

# The Competition and Complementarity between Internet Finance and Commercial Banks

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**Abstract:** *With the rapid development of Internet finance, it has already had a profound impact on commercial banks. In this context, commercial banks should change their business models and competitive strategies, and rationally use the advantages of Internet finance to promote the development of their own and China's financial market is an urgent problem to be solved. This article will analyze the characteristics and models of Internet finance and commercial banks to compare their strengths and weaknesses. Specific analysis on which aspects of Internet finance will pose challenges to traditional commercial banks, and how to deal with challenge of commercial banks. Analyze the future development direction and market positioning of commercial banks and internet finance.*

**Keywords:** internet finance, commercial bank, competition and complementarity

## 1. Introduction

As the main body of China's financial sector, commercial banks have maintained their leading position for many years. But with the vigorous development of Internet Finance in recent years, it has formed a certain impact on commercial banks. Since 2013, the Internet companies, headed by Ali group, have been fully involved in the financial industry and have challenged commercial banks in the fields of mobile payment, mobile financial management and P2P. The third party payment, represented by Alipay, has a direct impact on the payment field of commercial banks. The small loan business represented by Ali small loan affects the third party payment of commercial banks. Represented by the balance treasure, it affects the debt business of commercial banks, and promotes fund disintermediation. At the same time, the sudden emergence of Internet finance has made outstanding contributions to revitalizing the virtual economy, enhancing financial universality and enriching investment channels.

Faced with a series of challenges in Internet finance, whether commercial banks can accelerate their transformation, improve their own construction, and increase the application of the Internet and big data will be the key to whether commercial banks can cope with challenges and maintain competitiveness. At the same time, commercial banks can learn from the development of Internet finance with new development models, and force commercial banks to carry out reform and optimization. The traditional mode of commercial banks also provides a reference model for the emerging Internet finance, and the complementarity and cooperation between them will be more conducive to the development of the two. Under the background of China's financial market reform and innovation, it is of great theoretical value and practical value to explore the relationship between Internet finance and commercial banks and realize the benign interactive development of the two.

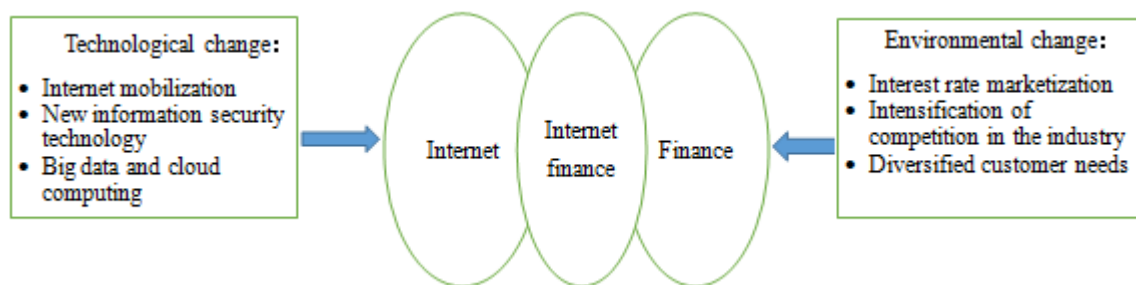


Figure 1: Integration of finance and the Internet

## 2. Literature Review

In the study of Internet Finance by foreign academics, the Internet finance is called the electronic finance, which means the application of the Internet and the related IT innovation technology to the financial system. The United States is the earliest and most developed country in the world of Internet finance. In the middle of 1990s, various types of Internet companies were set up in the United States. Franklin Allen, James Mcandrews and Philip Strahan<sup>[1]</sup>

believes that the application of electronic finance will accelerate the financial disintermediation in the financial services industry and promote the integration of banking industry. Lihui Lin, Xianjun Geng and Andrew Whinston<sup>[2]</sup> believes that electronic finance blurs the boundaries between different financial institutions, such as banks, securities and insurance, which aggravates the competition in the financial industry and makes it possible for financial products and services to be innovated continuously. James Mcandrews and Strahan<sup>[3]</sup> recognized

