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## Impact of Digital Finance on Credit Structure and Risk-Taking in Commercial Banks: An Empirical Analysis

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### Abstract

With the rapid growth of new technologies such as big data, digital technology is increasingly permeating our daily lives. Financial institutions, particularly commercial banks, are also seizing opportunities in the wave of digital financial development to provide better financial services. However, this development in digital finance has affected the credit structure and risk-taking of banks. This study aims to empirically analyze the impact of digital finance development on the credit structure and risk-taking of commercial banks. Additionally, the study seeks to discuss how the combined effects of digital finance and credit structure influence bank risk-taking. Empirical analysis is conducted using financial data from commercial banks over the past decade. The analytical methods include collecting secondary data, statistical data processing, and regression analysis to evaluate the relationships between digital finance development, credit structure, and bank risk-taking. The empirical analysis results show that the development of digital finance has promoted an increase in the scale of bank credit and the ratio of personal loans to credit loans. Integrating digital finance with banks has proven to reduce the risk burden banks bear. Furthermore, as digital finance continues to develop, adjustments in the bank's credit structure also affect the risk burden borne by the banks. Based on these findings, it is recommended that commercial banks continue to adopt digital financial technologies to increase their credit scale and optimize their credit structure. Additionally, banks should consider developing policies that support integrating digital technologies to reduce risk burdens and enhance financial stability. Further research is also suggested to explore the long-term impact of digital finance on the overall financial performance and risk of banks.

**Keywords:** *Digital Finance, Credit Structure, Risk Taking*

### A. Introduction

With the explosive growth of emerging technologies such as the Internet, cloud computing, artificial intelligence, and big data, China's digital economy is developing rapidly. New situations and models continue to emerge, supporting the high-quality development of China's economy. In recent years, "digitalization" has significantly impacted our lives. Governments, enterprises, and individuals all enjoy the benefits brought by "digitalization". As a crucial part of economic activities, finance has also entered an era of technological change. When new technologies and finance combine, digital finance, as a new inclusive financial model, has become a trend in financial technology development. The emergence of Alipay in 2004 is generally considered the starting point of China's digital finance, while the implementation of Yu 'e Bao in 2013 is seen as the first year of China's digital finance development. After decades of development, China's digital finance has grown rapidly, with the scale of digital currency, third-party payment, and other businesses leading the world, greatly impacting traditional financial institutions. On one hand, digital finance improves the efficiency of bank operations, promotes the perfect and reasonable process of banking business, and reduces the cost of banking

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services through technical impacts on financial institutions. On the other hand, the deepening development of digital finance has stimulated competition between traditional financial institutions and new Internet companies, promoting technological changes, business model innovations, digital transformation, and other aspects of financial institutions, making digital finance more "universal" and "beneficial" (Li, 2022).

As China's economic development moves toward the new normal, commercial banks have adjusted their credit structures to alleviate the financing difficulties and high costs faced by SMEs, promoting the development of the real economy through SMEs and achieving high-quality development. Credit structure is gradually becoming one of the key focuses of national monetary authorities and credit researchers. In recent years, the State Council and the China Banking and Insurance Regulatory Commission have closely monitored the adjustment of the banking industry's credit structure, offering numerous suggestions and targeted policies. This indicates that promoting the active transformation of the credit structure and credit system of commercial banks and increasing the intensity and scope of appropriate lending has become a critical part of the current financial supply-side reform process in China. For many years, the government has emphasized the goal of avoiding regional and systemic financial risks. However, with the innovation and development of the financial industry, some financial businesses and derivatives have exceeded the scope of financial supervision, leading to vulnerabilities in the financial system. This has forced many commercial banks to re-examine and identify potential financial risks and implement corresponding preventive and responsive measures (Zhang, 2023).

In recent years, the intersection of digital technology and finance has become a focal point of academic and industry research, particularly in the context of China's rapid economic transformation. The explosive growth of emerging technologies such as the Internet, cloud computing, artificial intelligence, and big data has accelerated the development of the digital economy, positioning China as a global leader in this domain. This digital revolution has given rise to new financial models and services that are reshaping the landscape of traditional banking and finance (Li, 2022). The emergence of digital finance in China can be traced back to the launch of Alipay in 2004, which marked the beginning of significant changes in the financial sector. The implementation of Yu 'e Bao in 2013 further accelerated this trend, establishing 2013 as the landmark year for China's digital finance development (Zhang, 2023). Over the past decade, the scale of digital currency, third-party payment systems, and other digital financial services in China has expanded rapidly, surpassing global benchmarks and profoundly impacting traditional financial institutions. This growth has been fueled by technological advancements that enhance operational efficiency, reduce service costs, and streamline banking processes (Chen, 2021).

