An Impact of Internet Finance on the Business Performance of Commercial Banks

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Abstract: Commercial banks play an important role in China's financial industry, and the rapid development of Internet finance has had a great impact on the performance of commercial banks. Facing the development of Internet finance, it not only brings challenges to commercial banks, but also brings opportunities. Based on the research results of relevant literature at home and abroad, this paper expounds the meaning, characteristics, development course and advantages and disadvantages of Internet finance, and analyzes its impact on the performance of the three major businesses: asset business, liability business and intermediary business of commercial banks. Select data from 28 commercial banks for 2010-2019 and use panel data for empirical analysis. The results show that both third-party payment and P2P network loan have a negative impact on the operating performance of commercial banks. Commercial banks should combine the technological advantages of the Internet with their own financial advantages, retain existing customers, develop potential customers, innovate financial products, and improve business performance.

1. Introduction

The concept of “Internet finance” was first proposed by Chinese scholars in 2012, after which the community began to pay attention to the concept and had a heated discussion. In 2015, Chinese Bank of China jointly issued guidance with more than a dozen departments that Internet finance is a new model of financial innovation that uses Internet technology to provide customers with financing, trading, investment and intermediary business. Internet finance can be broadly divided into three categories, namely, P2P network loans, third-party payment and crowdfunding three models. Internet finance can provide customers with personalized services, accumulated a large number of customers. This innovative model is eroding the profits of commercial banks, and the financial market competition will become more intense in the future. Based on qualitative research and quantitative analysis, this paper studies the impact of Internet finance on commercial banks, especially on their profitability, and puts forward relevant countermeasures and suggestions on this basis, which have some theoretical and practical significance for optimizing the operation and

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management of commercial banks.

2. The Basic Theory That Internet Finance Affects the Business Performance of Commercial Banks

2.1 The Impact of Internet Finance on the Assets of Commercial Banks

The asset business of commercial banks is the business of commercial banks to use funds, mainly to make loans or investments, so as to earn income. The following analyzes the impact of the rise of Internet Finance on its asset business from both short-term and long-term aspects.

2.1.1 Analysis from a Short-Term Perspective

With their own technical advantages, online loan coverage is broader, but mainly targeted at commercial banks did not design the field, has not threatened the core assets of commercial banks, the advantages of network loans include three main aspects: first, the network loan application is more convenient; Further broaden the financing channels. It can be seen that the three characteristics of Internet loans can meet the credit needs of individual customers and small and medium-sized enterprises.

Most customers still like bank loans, but can't get commercial bank loans for individuals and small and micro-enterprises, and it's easier to borrow on the P2P platform, so P2P bank credit markets can't largely suppress credit markets, but the complementarities between the two are becoming more and more obvious, so the development of P2P won't have much impact on commercial banks' asset business. In this case, China's commercial banks business model is actively responding to external shocks, with the rise of P2P and other network lending, China's joint-stock banks are actively seeking changes in the field of online lending, and with internet financing. The establishment of online business application and its own online financial brand has promoted the service transformation of commercial banks, and the development of online loans has had a positive impact on commercial banks to a certain extent.

2.1.2 Analysis from a Long-Term Perspective

In the long run, the continuous development of network loans makes commercial banks began to pay attention to the untapped small and medium-sized enterprises market, the further direction of commercial banking business development will be to expand the customer base. Some small and medium-sized banks have begun to expand into the microfinance market. Take Alibaba's microfinance, for example, which can successfully break through the threshold of capital requirements with its innovative talents and financial strength, and its lending targets and loan volume will certainly increase, which will compete with the traditional bank microfinance business.

2.2 The Impact of Internet Finance on the Liabilities of Commercial Banks

Liability business is the business activity of the source of funds organized by commercial banks, and it is the starting point and basis of the asset business and other business operations of commercial banks. The rise of Internet finance will certainly reduce the deposits of some banks.

2.2.1 The Influence of the Third Party Payment on the Liability Business of Commercial Banks

The original purpose of third-party payments was to act as a customer reserve, mainly for daily online shopping, and to simplify trading procedures and function as wallets, but not to add value. However, because of the strong compatibility of third-party payments, they can be linked to a variety of platforms, while some third-party payment platforms create new wealth management products, thus weakening the boundaries between them and monetary funds. As a result, third-party payment platforms reduce some bank deposits, especially demand deposits, which can have an impact on commercial banks' current savings.

2.2.2 The Impact of Internet Monetary Fund Financial Products on the Liability Business of Commercial Banks

As our wealth management products become richer, the impact on bank deposits. The rapid development of the network money fund makes the cost of absorbing capital deposits increase for commercial banks. Before buying Internet money fund products, most investors' funds were deposited in the form of demand or term deposits, and now because of the huge advantages of Internet funds, many investors are transferring money, resulting in banks now need to raise interest rates to absorb deposits, which increases the cost of banks.