that Internet finance has the functions of promotion of financial disintermediation, the consolidation of banking industry and the credit acquisition in the field of financial services. Facing the fierce competition in the financial industry, the traditional financial institutions should change the competitive advantage of the strategic positioning of the physical network, increase the investment in the research and development of the network financial products, apply more information technology to the financial products and services, and form the differential advantage of the financial products and services. In the 1990s, Chinese banks began to use Internet technology to carry out online banking business.. Dai Xianfeng <sup>[4]</sup>believes that the rapid development of Internet finance in China is mainly due to the long-term "financial suppression" status of China's financial system and the lack of supervision over the "Internet Finance" business and related businesses. Xie Ping <sup>[5]</sup>believes that Internet finance is subversive to the traditional financial system. The progress of Internet finance depends on the development of Internet technology. Gong Xiaolin <sup>[6]</sup>explained the influence of Internet Finance on commercial banks from the profit model. In the short term, Internet finance will not shake the profit mode of commercial banks. In the long run, the commercial banks need to use the Internet finance model to get deeper development. Qiu Xun<sup>[7]</sup>, taking the balance of treasure as an example, focuses on the impact of Internet funds on commercial banks, which mainly impact on the market status of commercial banks, current deposits, financial products and fund sales. Jia Nan<sup>[8]</sup> analyzed that Internet finance products and services have a strong "long tail effect", which can gather a large number of customers with small capital, and Internet financial products are developed from the perspective of customers' use and habits. Therefore, users can make use of scattered time and money to do financial management, improving customer experience and value.

### **3. The advantages of Internet finance and traditional commercial banks**

#### **3.1 Advantages of Internet Finance**

Although the current Internet finance companies are mixed, the whole society is still arguing about the development of Internet finance. But judging from the current pattern and development trend of various types of Internet finance, it does not change the core essence of finance, and the risk and externality of finance still exist. The changes brought about by Internet finance are mainly reflected in the penetration of Internet factors into finance and the innovation of business models.

1. Internet finance is convenient and efficient, while reducing the asymmetry of market information. Internet finance relies on the Internet platform to provide financial services for customers. Customers can get all kinds of financial services at anytime and anywhere without the restrictions of time and place, including transactions such as payment, transfer, investment and financing, and purchase

of wealth management products. The fast and convenient financial services of Internet finance have improved the efficiency of the operation of the financial system and provided great convenience to customers. The foundation of the financial industry is information asymmetry, and the purpose is to support the development of the real economy. Internet finance basically relies on data, and its development process will continue to promote data opening and sharing. In the era of Internet finance, more and more human behavior is transferred from offline to line. In the online business, all aspects such as application, matching, transaction and payment are traced and traceable, and this change alleviates the information asymmetry. The Internet Finance alleviates the information asymmetry mainly in three aspects: one is to reduce the cost of information search, the other is to make information cross the limits of the subject and the region, and the third is to force the transaction subject to self-discipline and integrity.

2. Internet finance significantly reduces transaction costs. With the rapid development of information technology and the exertion of network effects, the overall transaction cost in the Internet has been greatly reduced. On the one hand, the price of hardware equipment follows the decline of "Moore's law". The speed of network broadband transmission is rapidly improved with the "Gill's law". The reduction of hardware costs and the improvement of network broadband have led to an exponential increase in the coverage and scope of information. For example, Ali financial based on customer transaction information, with the help of large data analysis, can accurately and quickly assess the customer's credit status, greatly improved the efficiency and saved the cost of approval of the loan. The cost of settlement resulting from the third party payment has been greatly reduced. Internet finance allows customers to obtain better financial services at a lower cost. The decline in transaction costs has a significant impact on the existing financial services model. On the one hand, the decline of computing cost promotes the efficiency of information processing. With the continuous improvement of computing power, the new computing technology represented by cloud computing has improved the ability of information processing, thereby improving the efficiency of asset risk pricing and asset risk management. On the other hand, the decline in network transaction costs has increased the availability of financial services. With the popularity of mobile communication networks, individuals can enjoy financial services through handheld terminals in real time, which promotes the expansion of financial coverage.

3. Internet finance's application of big data. Big data analysis is the foundation of Internet finance. In the process of Internet application, a large amount of data will be generated to form big data. The financial industry has always been a producer and user of big data. The accounts, prices, transactions and investment risks involved in the financial system can all be the source of the data. The financial industry also relies heavily on data for risk assessment and asset pricing. In the Internet finance industry, big data as a core asset, through the analysis and application

of big data, financial institutions will better understand customers, establish good relations with customers, and accurately marketing of customers. Big data analysis has gradually become an important analytical means of Internet finance, which has had an important impact on the way of financial services. First, big data will affect the bank's credit risk management system. At present, banks need to set up a set of professional risk control system relying on professionals to manage credit risks. Once a single individual's multi-dimensional information data is collected and recorded, it can be relied on data extraction, processing and analysis to reduce information asymmetry, which will significantly improve the effectiveness of credit risk management and reduce management costs. Second, big data will enhance the bank's financial marketing service capabilities. Abundant customer behavior data can help banks' Market Research and demand forecasting, thus providing a basis for precise positioning and marketing of financial services.

