



VAASAN AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES

Siqi Jiang

INTERNET FINANCE FOR COMMERCIAL
BANK DEVELOPMENT AND
COUNTERMEASURES OF INDUSTRIAL
AND COMMERCIAL BANK OF CHINA

Business Economics
2018

VAASAN AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES (font size 12)
Name of the Degree Programme (font size 12)

ABSTRACT

Author	Jiang Siqu
Title	Internet Finance for Commercial Bank Development and Countermeasures of Industrial and Commercial bank of China
Year	2018
Language	English
Pages	41 + 3 Appendices
Name of Supervisor	Rosmeriany Nahan-Soumela

With the high-speed innovation of Internet technology, the connection between the Internet industry and the financial industry has become increasingly closer. As the result of rapid development of Internet finance, the traditional commercial banks have been confronted with severe challenges.

Therefore, the objective of this study is to do a research of internet finance for commercial bank in China through summarizing the development of Internet finance at different stage, the impact on traditional commercial banks. Take industrial and commercial bank of China as an instance, to explore the insufficiency of commercial banks. And ultimately purports to offer corresponding suggestions for commercial bank.

In the theoretical framework, it presents the concept and characteristics of internet finance, the development of internet finance at home and abroad are presented, and briefly introduced the main functions and business models of internet finance. It mainly applies the basic theory of internet finance including the long tail effects theory, internet finance development theory and financial innovation theory. Specifically, it discussed internet finance on commercial bank and analyzed its development based on the theory.

In empirical research, qualitative method was employed in the study. This study collected data from financial development reports of banks in recent years. The industrial and commercial bank of China was chosen to analyze Internet Finance for Commercial Bank Development. This study profoundly explained the practice of commercial banks in the development of internet finance and elaborate the countermeasures of commercial banks under the Internet finance environment.

In conclusion, in the development of Internet finance, it is not only necessary to pay attention to imagery problems, but also to focus on long-term development. Commercial banks should comply with the development of Internet finance. The countermeasures for the development of commercial banks to deal with the development of Internet finance were presented at the end the study.

Keywords Internet Finance, ICBC, China

CONTENTS

ABSTRACT

CONTENTS.....	3
LIST OF FIGURES AND TABLES.....	5
1 INTRODUCTION.....	6
1.1 Background of Research.....	6
1.2 Research problems and objectives	7
1.3 Structure of study	8
2 THEORETICAL FRAMEWORK	10
2.1 Internet finance description	10
2.2 The development of internet finance in china.....	11
2.3 The Impact of Internet Financial Model on Commercial Banks	13
2.4 The long tail effects theory	20
2.5 Internet finance development theory.....	21
2.6 Financial innovation theory	22
3 RESEARCH METHODOLOGY	24
3.1 Data collection	25
3.2 Data analysis process.....	25
3.3 Validity and reliability.....	26
3.4 Limitations	26
4 EMPIRICAL ANALYSIS	27
4.1 The introduction of internet finance on Industrial and Commercial bank of China 27	
4.2 Regression model definition	28
4.3 Variables selection	28
4.4 Sample data selection and model establishment.....	30
4.5 Regression result	31
4.6 The analysis of regression result.....	32
4.7 Summary of Empirical Research Findings.....	32
5 CONCLUSION	35
5.1 Recommendations for the Commercial Bank.....	35
5.2 Direction for further study	41

REFERENCES.....	42
-----------------	----

LIST OF FIGURES AND TABLES

Figure 1. The scale and tendency of third-party payments (Analysis 2016 modified).. 15

Figure 2. Peer-to-Peer Lending Trading Volume in China (WDZJ 2017 modified)..... 17

Table 1. The development of foreign internet finance..... 11

Table 2. Model variables, metrics and definitions.....30

Table 3. Regression result from Eviews.....32

1 INTRODUCTION

Along with information technology constant development, the Internet is a product of the continuous development of information technology. Once the Internet has emerged, it quickly penetrates into all areas and industries of the world and has a profound effect on social development and people's lives. Internet finance involves two industries, namely, communication networks and finance, and the emergence of Internet finance breaks the mutual independence of the traditional fields of communication and finance, resulting in convergence and greater impact on the financial industry. The industry giant Alibaba has already joined the financial market competition several years ago. In recent years, new online financial tools emerge, such as Peer-to-Peer lending, online payments, and financing for projects through crowdfunding, etc. It is in a very short period of time that it has a large number of supporters.

1.1 Background of Research

In middle of 2013, Alipay and Tianhong Fund jointly launched the first Internet financial management tool in China, Yu'E Bao, which has hundreds of thousands of purchasers every hour. In the following months, Baidu launched its financial management tools, BaiFa, has made amazing achievement than Yu'E Bao. By the end of 2013, people's focus on online financial tools had shifted from Yu'E Bao and Baifa to WeChat red envelopes. During the Spring Festival alone, there were more than 200 million people using WeChat red envelopes.

After 2014, Internet finance has further developed. Alibaba, Tencent Payment, and JD.com have entered the public's awareness. They have brought tremendous challenges and challenges to the development of the traditional financial industry; Industrial and Commercial bank of China (ICBC), China Construction Bank(CCB), and Ping A Bank. Then they have introduced similar Internet financial services, such as Ping An Bank's online supply chain financial services and (China Merchants Bank of China) CMBC's e-commerce platform.

The rapid development of Internet finance has caught much attention of the Party Central Committee and the State Council and has provided policy support. At the Third Plenary Session of the 18th Central Committee in November 2013, it officially proposed the

development of “Inclusive Finance”. By means of the Internet technology, it actively developed financial products to satisfy the needs of customers for financial products. At the same time, this concept was written in the government work report. In 2014, Prime Minister Li Keqiang also emphasized in the government work report the importance of internet financial development for economic restructuring and industrial development; in 2015, the first time the China Banking Regulatory Commission adjusted its organizational structure, the Ministry of Finance has been established to manage and supervise the emergence of new products and marketing models for Internet finance.

In March 2018, the transaction volume of the Peer-to-Peer lending was 25.2 billion EUR, which was 13.35% higher than that in February and a decrease of 23.63% year-on-year. With the major platforms returning to normal bidding after the Spring Festival holiday in March, there has been a significant rebound in the volume of online loan transactions, but it can be seen that the transaction volume in March is still less than the average level in the past year (WDZJ 2018). As of the end of March 2018, the cumulative turnover of the Peer-to-Peer lending has reached 0.89 trillion EUR.

Internet finance cause tremendous impact on commercial banks. Some platforms such as Weibo and WeChat promoted more extensive financial publicity and dissemination. “Yuebao” caused commercial banks a hard time in 2015; The unique business of the original commercial bank was constantly invaded by internet financial products. The monopoly position of the traditional commercial bank was not only broken, but also greatly affected. Therefore, in the face of the impact of internet finance, how commercial banks should respond and whether they can take an advantage in market competition has become a core problem that many commercial banks have to face and solve. Therefore, based on the development of Internet technology, this study introduces and analyzes Internet financial products, discusses the impact of Internet finance on commercial banks in depth, and provides measures and recommendations for commercial banks in the new normative financial transformation.

1.2 Research problems and objectives

This study deeply analyzes the financial impact of the Internet on the commercial bank and the reasons puts forward some safeguard measures to solve the commercial banks in

the process of dealing with financial problems in the Internet Environment. Hence, in this study, the aim of the research is the following:

- 1) To study the current situation of internet finance, which include:
 - a) The concept and development of internet finance.
 - b) The main functions and business model of internet finance.
 - c) The basic theories adopted in the research of the study.
- 2) To study the impact of Internet Financial Models on Commercial Banking Business in China and describe the impact of third-party payment, Peer-to-Peer lending, big data finance, information-based financial institutions, and internet financial portals on banking services.
- 3) To study the commercial Banks' response to the Current Situation of Internet Finance-take Industrial and Commercial bank of China (ICBC) as object .
 - a) ICBC's Internet Financial Business Development.
 - b) The impact of internet finance on ICBC.
- 4) To study the commercial banks' countermeasures to Internet Finance in China.

1.3 Structure of study

The study is divided into four parts.

Chapter 1 consists of the introduction of the research, and includes the background of current internet finance, the main objectives of this study, the limitation this research has and an overall view of this study.

Chapter 2 presents the theoretical part. It mainly introduces the concept and features of internet finance, the development of internet finance at home and abroad, briefly introduces the main functions of internet finance, business models, and the strategic significance of internet finance, the influence of internet finance on commercial banks, and specifically elaborates the basic theories adopted in the research of the study.