2.3 The Impact of Internet Finance on the Intermediary Business of Commercial Banks

Intermediary business refers to the commercial bank on behalf of customers for collection, payment and other entrustment matters and charge fees for the business, to provide a variety of financial services and charge fees business. The rise of Internet finance, making it more convenient to handle various businesses, will certainly seize part of the bank's business, thereby reducing intermediate business income.

3. Empirical Analysis of the Operating Performance of Commercial Banks by Internet Finance

3.1 Research Assumptions

Because the return on assets of commercial banks can reflect the effect of bank operations, this paper selects the return on assets as the interpreted variable, and combines the above analysis to make the following assumptions:

The third-party payment scale reduces the profit level of commercial banks; The scale of online loan reduces the profitability level of commercial banks.

3.2 Indicator Data Description

3.2.1 Variable Setting

This paper takes into account that the profit of the traditional business of commercial banks mainly comes from the difference between deposit and loan interest, so the return on assets is chosen as the explanatory variable.

The main direct impact on the return on bank assets is the third-party payment and P2P network loan two models, therefore, this paper chooses the third-party payment scale and P2P network loan scale as explanatory variables, analysis of the impact of Internet finance on the profitability of commercial banks. At the same time, the commercial banks' own asset size, non-performing loan ratio, asset return and macro GDP growth rate will have an impact on the profitability of commercial banks. Therefore, the size of the bank's assets, non-performing loan ratio, asset-liability ratio and GDP growth rate as the control variables of the model.

3.2.2 Indicator Data Description

Based on factors such as bank data integrity, market position and influence, this paper selects the data of 28 listed banks as a research sample. After data collation, get the underlying panel data.

(1) Explained variable

The return on assets(roa) is the ratio of net profit to total assets of a commercial bank. It is an indicator of how much net profit per unit of assets is generated, reflecting the profitability of commercial banks. This paper analyzes its impact on the profitability of commercial banks as an explanatory variable.

(2) Explanatory variable

Third-party payment transaction size(escrow): Because ofthe large amount, the total amount of third-party payment transactions is naturally synonyms. Similarly, P2P network loan transaction size(pp):due to the large amount, but also take natural values for it.

(3) Control variable

Asset size: Due to the large amount, the total amount of third-party payment transactions is taken as natural logarithm. Similarly, the transaction scale of P2P online loan (PP): due to the large amount, the natural logarithm is also taken.

Asset-liability ratio(dar): A measure of a company's ability to conduct business with funds provided by creditors and to reflect the security of loans made by creditors.

Non-performing loan ratio(nplr): An assessment of bank risk management. The lower the non-performing loan rate, the better the ability of financial institutions to recover loans. The weaker the other hand.

GDP Year-on-year growth rate(rgdp): Macroeconomic indicators, the better macroeconomic development, the higher the year-on-year growth of GDP, the more profitable banks are.

3.3 Model Building

This paper uses panel data for regression analysis, the model is as follows:

Model 1:

$$ROA_{it} = \alpha + \beta_1 LNT_{it} + \beta_2 LNSIZE_{it} + \beta_3 NPL_{it} + \beta_4 NIP_{it} + \varepsilon_{it}$$

Model 2:

$$ROA_{it} = \alpha + \beta_1 LNP_{it} + \beta_2 LNSIZE_{it} + \beta_3 NPL_{it} + \beta_4 NIP_{it} + \varepsilon_{it}$$

In the above formula, i and t represent the data for the ith individual's t-year, respectively, α is the intercept term, is the β_i coefficient of the explanatory variable, and is the random error ε_{it} term.

3.3.1 Descriptive Statistics

The data is analyzed to get Table 1.

Table 1 Descriptive Statistics For Each Indicator

Variable	Obs	Mean	Std.Dev.	Min	Max
Roa	167	0.0091468	0.0022188	0.0044882	0.0258628
lnt	167	3.958956	1.710865	0.1823216	5.420978
lnp	167	9.239434	1.00334	6.799167	10.24167
lnsize	167	28.39782	1.619539	25.12201	31.03586
nir	167	0.188741	0.0885042	0.0267744	0.3763844
npl	167	1.408982	0.3680339	0.65	2.47

3.3.2 Correlation Analysis

Correlations between variables affect the results of the analysis, so correlation analysis of the variables is required, such as Table 2.