4. The Internet has promoted the rise of bilateral platforms. Cross-border competition through the creation of bilateral platforms is the core model of Internet finance. In the Internet era, bilateral platforms have swept the world at an incredible speed due to the externalities of network effects and low replication costs. The bilateral platform not only gradually subverts the linearized industrial organization model, but also gradually forms a platform-based ecosystem by integrating different service providers. The emergence of bilateral platforms has had a profound impact on the financial services model: First, the platform has a natural monopoly, which is different from the more decentralized competition order of the traditional offline industry. The information technology-related industries usually show the law of winning the whole, that is, the industry's first enterprise accounts for 70% of the market share, the industry's second enterprise has a 20% market share, and the remaining competitors can only account for 10% of the market. Therefore, once a platform has formed a leading enterprise in the industry, the cost of shaking will be very high in the short term. Second, the bilateral platform has strong data recording capabilities, it is an important data production method. Take the electronic business platform as an example, the complete track of consumers' buying behavior, including information flow, logistics and capital flow, is automatically recorded by the platform side. Third, the platform has a greater driving force to integrate various financial services. The main function of financial services is to undertake the transfer payments and supplements of the flow of funds in order to facilitate the transaction. In order to provide one-stop service, the platform has great driving force to integrate the capital flow, so as to enhance the stickiness of consumers to the platform. Fourth, the platform side has established the trading rules for customers within the platform. On the platform, financial institutions are often passively accepting the situation and are easily channelization or post platform.

### **3.2 Advantages of traditional commercial banks**

1. Huge asset scale and abundant customer resources. Despite the rapid development of Internet finance companies in recent years, there are still large gaps in the scale of assets and the scale of transaction compared with commercial banks. Banks also operate deposit and loan business, which enables banks to have the function of inter-temporal financing. Moreover, the scale of funds of commercial banks is huge, so the bank's deposit and loan business has a huge impact on the financial market. Under the condition that the bank liabilities constitute the main body of the credit money, the bank system has gained the ability to expand the credit loan beyond the source of the deposit, which further strengthens the position of the commercial bank in the financial system. Commercial banks have a much longer history than Internet finance companies, and they have wide range of business scope that Internet financial companies can hardly match. Commercial banks have accumulated a large number of high-quality customer resources in their long-term development process. Commercial banks maintain good and stable relationships with many large corporate customers through relationship pricing and other strategies. With the promotion of the bank card collecting market, the bank has mastered a number of terminal service providers, and the banks have a large number of brand service enterprise resources such as hospitals and schools. In recent years, with the continuous promotion of commercial banks' electronic banking business, the number of their customers has also increased significantly.

2. The risk control system is perfect. An important feature of the financial industry is risk management. Therefore, risk management has been running through the development of commercial banks. In terms of risk control, commercial banks have huge advantages over internet financial companies. Under the fierce competition environment and stricter external supervision constraints, risk management capability has become one of the core capabilities of commercial banks. Commercial banks have continuously improved their understanding of operational risks, and their risk management processes are continuously optimized. With the continuous development of banking business and the intensification of market competition, the risks of banks are also complicated and changeable. Only by strictly controlling various risks can banks maintain their competitiveness in the same industry. The financial model established by Internet payment companies using big data cannot grasp the flow of funds of lenders. Just relying on data for credit risk judgment may lead to judgment errors and increase of default rate, resulting in a large number of bad debts.

3. The function of the banking system on macroeconomic regulation and control. The central bank has the functions of issuing currency, controlling inflation, and maintaining economic growth, while the banking system serves as the main channel for transmitting macroeconomic policies and regulating the market economy. The traditional commercial

banking system has a core position in both the financial sector and the social credit system. Despite the rapid development of Internet finance, it is only a supplement to the existing banking credit system rather than a new credit system. Banks have been supported and recognized by the existing legal system in terms of creating money, saving, paying, trading and settling accounts. As a part of the government's macroeconomic regulation and control, commercial banks play a role that is difficult for non-bank financial enterprises to substitute.