Chapter 3 describes qualitative research which is including the literature research method , take Industrial and Commercial bank of China (ICBC) as object for empirical analysis. Specifically , it introduces the development strategy of ICBC Bank under the Internet financial environment. It mainly describes the practice of ICBC Bank's development of Internet finance and elaborates on the measures of ICBC Bank under the Internet financial environment. Lastly, it analyses the factors which is likely to influence commercial bank by examine the potential factors.

Chapter 4 focuses on the conclusion part which includes two parts. The first part is the recommendations based on ICBC. The second part is the instructions of further study according to the case study and theoretical research.

2 THEORETICAL FRAMEWORK

Theoretical frameworks are critically important to all of the study, quantitative, qualitative, or mixed methods (Lederman 2015). This chapter aims to elaborate on the concept and characteristics of internet finance, the development of internet finance at home and abroad, briefly introduce the main functions of internet finance, business models, and the strategic significance of internet finance, and specifically elaborate on the basic theories adopted in the research of the study. The study will further elaborate on the impact of internet finance on commercial banks.

2.1 Internet finance description

Since the 1990s, the Internet in countries such as the United States has developed rapidly, and Internet finance has also been booming.

Financial services such as online banking, online insurance, and internet banking were produced. With the continuous development of internet finance, online banking has become more mature, and online insurance and internet securities have developed rapidly. Electronic money and online payment have gradually facilitated people's lives and are favored by many people.

At the same time, the Internet financial model has also developed steadily, forming a variety of new types of financial products and financial services. For example, the Peer-to-Peer lending platform, which reflects the concept of inclusive finance, began to appear in the financial markets of countries such as the United States. In 2005, Zopa Corporation was established in the United Kingdom, attracting many people's investment.

Combined with relevant official data, it can be seen that in 2018, transaction value in the "Crowdfunding" segment amounts to US\$9,370million (Statista 2018). In April 2011, the United States publicly enacted the JOBS Act to encourage SMEs to use crowdfunding to ease their financing difficulties. From a vertical perspective, the development of foreign Internet finance goes as in the figure below:

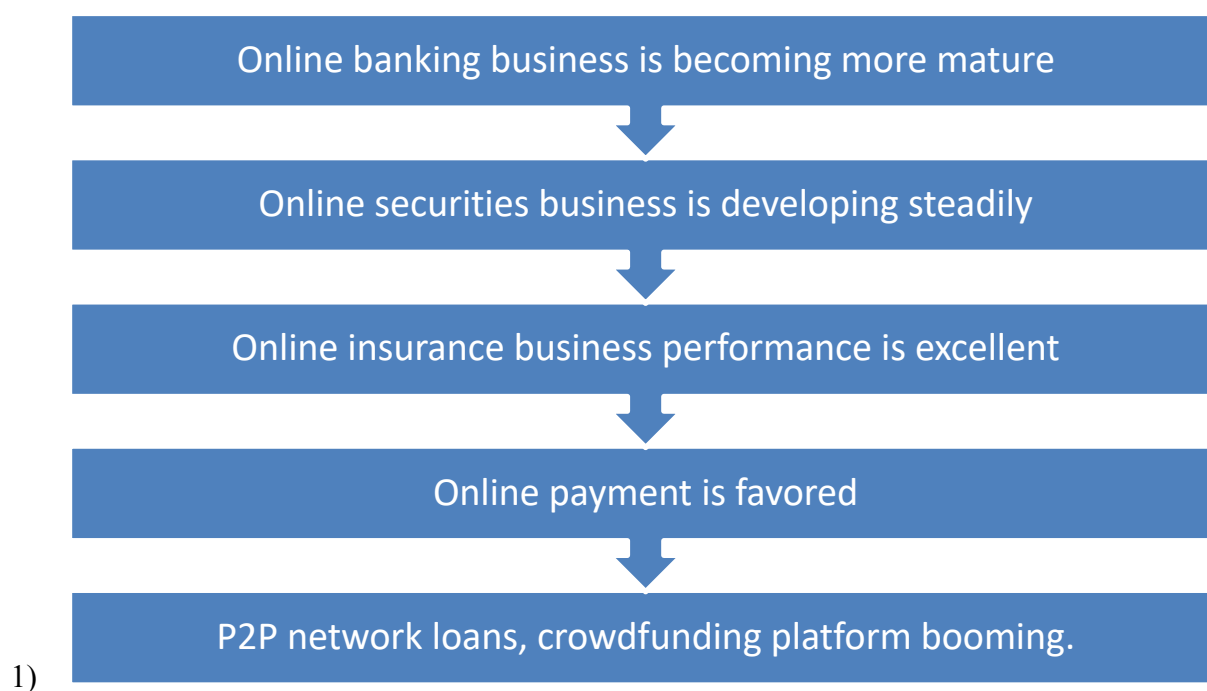


Table 1. The development of foreign internet finance

2.2 The development of internet finance in china

In terms of the development of a country, the development of Internet finance started relatively late and only developed a short time. Until 2012, Xie Ping, a senior executive of China Investment Securities, put forward this concept for the first time. He believes that regardless of whether it is "Internet finance form" or "Internet into the capital market," the market should be in the environment of more balanced information., and it depends on one side of the funds intermediary, which is different from the form of direct financing. On the other hand, there is another form of financial financing which is different from the form of indirect financing. As a result, the professionalism of the financial industry has been greatly weakened, and its related system technologies have also been replaced. In addition, this form of market participants is more generic, which in turn makes the status of both parties more equal. In his perspective, the new financial form can be divided into three key parts: information disposal, payment methods, and resource allocation (Xie Ping 2012) .

In 2012, Internet finance was first put forward and received extensive attention. In fact, Internet Finance in China can be traced back to the middle of the 1990s. Therefore, the development of Internet finance can be divided into the following stages:

1) The initial integration of network and finance.

In the 1990s, after the emergence of the Internet, it was widely used in all areas. Including the financial industry, commercial banks uses Internet technology and mainly set up online interactive platforms to provide businesses such as account opening, transfer, and inquiries. Securities institutions mainly conducted market quotation and data services for Internet platforms.

2) Internet finance in its infancy.

From the beginning of the 20th century to 2012, was the initial development period of internet finance (Xie Ping 2012). At this stage, the Internet was popularized, Internet technology was continuously innovated, the technical bottleneck restricting the development of the Internet was solved, and people's concepts were greatly changed. Mobile payment, big data, cloud computing, and social networking had entered people's lives and were widely used.

Because of the financial advantages of financial companies, Internet technology is more widely used in financial companies. At this stage, e-commerce had developed rapidly, and the proportion of online shopping in total sales had rapidly increased. The development of e-commerce had a greater demand for third-party payment, which had led to the rapid development of third-party payment.

Therefore, Internet finance was first accepted by third-party payment. In order to standardize the development of third-party payment, the People's Bank of China issued licenses to Internet finance companies from 2011 onwards, and the third-party payment agencies became faster and more standardized. In the development stage, the development of third-party payment greatly promoted the development of e-commerce in China.

3) The flourishing of internet finance

The concept of internet finance in 2012 was formally proposed.

Internet finance was explosively developed in 2013. Many new business models emerged in this year, such as Peer-to-Peer, crowdfunding. The traditional financial industry was continuously integrated with the Internet to form a traditional financial industry. The industry was becoming Internet-based, building its own online platform, and transforming

traditional business models into networks. For instance, ZhongAn Online - the first professional online insurance, Tencent Bank - the first bank without a physical store.

In the case of independent innovation by enterprises, the government has continuously formulated policies to encourage the development of Internet finance. In a report on the work of the government of Premier Li Keqiang in March 2014, Internet finance emerged for the first time. Premier Li Keqiang acknowledged the important role of Internet finance and encouraged its healthy development to provide services for the rapid development of the real economy (Li Keqiang 2014).

2.3 The Impact of Internet Financial Model on Commercial Banks

Internet entered a stage of rapid development in 2013, and that year was called "the first year of Internet finance."

In the same year, Tianhong Fund quickly developed into the top ten national fund companies with the help of Yu'e Bao. JieDaiBao was also popular among the people because of its high interest rate. The standardization of payment business licenses has standardized the intermediary payment organizations. From the perspective of each aspect, Internet finance in China has developed rapidly.

According to the development status of Internet finance at this stage, this study divides the Internet finance business into three categories. One is investment and wealth management, the other is network financing, and the third is third-party payment. The status of Internet finance is on the basis of development of internet finance.

- **Third-party payment**

In recent years, domestic Internet finance has developed rapidly, especially third-party settlement services. The remote mobile network settlement service in third-party payment is a key development content, including mobile settlement and network settlement, such as Alipay (Qian Yang 2017). This type of settlement has significant advantages. It is convenient and quick to pay, the cost of the settlement terminal is low, the transfer operation is rapid, and the charge is low. As a result, the transaction volume of such settlement platforms has grown substantially, involving a huge amount of funds. According to the statistics of relevant authorities, since 2010, transaction volume in the third-party network

settlement market has increased by approximately 129.207 billion in five years (Pan Jing 2013) .

