions to acquire and process more diverse customer information, significantly enhancing their ability to identify potential risks.

In their review study on financial inclusiveness and its economic effects, Mishra et al. pointed out that the development of digital finance is beneficial for expanding the coverage of financial services. It will generate spillover effects on economic development by improving resource allocation[3], and the development of the financial technology credit market provides new competition and joint ventures for traditional bank credit. The impact of digital inclusive finance on the credit decision-making mechanism of commercial banks is mainly reflected in the transformation of risk assessment methods. Traditional credit mainly relies on financial statements and collateral information, while with the support of digital technology, banks can accurately evaluate borrowers through multi-dimensional data. Including transaction behavior, payment records and operational data, data-driven credit assessment

methods help improve the timeliness and targeting of risk identification. By optimizing the credit approval process and relying on intelligent risk control models, banks can monitor loan customers in real time and achieve predictive risk management. It greatly reduces the probability of non-performing loans. Digital technology improves the efficiency of risk management and promotes the transformation of commercial bank credit decisions from experience-based judgment to data-driven decision-making.

The emergence of digital inclusive finance has altered not just how financial services are provided, but has also had a profound impact on the risk management and credit decision-making mechanisms of commercial banks. Gallego-Losada et al. pointed out through a systematic review of the literature on digital financial inclusion that research in this field is gradually shifting from a single issue of financial accessibility to a discussion of the comprehensive influence on society and the economy [10]. However, with the expansion of data scale, new issues such as data security and regulation may also arise. Therefore, future research can combine more microdata to further analyze the long-term impact of digital inclusive finance on the credit behavior of commercial banks from the perspectives of data governance, financial regulation and bank differences.

5 Conclusions

Overall, existing research has explored the impact of digital inclusive finance on commercial bank lending behavior from multiple perspectives, but there is still room for further research. On the one hand, the relationship between fintech and traditional banks remains complex, and its long-term impact on the financial system structure requires further investigation. On the other hand, with the deepening application of digital technology in the financial sector, bank lending models may continue to change. This paper systematically reviews the literature on how digital inclusive finance affects commercial bank lending behavior, based on a review of relevant domestic and international research. According to studies, the growth of inclusive digital finance has, to some extent, altered traditional financial service models and has had multifaceted impacts on commercial bank lending behavior by reducing information asymmetry, expanding the coverage of financial services, and enhancing information processing capabilities.

Inclusive digital finance not only promotes the expansion of credit volume but also drives the optimization of credit structure, enabling financial resources to be allocated more effectively to SMEs and other groups with strong financing constraints. Simultaneously, the application using technology like artificial intelligence and big data has, to some extent, improved commercial banks' risk identification capabilities, thereby improving the efficiency of credit decision-making. However, while improving financial efficiency, digital inclusive finance may also bring new difficulties like data security, protection of privacy, and financial regulation. In terms of literature, existing research has reached a certain consensus on credit volume expansion, credit structure optimization, and risk management models, but research

on the impact of bank heterogeneity and the long-term impact of digital technology remains relatively limited. Therefore, future research can further conduct empirical analyses from the perspectives of bank heterogeneity, regulatory environment, and technology application to more comprehensively understand the long-term effects of inclusive digital finance on commercial bank lending behavior.

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