#### **4. Internet Finance and Commercial Banking Competition**

1. Marketization of investment and financing activities. The logic of the existence and operation of commercial banks stems from the theory of financial intermediation. Under the condition of information asymmetry, commercial banks connect capital supply and demand through their information advantages. Internet financial enterprises rely on big data and cloud computing, and use network transaction data to conduct risk assessment, which greatly reduces the cost of information collection, customer contracting and post-supervising in loan transactions, and alleviates the information asymmetry in the transaction process to the greatest extent. From the perspective of capital demanders, the development of Internet finance makes it easier and faster to obtain funds. From the perspective of fund providers, the return of Internet finance is generally higher than that of commercial banks. Capital holders can achieve capital maintenance through internet financial enterprises. The development of internet finance has made investment and financing behavior more market-oriented.

2. The marginalization of commercial bank payments. Internet finance forms a disintermediation effect through third-party payment. The POS payment system built by commercial banks and China UnionPay plays a key role in traditional payment settlement. However, with the development of Internet finance, the third party payment, represented by Alipay, has formed a huge challenge to the traditional payment and settlement of commercial banks. The third party payment has replaced the payment and settlement function of the bank in some respects, especially in the field of quick and small payment, the third party payment has a strong advantage. First, third-party payments use the big data technology to make transactions transparent. Secondly, the use of mobile communication technology for payment is more convenient, which greatly facilitates both parties to the transaction. Finally, mobile payments can provide a process-free inter-bank transaction service that enhances user stickiness. The launch of the "Online Payment Inter-bank Clearing System" of the People's Bank of China has also greatly promoted the development of third-party payment. Customers only need to open an online banking business can control the funds in all their accounts through the "Online Payment Interbank Clearing System. At the same time, as the third-party payment platform moves to the front end of the payment process. Internet

finance companies can use their mastery of customer consumption, procurement, settlement and other information combined with big data and artificial intelligence technology to analyze the customer's consumption preferences, asset status, even health status. Internet financial companies use their own information to provide customers with more high-quality and convenient financial services, it can enhance customer stickiness. As the representative of third-party mobile payment transactions, Alipay accounts for 54% of the market share, while the offline payment giant UnionPay has a small market share.

3. Diversification of investment in financial products. With the promotion of Internet financial wealth management products, the investment direction of wealth management products has become more diversified, and it has also had a huge impact on bank wealth management products. In 2013, Alipay and Tianhong Fund jointly launched the balance treasure, which had a huge impact on commercial banks. An important feature of internet finance is the diversification of products. With the gradual popularization of Internet wealth management products, investors will be more diversified in their choice of wealth management product.

#### **5. The Complement of Internet finance and Commercial Banks**

1. The beneficial impact of internet finance on commercial banks. The rapid development of Internet finance has had an impact on the traditional business of commercial banks, but it has also brought new vitality to commercial banks. Internet finance has increased the incentives for commercial banks to innovate, making commercial banks Internet-based. When dealing with competition from internet financial companies, commercial banks will inevitably make changes to facilitate customers and reduce costs. Commercial banks expand their Internet related businesses while optimizing their existing businesses, so that they maintain their original customers and acquire new customers. The universal financial concept of Internet finance has also changed the traditional thinking of commercial banks, making it aware of the importance of small and micro enterprises and individual customers and changing their traditional customer orientation. Nowadays, the loan interest rate has been fully marketized, commercial banks must pay attention to small and micro enterprises and individual customers in order to maintain customers' market expansion. Commercial banks need to learn from the P2P operating model and establish their own online loan platform. The development of Internet finance has brought Internet technology to commercial banks. Technological innovation will promote the concept innovation and mode innovation of commercial banks, and at the same time make commercial banks more closely linked with various economic entities.

2. Internet finance and commercial banks complement each other in customer positioning. The financing model of internet finance has established a credit risk evaluation system based on cloud computing and big data analysis. It relies on the P2P online loan platform to break through the



time and geographical restrictions, and can greatly satisfy the loan demand of small and medium-sized enterprises and individual customers. As an important participant in the financial market, commercial banks prefer state-owned enterprises and large private enterprises with high credit ratings and strong assets. For small and medium enterprises and individual customers, because of their small demand for funds, frequent capital turnover, low credit rating and large default risk, commercial banks need to conduct detailed investigation, credit rating, mortgage and so on to control their bad loan rates. Therefore, the procedures are complicated, the loan time is long or the loan is refused. The difference in customer positioning between Internet finance companies and commercial banks enables the mutual development of both parties to meet the needs of various customers in the financial market and promote economic development. At this stage, China's financial market is still relatively imperfect. Commercial banks and Internet finance will play their respective advantages and jointly promote the development of financial markets.