According to the development trend of the mode, after three years, the growth of third-party online payment in China has increased. The speed has dropped, and that is the amount of third-party online payment market that is expected to reach RMB 33.51 trillion (Pan Jing 2013) .

In short, under the support of Internet technology, third-party settlement business has developed to a certain stage. With the update of information technology, the offline market may also become an important area for competition.

The development of third-party settlement services has increased the income of related departments. Outwardly, third-party settlement services can bring higher costs and benefits, and can raise funds through Alipay accounts. The development of settlement services includes not only settlement, operations like transfer and repayment can also bring a lot of information. With the increasing emphasis on credit, when acquaint with the reputation of customers, commercial banks can more accurately grasp the safety of funds and reduce the expected risks. In addition, commercial banks can understand the customer's propensity to consume, preferences, etc. from the data, which is beneficial to customers to provide excellent services, in this case, it has attracted a large number of customers and has caused serious business pressure on traditional financial institutions (Chen Lin 2013).

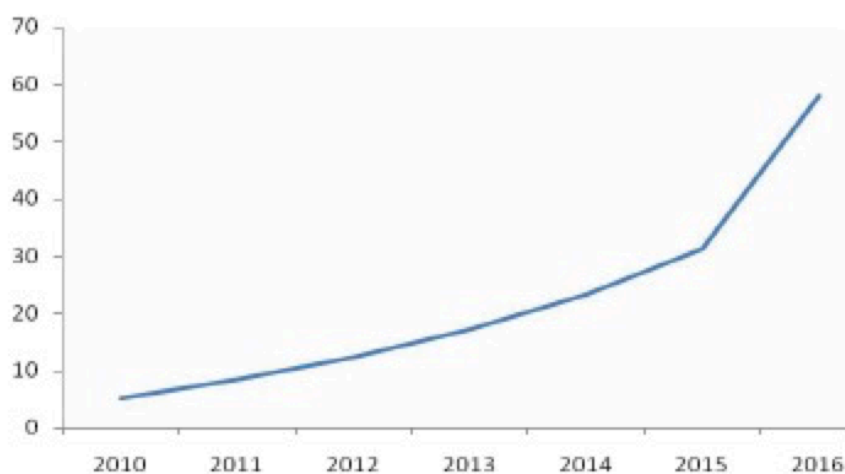


Figure 1. The scale and tendency of third-party payments (Analysis 2016 modified)

In fact, commercial banks and third-party payments have different advantages in different aspects. With the continuous development of third-party payment, it has had many influences on commercial banking business. The main contents are as follows:

- 1) The third-party payment services operated by non-financial institutions have gradually become one of the main contents of the financial services industry, alleviating the blind spots of traditional banking services and effectively enhancing the flexible use of social funds. At the same time, since the emergence of third-party payment services, the payment chain of banks has gradually shifted to the behind-the-scenes, setting off a new round of financial reforms, broadening the field of service products and creating new economic growth points.
- 2) The rapid development of third-party payment has, to a certain extent, promoted the development of the banking industry in the direction of e-commerce. Financial institutions have placed customer experience and service quality at the center of development. For example, at present, domestic commercial banks have begun to gradually implement the application of Internet technology, so as to achieve financial innovation. Taking China Merchants Bank's mobile wallet as an example, its launch quickly occupied the market share of mobile payment. In addition, the four major banks in China have also strengthened their research on science and technology and launched their own innovative products.
- 3) The traditional business of commercial banks in China has always been the development of major financial products such as funds and insurance, but third-party payment, with its fast payment characteristics, has also launched products such as funds and insurance, which accounted for the market share of commercial banks in fund agency sales. As can be seen from in figure from the 4th quarter of 2015 to the 4th quarter of 2016, the 3rd payment in the fund transaction has rapidly risen from 13.4 to 20.5% and has gradually increased. This will cause a huge pressure on the commercial bank's fund agency business (Zhang Lianbiao 2013).
- 4) With third-party payment, the share of banking intermediary business has become more intense. From the perspective of content, insurance agency sales, fund agency sales, and payment and settlement services are the major components of the

intermediary income. Third-party payment directly impacts the sales pattern of funds based on bank sales by virtue of convenient payment speed and lower rates.

- Peer-to-Peer lending

This model mainly focuses on the needs of both parties through the information platform to concentrate fund providers and demanders into one market for transactions. People with financial strength and those who need funds often do not match, and the Peer-to-Peer platform solves this problem. Platform, the respective needs of both parties have been met.

In order to diversify risk, the fund provider lends its funds to multiple entities. The borrower analyzes the proceeds and deadlines of the borrower's fund requirements through the information platform and selects the most suitable for the lender's information. The product. At present, there are two modes of Peer-to-Peer lending, one is a pure online mode, in which the borrower and lender conduct online identity authentication, network authentication, and bank account details, and through the above information, the platform carries out its qualifications. After the review and approval, the lender publishes information on the platform, borrowings and loans are realized online, and no offline audit is required. The second mode is a combination of offline and online methods. After the online application for the loan is passed, the qualification of the customer needs the site platform or the agent to perform the offline audit. After the review, the information can be published on the platform. Due to the higher yield of Peer-to-Peer lending, it is sought after by investors. The average rate of return on Peer-to-Peer lending exceeds 20%, and the Peer-to-Peer lending platform's risk has also attracted people's attention. Among the Peer-to-Peer lending companies, the typical company is Luqin, which provides Peer-to-Peer lending services, and the rate of return It has reached 20%, and its bad debt rate is only 0.9%, making it a good investment. The Peer-to-Peer Lending company in China has developed rapidly and the number and size of transactions have been rapidly developed. There is a big difference between Peer-to-Peer Lending and traditional financial system. It has a very strong sense of innovation. It captures the shortcomings of commercial banks in lending to small and micro enterprises, based on the Internet, and uses small the corporate customers are the main service targets, making it easier for both lenders and borrowers to connect funds to serve small and micro enterprises. When the Peer-to-Peer platform is in operation, it can not only help people who have spare cash in their hands to

complete their financial management, but also help those who need funds to find a new way of borrowing money. The Peer-to-Peer platform obtains spreads between the two to achieve a win-win situation for the three parties.

The advantages of this model are obvious. Therefore, the banking industry has also embarked on business development. In September 2013, China Merchants Bank became the first institution in banking industry to join P2P. This move confirms that the Peer-to-Peer platform has had a significant impact on the financial industry in China. If the banking industry wants to continue to lead the market, it must achieve diversified operations

Combined with the “China P2P Lending Industry March 2017 Monthly Report,” It can be seen that Peer-to-Peer Lending industry has seen a rapid increase. As shown in the chart below, from April 1, 2016 to December 1, 2016, the P2P Lending industry market is rapidly booming and continues to maintain a rapid upward trend. Due to the influence of the opening of the year and the Spring Festival in 2017, the transaction volume has been reduced to a certain extent. However, after the start of the year, on March 1st, the single-month history of the Peer-to-Peer banking industry recorded a record high turnover, reaching 34.45 billion EUR rose by 23.87% in February

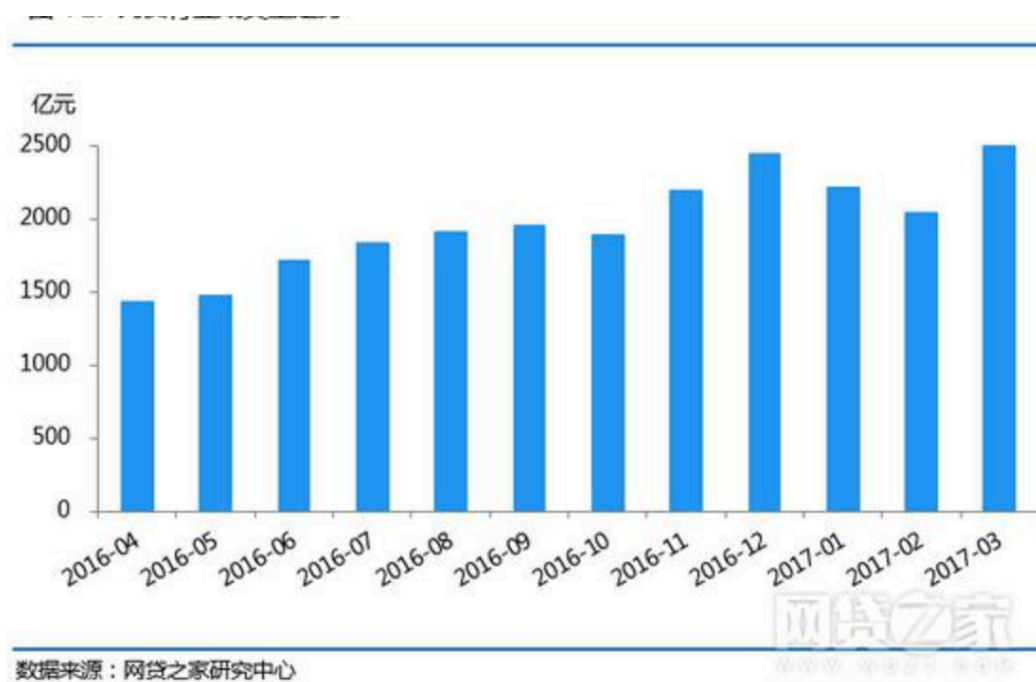


Figure 2. Peer-to-Peer Lending Trading Volume in China (WDZJ 2017 modified)