The integration of digital finance has had a dual impact on traditional financial institutions. Firstly, it has driven efficiency improvements within banks, promoting more streamlined and cost-effective banking operations (Wang, 2020). Secondly, it has intensified competition between established financial institutions and emerging Internet-based financial companies. This competition has spurred innovation, pushing traditional banks towards digital transformation and the adoption of new business models. As a result, digital finance has become more inclusive, extending financial services to previously underserved populations and contributing to broader economic development (Liu, 2019). In response to the dynamic changes brought about by digital finance, Chinese regulatory bodies such as the State Council and the China Banking and Insurance Regulatory Commission have placed significant emphasis on the adjustment of credit structures within the banking sector. The focus has been on alleviating financing difficulties for small and medium-sized enterprises (SMEs) and promoting the development of the real economy (Ma, 2022). These regulatory efforts are part of a broader financial supply-side reform aimed at ensuring financial stability and preventing systemic risks (Zhou, 2020).

Despite the benefits, the rapid innovation in digital finance has also introduced new challenges. Some financial products and derivatives have outpaced existing regulatory

frameworks, creating vulnerabilities within the financial system. This has necessitated a re-evaluation of risk management practices by commercial banks, compelling them to identify potential financial risks and implement appropriate preventive measures (Sun, 2021). Current research is increasingly focused on understanding the comprehensive impact of digital finance on financial stability, efficiency, and inclusion. Studies are exploring the long-term implications of digital finance on traditional banking models, regulatory practices, and economic development (Gao, 2021). Researchers are also examining the interplay between technological advancements and financial risk, aiming to develop frameworks that can guide policy and practice in this rapidly evolving field (Liang, 2023).

The primary objective of this study is to empirically analyze the impact of digital finance development on the credit structure and risk-taking of commercial banks, as well as to understand how the combined effects of digital finance and credit structure influence bank risk-taking. Specifically, the study aims to identify and measure changes in the scale of bank credit resulting from digital finance advancements, determine how digital finance affects the ratio of personal loans to credit loans, and evaluate the impact of digital finance integration on reducing the risk burden borne by commercial banks. Additionally, the study seeks to analyze how adjustments in bank credit structures influence risk-bearing in light of digital finance developments. Based on these findings, recommendations will be provided for commercial banks to adopt digital financial technologies to enhance their credit scale and optimize their credit structure. The study will also propose policies to support the integration of digital technologies in order to mitigate risk burdens and enhance financial stability. Furthermore, the research aims to encourage further investigation into the long-term effects of digital finance on the overall financial performance and risk of banks.

## **B. Methods**

### **1. Theoretical Analysis**

The credit structure of commercial banks reflects the investment and application of credit funds. The popularity of emerging financial models such as digital finance has enabled many financial institutions in China to achieve a daily operation mode full of high-tech. The application of Internet technology and big data technology has enabled banks and other financial institutions to obtain more information than customer financial information. The existence of cloud computing technology, blockchain technology and artificial intelligence technology can further reduce the cost of processing large amounts of data, so that customers' information is described more specific and more complete. The development of digital finance can alleviate the problem of information asymmetry between commercial banks and credit customers, and also narrow the gap in information processing capabilities between banks of different sizes. Before the development of digital finance, small and medium-sized banks, because of the close connection between institutions and credit customers, have a higher degree of "soft information" than large banks, so they will give more financial support to enterprises with insufficient mortgage assets. With the development of digital finance, the ability of commercial banks to convert and absorb information has been enhanced, making information more readable. Based on the advantages of capital and reputation, large banks seize the high-quality customers of the original small and medium-sized banks, which leads to the occurrence of crowding out. The development of digital finance also has the effect of technology spillover (Jin Hongfei, Li Hongji & Liu Yinlu, 2020). With the popularization of digital technology, the operating cost and information acquisition cost of banks are relatively reduced, and their risk processing ability and service process optimization ability are improved, which also reduces the information asymmetry between banks, enterprises and individual customers. With the development of digital finance, the competition between banks will become more intense, which will promote the expansion of bank credit and promote the adjustment of bank credit structure (Xu Xiaoping,

Li Hongji & Ge Yingfan, 2021). Based on the above analysis, this paper proposes the following hypotheses:

H1: The development of digital finance promotes the increase of bank credit scale and optimizes the structure of bank loans.