3. The supporting role of commercial banks in the development of Internet finance. Internet finance relies on cloud computing, big data and other technologies to achieve rapid development, but it is still inseparable from the support of commercial banks. First, the imperfections of commercial banks provide space for the development of Internet finance. Second, Internet finance transactions are not completely separated from commercial banks. For example, banks provide settlement systems for third-party payments. Finally, Internet finance can use commercial banks to increase their credit and control their risks. At present, due to the lack of industry-standard credit calculation methods, Internet finance increases the operational risk and operating costs of the platform. Banks with a core position in the financial industry have a relatively complete risk prevention system. When Internet finance attracts a large number of users and transactions, it is especially important to control customer risk and maintain the platform. Therefore, Internet finance companies learn the credit evaluation system of commercial banks, which can optimize the credit evaluation system of the online loan platform and reduce its unknown risks.

## **6. Policy Recommendations to Promote the Joint Development of Internet Finance and Commercial Banks**

1. The government should promote the optimization of the financial industry structure and create a healthy competitive environment for Internet finance and commercial banks. The development of Internet finance has promoted the extension of the financial industry from offline to online. The development of Internet finance is not only the trend of technological development, but also satisfy the consumer's consumption habits. It also changes the traditional business model. At the same time, the rapid development of Internet finance also reflects the rigid demand and deficiency of domestic financial market. In the process of collision and integration between Internet finance and commercial banks,

the government and regulatory agencies should actively encourage the development of Internet finance, improve the regulatory system of Internet finance, and guide commercial banks and Internet finance to form healthy competition and accelerate the Internetization of commercial banks. The development of Internet finance has challenged the monopoly position of commercial banks, which has forced the reform of interest rate marketization and promoted the development of financial markets. The government should help guide the adjustment of the Internet financial enterprises to their own positioning, promote the interaction and integration of commercial banks and Internet finance, and form a financial system with commercial banks as the main body and Internet financial enterprises as the auxiliary.

2. Regulators must guard against industry risks and promote fair competition. As an emerging industry, Internet finance attracts a large number of participants with its low barrier to entry, good development prospects and high profit margins. The Internet financial industry is a high-risk industry. In addition, some low quality enterprises increase the risk of the industry. The emergence of Internet finance fraud companies such as e-Tibet and Jinyu Hengtong reflects the chaotic development of the Internet financial industry and the weak supervision of the government. With the continuous development of Internet finance, the existing industry regulatory rules can no longer meet the needs of the market. Therefore, it is the primary task of the current regulatory authorities to change existing regulations and formulate new regulatory rules to ensure fair and orderly market. Regulators should implement moderately loose supervision methods for Internet finance companies, respect market rules, and not easily ban platforms, giving them sufficient room for development. The regulatory agency should guarantee the principle of fair supervision in the financial market, which can not only promote the development of the Internet financial sector, but also enable the commercial banks to maintain sufficient business motivation. Perfect supervision system can not only promote the orderly and healthy development of the market, but also enhance consumer confidence in the Internet financial market.

3. Strengthen the government's guidance on the development direction of Internet finance. In the current development of Internet finance, there are mainly microfinance, third-party payment, financial management and other fields. In the future, the development direction of Internet finance is to develop and consolidate these areas, so as to make Internet finance more professional and refined. In the modern financial field dominated by commercial banks, although the rapid development of Internet finance has had a certain impact on commercial banks, it is difficult to subvert the traditional commercial banking model. The development of Internet finance is only a supplement to the functions of commercial banks. Taking the online lending platform as an example, due to the lack of supervision at this stage and the lack of relevant legislation, its low entry barrier has caused a large number of participants to enter the industry, resulting in vicious and disorderly competition.

Therefore, the government has strengthened guidance on the direction of Internet finance development, established a good risk evaluation system, and promoted the professional and refined development of the online loan platform. Although some of the modern online lending platforms have large investors, their main customers are still small investors. With the clear positioning of the online lending platform, it is mainly divided into the field of microfinance.

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