Secondly, P2P defines its own service targets as small and micro enterprises. Therefore, the main measure for risk control of Peer-to-Peer platforms is personal credit, and quantitative management of risks is carried out by means of group joint guarantees and manual investigation. This management model relies on the massive amount of information on the Internet and uses this information to quantify the risk. This kind of risk control model is an innovative model that brings some inspiration to the traditional banking industry and promotes the bank's innovative model of risk control.

- Financial big data

Big data finance mainly relies on huge and unstructured data, uses cloud computing and the Internet's informatization approach to discover and analyze relevant data. It also has the characteristics of traditional financial services and carries out innovative financial and financial work. It not only enriched the types of the financial industry, the phenomenon of traditional financial monopoly was broken, financial services and products were able to innovate, and the cost of the enterprise was reduced. Similarly, big data finance is also based on the existence and development of the network. Currently, it is mainly presented in two types: "One is a platform type—Alibaba; the other is a supply chain type—Jingdong Finance.

commercial banks have gradually strengthened their contacts with e-commerce companies. For example, the Alipay platform cooperates with many commercial banks' mobile banking, and also provides corresponding official Weibo and public numbers to continuously improve publicity and acquire market customer resources. In 2013, Everbright Bank opened a financial management platform. As of December 30, 2016, the total sales of the platform reached 1.65 billion EUR. In May 2014, Ping A Bank played a significant advantage in the capital market and provided comprehensive products including credit cards, funds, securities, automobile insurance and other aspects. Not only can it quickly acquire customer information, but it can also use its own insurance. Securities and banking, and other competitive advantages, grab a lot of customer-related data. At the same time, with the help of these data, customers can be effectively positioned and subdivided to improve marketing quality. Since 2014, the cooperation between traditional banks and big data platforms has increased. Dalian Bank has launched a "cloud" service plan, and Minsheng Bank has opened a big data platform. More and more banks are gradually recognizing the

importance of cloud services, and actively respond to the development trend of the era of big data.

The era of big data has also brought technical challenges, management challenges and cultural challenges to commercial banks, which have had a disruptive impact on traditional banking services. Therefore, the advent of big data has forced the banking industry to value the value of the data that it owns, and to move toward precision. Therefore, at present, the major banks pay full attention to the use of big data and tap data from multiple aspects to handle and use them in various business systems of banks.

- Crowdfunding

Crowdfunding refers to the method of financing the project sponsors on the basis of the characteristics of the grasp of the Internet, the power of the masses and build capital approach, ability, to small and micro companies, artists and other individuals of certain activities, projects to raise the necessary funds. After continuous development and differentiation, crowdfunding presents different forms of operations, such as rewards, loan-based crowdfunding, etc. The main representative platforms are the nomination time and Jingdong crowdfunding.

At present, China's national crowdfunding platform projects cover a number of provinces and cities, and Beijing is the top fundraising source, reaching 46.3million EUR in funds. Followed by Shandong, Zhejiang, and Guangdong, the corresponding fundraising amounts were 0.42 EUR, 32.09 million EUR, and 21.97 million EUR, Shanghai ranked fifth, and the amount of funds raised reached 17.49 million EUR, Jiangsu ranked sixth, and the amount of funds raised reached 16.18 million EUR. In the total amount of funds raised in China, the above 6 provinces and cities accounted for 96.35% of the total amount of crowdfunding. In other 22 provinces and cities where there are crowdfunding platforms, the total amount of funds raised was only 0.06 billion EUR, accounting for 3.65% of the total amount of national crowdfunding, and there were strong regional differences (WDZJ 2017).

Although there are different crowdfunding platforms such as auto crowdfunding, Taobao crowdfunding and Jingdong crowdfunding, the overall turnover of the crowdfunding industry is very impressive. As for the crowdfunding in February 2017, Tabao crowdfunding has been ranked first, raising funds to 12.1 million EUR and raising 423,600 funders.

Followed by the start of crowdfunding, fundraising amounted to 11.05 million EUR, investors reached 7230 person-times (WDZJ 2017); Jingdong crowdfunding ranked third, fundraising amount to 9,202,678 EUR, Sunning crowdfunding ranked fourth this month, funding reached EUR 4,338,669.16, and the number of investors reached 76,300.

At present, China's IPO is not allowed, and companies face difficulties in financing, and crowdfunding provides a convenient way for these companies. It needs to be emphasized that China has specific regulations for public fundraising. These regulations have also led to certain limitations in the development of bones in the country. Therefore, if the country's policies and legislation have not been further improved, this model will not work. All-round development in the country will not cause a major impact on the banking industry.

2.4 The long tail effects theory

Chris Anderson (2006) takes the Internet information platform as the research object and proposes the long-tail theory based on the Pareto distribution. From the economic perspective, the theory focuses on the economic scale effect in the small-scale image market.

Philip Kotler (2011) think the long tail is a group with a precise positioning and a small scope. The traditional economic theory emphasizes a large-scale market. From the declining curve of the conventional market, it can be seen that the large market and the long tail market are located at the end of the curve and the end of the curve, so this positional distribution causes it to be difficult to pay attention and the resources and services that can be enjoyed are insufficient. The central argument of the long tail theory shows that in the process of resource allocation, the tail market should enjoy more adequate resources and services.

The application of long-tail theory is to achieve the value of the niche market as far as possible and based on the premise of cost and efficiency effectiveness, under the relatively complete state of the marketing channel, the production cost and marketing cost will be better controlled (Lin Jun 2015). If the cost of each individual market consumption is reduced, the long tail market economies of scale can be achieved. Now that information technology is well developed, the Internet has made network services more diversified, so the needs of the long-tail market can receive more attention and personalized services can be produced one after another.

2.5 Internet finance development theory

Since the 1990s, the application of computer technology and network communication technology in the financial sector has promoted the process of financial electrification. The innovative application of financial information management systems, electronic payment systems and other financial fields has accelerated and evolved, resulting in the concept of electronic finance. Electronic Finance, also known as cyber finance, is the product of the convergence of Internet technology and modern financial industry.

It is a financial activity such as banking, payment, currency, insurance and other online financial transactions and network financial supervision based on internet technology and financial electronic products (Wang ping 2017).

The term e-finance is widely used by academia. Corresponding to the concept of e-finance is the concept of Internet finance that is commonly used in China.

Since 2013, Internet technology innovation has brought about the cross-border innovation and development of China's financial industry. Internet finance, such as third-party payment services, Internet wealth management services, Peer-to-Peer lending services, crowdfunding services, and online banking services, has been rapidly developed and developed. It has had a tremendous impact on the development of China's financial system and traditional banking business. Therefore, 2013 was also referred to by the financial industry as "the first year of China Internet finance." At present, the definition of internet finance granted by China's financial authorities is: "Internet finance is a combination of the Internet and finance, and it is an emerging financial model that utilizes the Internet and mobile communication technologies to realize the functions of financing, payment, and information mediation. The narrow sense of internet finance refers only to Internet companies. Internet-based technology-based financial services, which are broadly defined, include both financial services undertaken by Internet companies that are non-financial institutions, and financial institutions that conduct business through the Internet (China Financial Stability Report, 2014).

According to the definition of Internet finance, it can be seen that Internet finance has the dual characteristics of the Internet industry and the financial industry. On the one hand, Internet finance has the characteristics of the Internet industry. Internet finance, as a specific product of the development of Internet technology, has the network effect that users

use of the product's utility will increase non-linearly with the increase in the number of users of the consumer economies of scale.

Relying on the Internet, Internet finance has a very low cost of information replication, marginal cost is much lower than traditional financial products, and due to the openness of the Internet, the Internet finance industry has high product compatibility and service opening. On the other hand, Internet finance has the characteristics of the financial industry. As a new type of product in the "Internet Plus" era, Internet finance products' core function is to provide financial services and products. It will inevitably have the characteristics of payment industry settlement, risk dispersion, and resource redistribution in the financial industry.