The research on the impact of the development of digital finance on the risk taking of commercial banks has not reached a unified conclusion in the academic circle. On the one hand, it is believed that the popularization and deepening of digital finance has improved the ability of commercial banks to identify and avoid risks. First of all, the application of digital financial technology has further improved the ability of commercial banks to process information, and the cost of processing information is lower, which significantly reduces the degree of information asymmetry between commercial banks and credit customers, and reduces the risk bearing of banks. Secondly, the application of digital financial technology in risk management can make its risk management method more scientific, more optimized process, lower cost and better effect. The other side believes that the development of digital finance will increase the possibility of bankruptcy of commercial banks. Firstly, the development of digital finance may lead to the prevalence of competitive behavior among banks, which may lead to banks impulsively increasing their credit scale, and further aggravate the credit risk of commercial banks. Secondly, the development of digital finance has promoted the emergence of a large number of financial technology companies, so that part of the deposit share originally belonging to banks has been absorbed by these technology companies (Liu Wei, Liu Weizhen, Dai Bingqing & Lv Ting, 2022). This kind of financial technology companies absorb deposits at higher interest rates, which increases the original capital cost of commercial banks and compresses the profit space of commercial banks, thus increasing the bankruptcy risk of banks and increasing their risk bearing (Zheng L S, 2014). Based on the above analysis, this paper proposes the following hypotheses:

H2: The development and popularization of digital finance will reduce the risk taking of banks.

H3: Digital finance can change the level of risk taking through the adjustment of credit structure.

## **2. Research Design**

### ***Sample Data***

The research data in this paper mainly includes three types: measurement indicators of the development degree of digital finance, data of banks on the financial level and data on the macro level. The above indicators of the development degree of digital finance are measured by the Digital Financial Inclusion Index released by the Digital Finance Research Center of Peking University (Feng, et al., 2020). The financial data of the bank mainly comes from the wind database, and some missing data are supplemented by consulting the annual reports of each bank. The macro data comes from the National Bureau of Statistics.

### ***Variable selection***

Credit Structure (Structure): For the variable of bank credit structure, this paper selects the natural logarithmic form of total bank loans (Loan) to measure the loan scale of the bank; The credit structure of commercial banks is measured by the ratio of bank credit to total loan (Crel). The customer structure of commercial bank credit is measured by personal loans as a percentage of total loans (Perl). Bank Risk(Risk): The variables used to measure the level of bank risk mainly include expected default rate, franchise value, stock return volatility, Z value, non-performing loan ratio, etc., but the former ones are not applicable in the current economic environment unique to China. After full consideration, the method proposed by Liu Zhonglu. (2016) is adopted to measure the level of bank risk.

Measurement of the degree of development of digital finance (Digit): This paper refers to the provincial panel data in the Digital Financial Inclusion Index released by the Digital Finance Research Center of Peking University to quantify the development degree of digital finance. The data itself has certain authority and is used by many industry scholars to measure the development degree of digital finance for research. The index, measured using data from Alipay Ant Financial, covers the financial inclusion index of 31 provinces in the Chinese mainland, and the provincial and municipal indexes cover nearly a decade, making the index comparable horizontally and vertically. With reference to existing studies, the following variables are selected for control: At the financial level of banks, this paper adopts bank Size, profitability ROA and capital structure EDR; At the macro level, this paper selects the local economic development level GDP, local inflation level CPI and monetary policy environment M2R, and refer to Table 1 for the definition of specific variables.

**Table 1.** Variable Definition Table

Variable	Variable Name		Variable Symbol	Variable Description
<b>Explained variable</b>	Credit Structure	Loan scale	Loan	The natural log of total loans
		Credit structure	CreL	Amount of credit/total loan *100
		Customer structure	PerL	Personal loan amount/Total loan amount *100
	Bank Risk	Non-performing loan ratio	Risk	Non-performing loan ratio = (subprime loans + doubtful loans + loss loans)/all loans * 100
<b>Core explanatory variable</b>	Degree of development of digital finance	Overall index	Index	Provincial data of Peking University Digital Financial Inclusion Index
<b>Control variable</b>	Financial level of bank	Bank size	Size	The natural logarithm of total asset size
		profitability	ROA	Return on total assets
		Capital structure	EDR	Equity capital/total liabilities
	Macro level	Level of local economic development	GDP	Local nominal GDP growth *100
		Local inflation level	CPI	Current consumer price index
		Monetary policy environment	M2R	Growth rate of broad money for the current period

### 3. Descriptive analysis

The descriptive statistical results are shown in Table 2. The mean value of the non-performing loan ratio in the sample is 1.291, and the standard deviation is 0.588. It can be seen that there are still large differences in the level of risk taking at various levels. In terms of the development degree of digital finance, the standard deviation is 109.706, which shows that the development degree of digital finance in different regions is very different. In the credit structure, we can also see the imbalance in the structure of various types of inter-bank loans, and the development of various banks is relatively different.