Table 2 Correlation of Variables

	roa	lnt	lnp	lnsize	nir	npl
roa	1.0000					
lnt	-0.5096	1.0000				
lnp	-0.5006	0.8364	1.0000			
lnsize	0.3683	-0.1857	-0.1525	1.0000		
nir	0.1557	-0.1276	-0.0148	0.6806	1.0000	
npl	-0.3625	0.4722	0.5751	0.0588	0.0712	1.0000

3.4 Empirical Results and Analysis

Table 3 Model 1 Regression Results

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnt	-.0004572	.000097	-4.71	0.000	-.0006489	-.0002655
lnsize	.0005965	.0001233	4.84	0.000	.000353	.0008401
nir	-.0041801	.002204	-1.90	0.060	-.008535	.0001748
npl	-.0013113	.000461	-2.84	0.005	-.0022222	-.0004005
_cons	-.0033436	.0032935	-1.02	0.312	-.0098512	.0031639

Model 1 regression result:The F value is 23.714, the corresponding P value is 0.0000,and the original assumption that the model is not significant at the significance level of 0.01 is rejected, that the model is reasonable. Third-party payment transactions are negatively correlated with the return on assets, which decreases by 0.46%when the volume of transactions increases by 1%. Control variables nir and npl have a negative impact on roa, and the smaller the non-performing loan ratio, the higher the profitability. The control variable lnsize has a significant positive effect on the interpreted variable roa, so the larger the commercial bank, the higher the profitability of the commercial bank.

Table 4 Model 2 Regression Results

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
lnp	-.0007204	.0001778	-4.05	0.000	-.0010717	-.0003691
lnsize	.0005631	.0001277	4.41	0.000	.0003108	.0008154
nir	-.0027993	.0022579	-1.24	0.217	-.0072608	.0016622
npl	-.0011688	.0005061	-2.31	0.022	-.0021688	-.0001687
_cons	.0020282	.0038843	0.52	0.602	-.0056469	.0097033

Model2 Regression Result: The model is reasonable because theF value is 19.01, thecorresponding P value is 0.0000, and the original assumption that the entire model is not significant at the 0.01 significance level is rejected. The explanatory variable lnp has a significant and negative effect on the interpreted variable. This indicates that the amount of online loan transactions has a negative impact on the return on assets, with a 1%increase in the size of the transaction and a decreasein the return on assets of 0.7%, so the development of P2P has reduced the profitability of commercial banks. The control variable nir has a negative effect on the roa but is not significant. The control variable npl has a significant negative effect on the interpreted variable roa, indicating that the lower the bank's non-performing loan rate, the higher the return on assets. lnsize has a significant positive effect on the interpreted variable roa, and the larger the commercial bank, the higher the profitability of the commercial bank.

4. Conclusion

4.1 Strengthen Cooperation with Internet Finance Companies

Commercial banks and Internet finance companies are not completely competitive, they can complement each other and grow together. Commercial banks have a mature management system and strong risk management capabilities, Internet finance companies have a large amount of data and traffic, the two can complement each other. Improve efficiency through close cooperation in building inclusive finance. Continuously improve retail e-banking channels, further enhance the efficiency of operations, deepen the digital construction of financial scenes, build financial management, credit services, further upgrade life, community pan-financial scene, and promote the organic integration with the financial scene.

4.2 Improve Mobile Banking

Based on mobile banking, we will steadily promote the construction of scenes such as content ecology, quality e-commerce and automobile life, continuously expand the product dimension, broaden the scope of cooperation, adhere to the technical depth, and strengthen the connection with users and merchants. Relying on fintech to provide customers with intelligent customer service, online repayment, online education and other home-based financial and life services, for merchants, with app as the carrier, to help catering, automotive and e-commerce and other consumer areas to recover.

4.3 Use Internet Channels to Develop Your Wealth Management Business

With the rapid development of China's economy and the increasing income of residents, people have great potential financial needs. At the same time, people's understanding of financial management is still relatively weak, the understanding of financial products is very limited. Commercial banks often focus only on high net worth customers, ignoring the wealth management needs of other groups of people. Commercial banks only attach importance to the promotion of offline branches, while ignoring online publicity and promotion. Under the background that Internet finance companies have taken the lead, commercial banks should not only innovate financial products, but also pay attention to the promotion and promotion of later products.

4.4 Use Intelligent Technology to Improve Service Efficiency

Commercial banks should keep up with the trend of the times, change the original product development process, customer-oriented, simplify the approval process, shorten the product development process. Speed up product updates and iterations to meet new customer needs in a timely manner. For example, some bank analyses have found that financial investment in art is promising, innovative financial products related to art, and market recognition. In the area of online business, commercial banks should learn from Internet finance companies and strive to simplify payment procedures for mobile and online banking, while paying attention to risk management in order to improve service efficiency. Transform the traditional banking network business model, more use of smart devices to complete all standardized services. Finally, in the key areas of people's lives, strengthen online and offline cooperation with external institutions to provide comprehensive and convenient services for customer payment and settlement. Adhering to the concept of openness and integration, we will continue to improve our professional capabilities, strengthen the integration of wholesale and retail services, online and offline services, finance and non-financial services, domestic and foreign services, continuously strengthen customer development, deepen the integrated management and services of customers, and continue to create value for customers. At the same time, deepen the use of fintech, in the customer needs of accurate identification, professional financial solutions, account manager professional competence training and internal operation processes to accelerate the process of digital empowerment, and constantly improve business operational efficiency and customer service experience.

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