2.6 Financial innovation theory

At present, many scholars have had different understandings of financial innovation, but they are generally discussed based on Schumpeterian theory. Schumpeter's "Economic Development Theory" defines innovation as follows: The company's decision-making managers will reconstruct the various production factors to construct a completely new production function. This process is innovation (Kishor 2002). Therefore, innovation has a very broad scope. For example, production technology, organization and management are all in the scope of innovation. Whether it is technology or management methods and concepts, it will cause changes in the production function.

- (1) From a macro perspective, financial innovation refers to the emergence of important events and major reforms in the history of social finance as financial innovation in different periods. The development of the financial industry is bound to have related financial innovations.
- (2) From which the concept of perspective, since the mid-19th century, the functions of a financial institution have undergone significant changes. From this point of view , financial innovation can more accurately analyze and summarize the characteristics of objects.
- (3) From the microscopic point of view, the research object is framed on the financial instrument. The financial work with the characteristics of credit innovation and risk transfer can promote reasonable transfer and dispersion of risks among various

entities through these financial instruments; and financial instruments with liquidity enhancement features are based on the original financial instruments. As a result, it demonstrated stronger liquidity and increased convertibility.

3 RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem (Kothari 1985). The methodologies used in study are different, but the purpose of all methodologies is the same, that is, to tell what the study or research methods are. Therefore, the commonly used methodology forms include qualitative data collection, quantitative data collection, and qualitative and quantitative data collection.

Qualitative analysis is a description of the nature of economic phenomena and its inherent regulative and regularity. Qualitative research is concerned with qualitative phenomenon involving quality (Kothari 1985).

Quantitative analysis is the analysis of the relationship between economic phenomena.

This study adopts qualitative analysis. Literature analysis and case analysis are complementary. Through literature analysis, theoretical derivation, and case analysis, based on existing theoretical results, a comprehensive analysis of the status, characteristics, problems, and environment of China's banking financial products through empirical analysis and case analysis is conducted to propose countermeasures to address the impact of Internet finance.

The research of this study mainly adopts three methods: literature analysis and empirical analysis.

The literature analysis method: A systematic literature review is a means of identifying, evaluating and interpreting all available research relevant to a particular research question, or topic area, or phenomenon of interest (Kitchenham 2004). Through literature search, screening and reading learning, this study summarizes domestic and foreign research related to the development of Internet finance and commercial banks under the "Internet Plus" environment and pass the existing literature on the innovation of commercial banking financial products. The basic concepts and theories ,as well as internet finance development theory are summarized, which lays a theoretical foundation for the following research.

Empirical analysis method: Empirical research is research using empirical evidence. It is a way of gaining knowledge by means of direct and indirect observation or experience (Goodwin 2005).

This study uses the Industrial and Commercial Bank of China as a typical case, to analyze the impact of Internet financial development on product innovation and development in the financial business areas such as deposits, financing, payment and wealth management of ICBC by establishing multiple linear regression model.

3.1 Data collection

Data collection is the process of collecting relevant data according to the determined data analysis content. It provides material and basis for data analysis. Data collection includes primary data collection and secondary data collection. Primary data mainly refers to data that can be directly obtained, and secondary data mainly refers to data obtained after processing.

A primary data source is an original data source, that is, one in which the data are collected firsthand by the researcher for a specific research purpose or project (Salkind 2010).

All other analyses of data collected for specific research studies or analyses of data collected for other purposes (including registry data) are considered ‘secondary analyses of existing data’, whether or not the persons conducting the analyses participated in the collection of the data (Phillips 2014).

This study mainly uses secondary data to analyze the impact of internet finance on traditional commercial banks and uses the official data from Industrial and commercial bank of China to analyze individual cases to discuss their impact and countermeasures.

The secondary data of this study is directly from the annual report of the Industrial and Commercial Bank of China. Part of the data is derived from the analysis data of the journal and relevant authorities.

3.2 Data analysis process

Combining the purpose of the empirical analysis of this study and the explanatory variables, explanatory variables, and control variables set in the model, based on the results of

the model review, the empirical evidence will explain the impact of the explanatory variables on the explanatory variables and the influence of the controlled variables on the explanatory variables. The results are analyzed, and these will be explained in detail in the empirical study section.

3.3 Validity and reliability

Validity in qualitative research means “appropriateness” of the tools, processes, and data. Whether the research question is valid for the desired outcome, the choice of methodology is appropriate for answering the research question, the design is valid for the methodology, the sampling and data analysis is appropriate, and finally the results and conclusions are valid for the sample and context(Lawrence 2015). This study collects and collates the theoretical research results related to the impact of internet finance on the traditional business of commercial banks, and conducts qualitative analysis to lay a theoretical foundation for the study.

In quantitative research, reliability refers to exact replicability of the processes and the results. In qualitative research with diverse paradigms, such definition of reliability is challenging and epistemologically counter-intuitive (Lawrence 2015). For this study ,all analyses are based on official data given by the official website in recent years on the development of Internet finance and authoritative agency forecasts.

3.4 Limitations

Based on the personal abilities and the limitations of the study, this study lacks in data processing and primary data, theoretical model construction, and banking practices which are also the direction for improvement and efforts in the future. This study mainly discusses the impact of Internet finance on the business operations of commercial banks and does not study other financial companies such as securities company, insurance company, trust company. This is also the inadequacy of this study.

4 EMPIRICAL ANALYSIS

This chapter was written to analyze how the Internet Finance influence Commercial Bank Development and give recommendations by establishing a Regression Model.

From the above analysis, in the terms of commercial bank operations, the development of Internet finance will have a certain impact on commercial bank liabilities, assets, and intermediate businesses. Among them, the third-party payment model and internet fund management will generate a certain diversion of savings deposits from commercial banks. Peer-to-peer lending has a minor impact on commercial bank loan business, Third-party payment models and Internet fund management can have a large impact on the intermediary business of commercial banks. At the same time, in addition to the development of Internet finance, there are many factors that can have a significant impact on the development of commercial banks' liability business, asset business, and intermediary business.

Therefore, this study takes the Industrial and Commercial Bank of China as an example and selects the impact of Internet finance on commercial banks' intermediary business as an empirical research object. It only conducts an empirical analysis on the impact of Internet financial development on commercial banks' intermediary business.

4.1 The introduction of internet finance on Industrial and Commercial bank of China

The Industrial and Commercial Bank of China, which was established in the 1980s, is the first of the five largest banks in China, including Bank of China, China Construction Bank, China Communications Bank, and Agricultural Bank of China. It has the largest customer base in China and is the largest in China. The commercial bank is also one of the top 500 companies in the world. Today, Industrial and Commercial bank of China (ICBC)'s business covers all parts of the world. It serves people or companies from different countries in the world and provides financial services and related financial products to nearly 500 million individual customers in the world through different channels such as branches of overseas banks.

In the field of informatization banking construction, Industrial and Commercial bank of China (ICBC) has added emerging Internet big data as a basis and added data such as e-commerce platform consumption information and integrated subsidiary registration

information to the database in order to be able to more fully acquire consumer spending. Information, identity information, spending habits, etc. At the same time, unstructured data, such as user personal online banking log records, was added to the group information database. The Bank has established its own database and group information database and two large data databases. The purpose is to centrally manage the management information of customers and accounts, and the relevance of transaction behavior and product content. At the same time, in accordance with the operational concept of centralized management, the existing mode of decentralized operations will be gradually changed to further complete the centralized and standardized business processing. In addition, a large number of customer self-service banking systems have been established, including 165 million mobile banking customers and 300 million online banking customers. Utilizing an ever-escalating technology strategy, the Bank gradually established a large-scale financial enterprise information construction road for industrial banks to help Industrial and Commercial bank of China (ICBC) implement an Internet finance strategy (Qu Bo2015).

4.2 Regression model definition

Regression analysis is a statistical technique for estimating the relationship among variables which have reason and result relation (Gülden 2013).

The development of intermediary business of commercial banks is affected by multiple factors. In addition to internet financial third-party payment and Internet wealth management products, it is also affected by the macroeconomic environment and the micro-development conditions of banks.

Therefore, this study uses a multiple regression model to analyze the impact of the development of Internet finance on the intermediary business of commercial banks.

4.3 Variables selection

REVS (Regression with Empirical Variable Selection), which uses all-subsets regression to quantify empirical support for every independent variable(Goodenough 2012).

The development of intermediary business of commercial banks is affected by multiple factors. In addition to internet financial third-party payment and Internet wealth

management products, it is also affected by the macroeconomic environment and the micro-development conditions of banks.

In terms of the macroeconomic environment, the factors that affect the development of commercial banks' intermediary businesses mainly include the state's overall economic development status, residents' income levels, and the degree of capital market development.

As regards micro-development conditions, the main factors affecting the development of commercial banks' intermediary businesses are the total assets of commercial banks and the net assets return rate of commercial banks. This study will set up empirical analysis indicators based on research needs and various factors that affect the development of commercial banks' intermediary business.

Firstly, explained variable must be set. Taking the Industrial and Commercial Bank of China (ICBC) as an example, the impact of internet finance on the intermediary business of commercial banks was selected as an empirical research object. Non-interest income and commission charges are the two main indicators for measuring the income level of commercial banks' intermediary businesses. Because the development of various Internet finance models is mainly based on payments and settlements, commission charges generated by consigned funds, it has an impact on the intermediary business of commercial banks. Therefore, the explanatory variable was set to be the commission charges.

Secondly, the explanatory variables must be set. According to the previous analysis, third-party payment models and Internet fund management can have a large impact on the income of commercial banks' intermediary businesses. Therefore, the third-party payment and internet fund are set as the core explanatory variables of the model. In addition, the third-party payment is based on the scale of Internet invoicing transactions in third-party payment markets, and the Internet funds is measured by the amount of Internet fund revenue.

Thirdly, set the control variables must be set. The development of the intermediary business of commercial banks is affected by multiple factors. One is the Internet financial third-party payment and internet financial products; Then there are the macro economic environment factors such as the state's overall economic development, residents' income

levels, and the degree of capital market development; and the micro-development factors such as total assets of commercial banks and net assets return of commercial banks.

Therefore, the five indicators of the country's overall economic development status, residents' income level, commercial bank's total assets, and commercial bank's net assets return rate are added as control variables into the model. In summary, the model variables and metrics are shown in Table 2

Variables	Metrics	Definition
Explained variables	Commission charges(CC)	The commission charges form Industrial and Commercial bank of China(ICBC)
Explanatory variables	Internet fund revenue (IF)	The amount of internet fund revenue
	Third-payment transactions (TPT)	
Control variables	Total asset of bank	The total asset of ICBC
	ROE	ROE of ICBC

Table 2 Model variables, metrics and definitions

4.4 Sample data selection and model establishment

The sample data is the quarterly data of Industrial and commercial bank of China (ICBC) from June 2014 to December 2017. ICBC's commission charges (cc), ICBC's total assets (ta), and ICBC's ROE data are derived from ICBC's regularly disclosed financial statements from June 2014 to December 2017.

Moreover, since the ICBC commission charges index value is relatively large and mostly absolute, when performing regression estimation, the index is taken as a logarithm; Gross domestic product (GDP) and per capita disposable income (PCDI) come from the "Statistical Communiqué on National Economic and Social Development 2014-2017" and China Statistical Information Network. The internet fund's share of the internet fund is taken from the balance of the income of Yuebao, CashBow, Wealth Link, ChangeBao,

and Baidu.com.Third-party payment Internet acquisition transaction volume (TPP) data from iResearch;

Based on the consistency of the model sample data selection, the sample data of the six commission incomes, net income from ICBC, total assets of ICBC, third-party payment of internet purchase orders, gross domestic product, per capita disposable income of residents, and securities trading amount are all Take the logarithm, which is expressed as $\ln CC_t, \ln I_t, \ln TPT_t, \ln GDP_t, \ln PCDI_t, \ln TA_t$. To test the impact of the development of the Internet financial model on ICBC's intermediary business, this study constructs the following multiple linear regression.

4.5 Regression result

To test the impact of the development of the Internet financial model on ICBC's intermediary business, this study constructs a multiple linear regression model for empirical analysis as follows:

$$5) \ln CC_t = \beta_0 + \beta_1 \ln IF_t + \beta_2 \ln TPT_t + \beta_3 \ln GDP_t + \beta_4 \ln PCDI_t + \beta_5 \ln TA_t + \beta_6 \ln ROE_t + \varepsilon_t$$

And, $t=(6.2014, \dots, 12.2017)$. ε_t is Random error term.

According to the constructed model and sample data, Eviews was used for regression analysis. The regression results are shown below.

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
C	-1.066149	4.71781	2.779883	0.0061
IF	-0.453039	0.082618	-5.483412	0.0000
TPT	-0.165654	0.086996	-3.984161	0.0387
GDP	0.087375	0.086874	1.005774	0.0316
PCDI	0.072273	0.085756	-0.842771	0.0400
TA	0.192988	0.76877	2.510345	0.0131
ROE	0.009275	0.046472	3.276141	0.0062

Table 3 Regression result from Eviews

According to the regression result, the following model expression is obtained:

$$6) \ln CC_t = -1.066 - 0.453 \ln IF_t - 0.166 \ln TPT_t + 0.087 \ln GDP_t + 0.0721 \ln PCDI_t + 0.1931 \ln TA_t + 0.009 \ln ROE_t + \varepsilon_t$$

4.6 The analysis of regression result

From the regression results, It can be concluded that the regression coefficient of Internet funds is -0.453, the regression coefficient of third-party payment is -0.166, both of these coefficients are less than 0; the regression coefficient of GDP is 0.087, and the regression coefficient of per capita disposable income of residents is 0.072, the regression coefficient of ICBC's total assets was 0.193, and the regression coefficient of Industrial and commercial bank of China(ICBC)'s ROE was 0.009, which were both over than zero.

Therefore, It can be seen that the income of Internet funds and third-party payments will have a negative impact on the commission charges of ICBC; the GDP, the disposable income of residents, the total assets of Industrial and Commercial Bank of China, and the net assets of Industrial and Commercial Bank of China The rate has a positive effect on the Bank of China's commission income.

4.7 Summary of Empirical Research Findings

Combining the purpose of the empirical analysis of this study, and the explanatory variables, explanatory variables, and control variables set in the model, the results of the model can be Table 3.

According to the table 3, this study mainly focused on the impact of Internet transaction in third-party payment market and the amount of Internet fund income on ICBC's intermediary business, respectively. And it also discussed how the overall economic development status of the country, residents' income levels, total assets of commercial banks, and net assets return rate of commercial banks have affected the Bank's intermediary business.

- 1) The impact of third-party payment market internet transactions and internet fund income on (Industrial and Commercial bank of China) ICBC's intermediary business.

As a result of the table 3 model regression, as an important indicator of internet financial development, the third-party payment market transactions and the income of internet funds will all have a negative impact on ICBC commission income. Specifically, for a 1% increase in the size of the third-party payment market's Internet acquiring transactions,

ICBC's commission income will be reduced by 0.166%. The reason for this is that third-party payment has the advantages of convenient payment methods and lower transaction costs. This has attracted a large number of existing ICBC customers and has negatively impacted ICBC's revenues from payment and settlement and remittance transfers. For every 1% increase in the income of Internet funds, ICBC's commission income will be reduced by 0.453%. The negative effect is relatively large. The reason is that Internet funds have seized part of the fund agency market, resulting in the Chinese bank fund agency sales business being Diversion, which reduced the ICBC's commission income.

- 2) The impact of the economic development status of the country, residents' income levels, total assets of commercial banks, and net assets return rate of commercial banks on ICBC's intermediary business.

The regression results of the model show that the overall economic development status of the country measured by GDP indicators has a positive effect on the development of ICBC's intermediary business, with a 1% increase in GDP, ICBC's fee and commission income. It will increase by 0.087%. A positive overall economic development of the country is beneficial to the performance of the scale of business such as the remittance of ICBC and the better its commission income.

Correspondingly, the per capita disposable income index of residents also has a positive effect on the development of ICBC's intermediary business. For every 1% increase in per capita disposable income of residents, ICBC commission income will increase by 0.072%.

This shows that the higher the residents' income level, the greater the demand for bank intermediary business, and the opening of ICBC's intermediary business will have a broader market space and customer groups, thus increasing its commission income.

ICBC's total assets also have a relatively positive effect on the development of ICBC's intermediary business. For every 1% increase in total assets of ICBC, ICBC's commission income will increase by 0.193%. This means that the higher the total assets of Industrial and Commercial Bank of China, the stronger its financial strength, the more able to expand the intermediary business market and innovative intermediate business products, thus increasing commission income.

ICBC's ROE has a positive effect on the development of ICBC's intermediary business. ICBC's commission rate will increase by 0.009% for each 1% increase in net asset yield, but this effect is relatively small. This shows that the better the operating performance of ICBC, and the more perfect its operating system, the more capable it is to expand and innovate its intermediary business, and it is also easier to attract intermediate customer groups, which will increase its fee and commission income.

ICBC's ROE has a positive effect on the development of ICBC's intermediary business. ICBC's commission rate will increase by 0.009% for each 1% increase in net asset yield, but this effect is relatively small. This indicates that the better the operating performance of ICBC, and the more perfect its operating system, the more capable it is to expand and innovate its intermediary business, and it is also easier to attract intermediate customer groups, which will increase its fee and commission income.

Therefore, it is necessary to face up to the various impacts of internet financial development on financial products of commercial banks, and comprehensively consider the various factors that affect the development of commercial banking business, so as to propose corresponding strategies to deal with the impact and challenges of internet financial development on financial products of commercial banks.

5 CONCLUSION

In this part, the research result from the survey and the theoretical part will first be summarized. Combining with the research objective, the conclusion of this study will be given. Last part contains the recommendations for Industrial and Commercial bank of China (ICBC).

5.1 Recommendations for the Commercial Bank

With the fierce competition in the financial market, commercial banks have been strongly impacted by internet finance, prompting commercial banks to urgently require business transformation. At present, the customer orientation of Internet finance is more extensive, and it is difficult to explore the business areas in commercial banking financial services, and it can be understood that Internet finance has eased the shortcomings of commercial banks. However, in the long run, Internet finance has innovated new consumer behaviors, which has made commercial banks' traditional businesses vulnerable. From this it can be seen that in order to better ensure a stable development of commercial banks, commercial bank should focus on customers, change business concepts, and upgrade financial product services so that commercial bank can continuously create new business growth points.

- Improve the level of financial product innovation

- 1) Build a SME Online Financing Platform to Broaden New Customer Base

In terms of profits, commercial banks have mainly implemented interest payments after the mortgage, which also makes it extremely important to the excavate new customers and has gradually developed into a core business of commercial banks. The development of the Internet is fast, and commercial banking has brought many of its offline businesses. With the dilemma faced by commercial banks in terms of financing, commercial banks should expand outwards and strengthen the exploration of potential customer groups so that they can make full use of existing resources and actively adjust the business. Building appropriate financing platforms for SMEs, strengthening understanding of the needs of SMEs for loans, and implementing dynamic management of funds, as well as comprehensively promoting the development of online platform financing would help to find effective solutions to solve problems such as financing difficulties for SMEs. Enterprises provide more thoughtful services and form a dynamic follow-up investigation and

feedback mechanism and strive to open a win-win situation between commercial banks and SMEs. For “one-stop” services, it is to provide customers with all-round, three-dimensional services to meet the financial business needs. If a customer enters a business outlet of a commercial bank to handle business, no matter what kind of problems the customer encounters, it can be solved in a timely and effective manner so as to avoid the loss of bank customers. In response to the "one-stop service" that first appeared in the United States, banks are focusing on the types of products they operate in the scale expansion and are striving to meet the various needs of consumers, enabling them to handle all business in one bank.

"One-stop service" has greatly improved the customer's dependence and satisfaction, thus forming an effective attraction for customers and taking the lead in systematization of product sales and service mechanisms. This type of business model is not uncommon in the financial sector. Many businesses can be included in them, such as savings, loans, and financial management. At the same time, with the continuous development of the Internet, the level of such services is also rising. The establishment of a "one-stop service" platform is extremely urgent for the development of commercial banks.

For SME customers, commercial banks should strengthen their own SME online financing platform, which is important and necessary. The scale of the company's development has been continuously expanded, and the demand for funds has also increased. It is an indisputable fact that the company has accelerated the development of enterprises through financing. In this regard, based on the development of the financial industry and the banking industry is booming in all major financing platforms, commercial banks should obviously speed up the construction of their own network platform to better fulfill their responsibilities and obligations, emphasizing the bank's responsibilities. People generally have such an understanding that for local financing platforms, it is not very reliable; at the same time, based on the Internet financial platform formed by the Internet, the traditional business of the commercial bank has improved its security performance and its reliability has also been significantly enhanced. Therefore, the importance of the construction of an online financing platform for SMEs dominated by commercial banks is obvious.

It is reasonable to build an online financing platform for small and medium-sized enterprises and make them dominated by commercial banks. First, commercial banks have

congenital advantages in terms of funds. Commercial banks' profit is mainly realized through interest, and there is no doubt that interest rates on lending to foreign companies are higher. Therefore, setting up a small and medium-sized enterprise platform is conducive to the improvement of bank's profitability. Second, building a financing platform requires technical and human resources to provide support. Commercial banks have always been rich in human resources. For the construction of financing platforms, human resources are not the primary considerations; in terms of technology, commercial banks have relatively strong technological capabilities and are always in other industries. In the front, it also has the conditions to build a financing platform for SMEs. Thirdly, the amount of customer data that commercial banks in China have is very large, and the information data of SMEs is relatively more comprehensive and complete. This will also help commercial banks review SMEs. Select SMEs whose credit information is relatively better, and this can also play an important role in the supervision of capital flow, which can effectively create a stable business environment for financial markets.

- 2) Integrate upstream and downstream resources to provide customers with comprehensive financial solutions

The integration and optimization of resources to improve resource utilization and innovation in management are the core driving forces for the development of commercial banks. At present, commercial banks are fiercely competitive in the market. Therefore, efforts must be made to manage them, reduce the cost of bank operations through management, and open up the upstream and downstream industrial chains to provide targeted financial solutions to customers.

At present, both the financing mode and the financing process of the bank are still relatively tedious. Many intermediate links can be eliminated. Whether it is a corporate customer or an individual customer, the company can be more efficient in financing, and it can also reduce the bank's handling. The cost of the financing process. The development and extension of this concept of "one-stop service" has a significant role in promoting the development of commercial banks. Commercial banks should simplify the entire transaction process, so that capital and technology can be in a dominant position, and strengthen exchanges with customers, especially for the services of SMEs, but also should have a sense of innovation, build a corresponding financial service platform.

In view of the current phenomenon of "fiscal disintermediation," commercial banks should base themselves on the actual development of their own and strengthen the management of funds so that the entire fund can form a closed loop. For example, Alibaba's Taobao and Alipay, in the entire commodity trading and circulation, transactions, withdrawals, etc. can be realized from the inside, and this also makes the bank's functions gradually weakened, which creates a new financial environment. In addition, many of large-scale Peer-to-Peer platforms integrate many scattered services in the financial industry and strengthen their own guarantees and innovations. This is in contrast to the in-depth development of resources in terms of guarantee business, asset reorganization, and standardization. Commercial banks have shown strong advantages. To sum up, based on the financial background of the Internet, commercial banks should make full use of network resources and actively expand business in order to promote the long-term development of commercial banks.

Commercial banks should also have a clear positioning for themselves and implement a comprehensive integration and use of a large number of information resources. From the aspect of funding, commercial banks will focus on the changes in the supply side and the demand side of the capital and use the advantages of data and information to demonstrate the advantages of the bank more fully and strive to maximize the profits of the bank. At the same time, through the integration of resources, banks can effectively weaken a series of problems caused by information asymmetry. In this regard, commercial banks can give full play to the role of the Internet and use the Internet as a carrier to achieve the integration and utilization of financial resources, so that customers have a higher degree of freedom in business selection and provide financing information to financing parties to make their own the service can be more distinctive, so as to obtain the corresponding service fee, which can increase the business performance of the commercial bank.

- Optimize the financial product sales environment

- 1) Make most of traditional advantages and open up transnational e-commerce business

Four stated owned commercial banks have very strong capital strength, and their online shops are all over the country, and basically all of them have achieved all-weather artificial services. This also leaves commercial banks in a monopolistic position in the field, and therefore responds to them under the conditions of Internet finance. The business

continues to expand outwards, enabling it to expand into more areas, strengthen product innovation and development, and promote the overall development of the business.

The traditional strengths of commercial banks are mainly reflected in the fact that, on the one hand, they have a very large customer base and are more in place in terms of service quality. After a long period of accumulation, Macro Commercial Bank continued to develop externally, and the number of its customers continued to rise. Many customers have high satisfaction with the service industries provided by commercial banks, which is undoubtedly very important for the development of commercial banks. Resources. Under the Internet conditions, the competition among commercial banks has become more intense, but in the end, it is a kind of competition in data and information. At the same time, commercial banking industry should take off its monopoly, use a hugely loved customer base, and rely on modern technology to achieve more efficient use of Internet resources. On the other hand, commercial banks are generally more creditworthy and industry credits are higher. The financial industry is crucial. With the continuous accumulation of capital in commercial banks, their scale is constantly expanding. Many large customers are very important customers for banks. Therefore, commercial banks should strengthen their own service levels so that they can gain an advantage in market competition.

Commercial banks have a clear understanding of their own advantages. They should actively expand some new types of businesses on the Internet and make their operations more diversified, such as transnational e-commerce exchanges. E-commerce exchange is an EFT system formed between different banks. The amount of funds involved in transfer is very large. Only commercial banks with perfect electronic banking can afford these services. At the same time, when many customers choose commercial banks, they generally choose these higher-reputation commercial banks. The development of commercial banks in China must ensure the safety and reliability of the system, actively innovate under the conditions of the Internet, continuously improve the quality of individual services, and continue to expand in the financial model. In addition, SMEs should also attach importance to the development of Internet finance, customer-centric implementation of product innovation, and then seek greater development.

2) Innovating Credit Information Systems

Under the traditional financing model, financing channels for small and micro enterprises are narrow, but along with the rapid rise of internet finance, commercial banks have made new breakthroughs in solving the problem of financing difficulties for SMEs. However, commercial banks are very concerned about the creditworthiness of SMEs, mainly because SMEs are relatively small in scale and their financial strength is relatively limited. In providing loans to them, banks have to consider the risks involved. For commercial banks, the risk prevention mechanism has not yet been established. If the loans for SMEs are to be liberalized, the problem of credit collection for SMEs will inevitably be solved. At the same time, SMEs have a relatively lower level of loans and the number of transactions will be higher. Dynamic management is very difficult, which also requires commercial banks to build more dynamic liquidity management of funds, so as to promote SME financing and solve the practical difficulties of SMEs.

If innovation is required on the basis of credit information, then the most crucial link is to solve the problem of credit information for small and medium-sized enterprises. Commercial banks also need to obtain corporate information from more channels. Under the conditions of the Internet, new technologies such as big data and cloud computing continue to emerge, which have provided convenience for commercial banks to obtain better information. At the same time, commercial banks and segregated financial institutions should also join forces to strengthen the small and micro loan business for small and medium-sized enterprises in a specific area and build a unified information platform so that different banks and financial institutions can fully share information. Collect as much SME information as possible within possible limits. In the course of operating financial businesses, financial institutions should also strengthen the use of information of non-financial institutions, implement deep-seated filtering of valuable information, and screen out information that is more conducive to the bank's control over and information about the creditworthiness of SMEs. The actual situation of enterprise development is presented more objectively.

3) Customer-centered to meet customer needs

The key reason why Internet finance is favored by the majority of SMEs and customers lies in its great convenience and popularity, which has caused the loss of customers of commercial banks. Therefore, for commercial banks, commercial banks must take the customer as the center and use the Internet platform to meet customer needs.

For commercial banks, they constantly strengthen exchanges and cooperation with their customers. At the same time, they deeply explore through the market and rely on their own technological advantages to enable themselves to make a difference in the Internet finance. Large Internet companies in China can obtain more Internet information, especially real customer data information, and store it in the back-end database. If these data can be further explored and analyzed, consumer preferences can be realized. Consumption habits and consumer psychology have a more accurate grasp. This information can prompt commercial banks to provide customers with a very comprehensive and considerate service. Through this service, they can increase their competitiveness in the market.

4) Strengthen risk awareness

In order to control risks in the Internet financial sector based on credit, for commercial banks, they should also grasp the core of this business, strengthen their ability to prevent and control risks, balance the relationship between risk and efficiency, and promote the improvement of bank profits.

At present, China still has a lot of weaknesses in the authentication of online credit subjects. The entire society's credit system has not yet been established, and e-commerce credits are very good in conformity with this situation. Commercial banks should strengthen cooperation with SMEs, strengthen SMEs and individual loans, and build a relatively more sophisticated modern risk assessment mechanism. Under the premise of fully taking into account costs, they must strengthen their own credit system and constantly improve, so as to implement more effective wind direction control.

5.2 Direction for further study

As the study is only a basic framework and thinking for China's commercial banks to deal with the impact of Internet finance on their financial products under the "Internet +" and financial globalization environment.

Therefore, its promotion and practice also need to be combined with the specific reality of commercial banks, which will require further research.

REFERENCES

- Agarwal. S.a.R.B.H. 2008.The Choice between Ann's-Length and Relationship Debt: Evidence from loans. American Finance Association (Annual Meeting) New Or leans.
- Analysys. 2016.The scale and tendency of third-party payments. <https://www.analysys.cn/analysis/trade/detail/1000825/>
- Barasinska N, Schäfer D.2014. Is Crowdfunding Different? Evidence on the Relation between Gender and Funding Success from a German Peer-to-Peer Lending Platform. German Economic Review.15(4).436–452.
- Beek.T. Behr Patrick. Andre Gtittler. 2009.Gender and banking: Are women better loan officers? European Banking Center Discussion Paper
- Bergen F.G.C. 2007.Electronic Marketplaces and Intermediation: Can Empirical Investigation of an Online P2P Lending Marketplace. JEL Classification.
- Berger S.C. F. Gleisner. 2007. marketplaces and intermediation: An empirical investigation of an online P2P lending marketplace. Working Paper, University of Frankfurt.
- Bernd H. Schmidt.2000. Experiential Marketing. Simon and Schuster. Free Press
- Chen Lin.2013. Research on Development and Supervision of Internet Finance. South China Finance. 5,11-12.
- Chris Anderson.2006. The Long Tail: Why the Future of Business Is Selling Less of More. Wired magazine.
- Ethan R. Mollick. 2014.The Dynamics of Crowdfunding: Determinants of Success and Failure. Journal of Business Venturing .1.1-16.
- Goodenough AE, Hart AG, Stafford R (2012) Regression with Empirical Variable Selection: Description of a New Method and Application to Ecological Datasets. PLoS ONE 7. E34338.
- Goodwin, C. J. 2005. Research in Psychology: Methods and Design. USA. John Wiley & Sons, Inc.

- Hui G CHENG. R. PHILLIPS.2014. Secondary analysis of existing data: opportunities and implementations. *Shanghai Arch Psychiatry*. 26(6).371–375
- Lawrence Leung .2015. Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care*. 4(3). 324–327.
- Lin Jun.2015. Analysis of Internet Finance based on the Long Tail Theory: The Financing of Small and Micro Enterprises for Example. *International Conference on Advanced Information and Communication Technology for Education*.
- Neil J. Salkind.2010. Primary Data Source In: *Encyclopedia of Research Design*. SAGE Publications. 1499-1502.
- Niehans.J.2012.financial innovation. *Multinational banking and monetary policy*. *Journal of Banking & Finance*.
- Nikil Chande. 2008.A Survey and Risk Analysis of Selected Non-bank Retail Payments Systems. Canada: Bank of Canada.
- Norman G. Lederman1 • Judith S. Lederman.2015. What Is A Theoretical Framework? A Practical Answer. *The Association for Science Teacher Education*. 26,593–597
- Pan Jing.2013. Research on Innovation of Internet Service Financial Services for Third Party Payment. *New west*.20,75-76
- Philip Kotler's.2011. *Marketing management*. 13th ed. Frenchs Forest, NSW: Pearson Prentice Hall,
- Qian Yang .2017. Third-party online payment solutions in China.LAMK.
- Qu Bo. Wang Yuchen.Yang. Yunsen.Wang Bo.2015. Research on the Countermeasures of Traditional Commercial Banks under the Impact of Internet Finance based on SWOT Analysis Method. *Western Finance*.1.41-45
- Ru Li .2014. The New Choice of Small Business Microfinance Channels under the Background of Financial Interconnections. *Economic Review*.10.88-91.

Schumpeter.J.A.2008.The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle, New Brunswick (U.S.A) and London (U.K.): Transaction Publishers.

Statista 2018. <https://www.statista.com/outlook/335/100/crowdfunding/worldwide#>

Sven C. Beiger. Fabian Gleisner. 2009.Emergence of Financial Intermediaries in Electronic Markets: The Case of Online P2P Lending. BuR Business Research 2.39-65.

Wang Ping, Zhang Wenjian, Liu Jiao.2017. Analysis of the Impact of Internet Finance on Banking Industry Development. International Journal of Finance and Banking Research.

WDZJ-OFFICIAL China 2017. Report on the volume of peer-to-peer lending. Accessed 01.3.2017. <https://www.wdzj.com/jhzt/P2Pwdxxy2017n1yyb/>

WDZJ-OFFICIAL China 2018. Report on the volume of online lending. Accessed 01.4.2018. <https://shuju.wdzj.com/industry-list.html>

Xie Ping .2012. The formation of the Internet financial model. Accessed 24.10.2012. <http://finance.caijing.com.cn/2012-10-24/112224080.html>

Yan Gujun. 2013.Contents and Measures for Supervision on Internet finance. Advanced Science Letters. 19 (4).1197.

Zhang Lianbiao, Yang Xiaoyuan.2013. The Impact of Internet Finance on Commercial Banks and Countermeasures Research. Zhejiang Finance. 10.31-33.