**Table 2.** Descriptive Analysis

	Obs	Std. Dev.	Mean	Max	Min
<b>idex</b>	462	109.706	263.507	458.970	18.470
<b>Loan</b>	462	1.815	26.737	30.660	23.334
<b>CreL</b>	462	10.755	16.290	42.972	0.007
<b>PerL</b>	462	11.406	28.682	62.523	3.546
<b>Risk</b>	462	0.588	1.291	9.560	0.220
<b>Size</b>	462	1.767	27.492	31.191	24.656
<b>ROA</b>	462	0.252	0.992	1.780	0.420
<b>EDR</b>	462	1.588	7.623	19.802	2.222
<b>GDP</b>	462	2.315	7.709	16.400	1.100
<b>CPI</b>	462	1.123	102.394	105.900	100.100
<b>M2r</b>	462	3.459	12.218	17.600	6.400

#### 4. Hausman test

F test and Hausman test were performed on the data, and the results were obtained as shown in Table 3, that is, the P-values of both F test and Hausman test were less than 0.01, which strongly rejected the null hypothesis. Therefore, the individual fixed effect model is used in this paper.

**Table 3.** F test and Hausman test

	F test	Hausman test
P value	0.000	0.000

#### 5. Model design

Through the construction of econometric model, this paper uses panel fixed effect to control the individual effect of banks, and discusses the influence of digital finance on bank credit structure and bank risk taking. Firstly, model (4.1) is set to analyze the impact of the development of digital finance on the credit structure of banks, including the credit scale of banks, the credit structure of credit and the customer structure of credit: :

$$Structure_{i,t} = \alpha_0 + \alpha_1 idex_{i,t} + \alpha Control_{i,t} + \mu_i + \gamma_{i,t} \quad (4.1)$$

Secondly, a model (4.2) is set to analyze the impact of the interaction between digital finance and bank credit on bank risk taking :

$$Risk_{i,t} = \beta_0 + \beta_1 idex_{i,t} + \beta_2 Structure_{i,t} + \beta_3 idex_{i,t} * Structure_{i,t} + \beta Control_{i,t} + \mu_i + \gamma_{i,t} \quad (4.2)$$

In the formula,  $\alpha_0$  and  $\beta_0$  are the intercept terms of the equation, the subscripts i and t represent the i bank and t year data,  $\mu_i$  represents the individual fixed effect, and  $\gamma_{i,t}$  represents the random error term. The specific variables represented by Structure and Control are shown in Table 1.

### C. Findings and Discussion

#### 1. Digital Finance and Bank Credit Structure

In order to study the impact of the development of digital finance on the credit structure of commercial banks, this part conducts benchmark regression analysis on the model, and the specific results are shown in Table 4. Among them, the results of (A) show that the coefficient of the development degree of digital finance is significantly positive, indicating that the development of digital finance helps promote the expansion of the credit scale of commercial banks; (B) The coefficient of regression is positive and the result is significant, indicating that the development of digital finance has a promoting effect on the credit loan ratio of commercial banks; (C) Regression results show that the development of digital finance has contributed to an

increase in the ratio of personal loans to total loans. The above regression results prove that the development of digital finance promotes the increase of bank credit scale and has an impact on the structure of bank loans, which verifies H1.

**Table 4.** The Return of Digital Finance to Bank Credit Structure

	(A)	(B)	(C)
	LOAN	CREL	PERL
Iindex	0.001*** (9.198)	0.017*** (4.852)	0.0942*** (22.534)
Size	0.859*** (35.468)	4.644*** (6.410)	-7.060*** (-7.932)
ROA	0.093*** (3.556)	-3.427*** (-4.055)	4.669*** (4.201)
EDR	0.042*** (9.973)	0.238* (1.903)	-0.696*** (-6.493)
GDP	-0.002 (-1.336)	0.251*** (3.847)	0.013 (0.156)
CPI	0.022*** (6.010)	1.020*** (7.787)	1.694*** (10.661)
M2r	0.008*** (6.060)	0.184*** (3.960)	-0.323*** (-5.709)
C	0.034 (0.046)	-233.052*** (-9.926)	29.066 (1.057)
Adj-R2	0.9988	0.9552	0.9352

## 2. Digital finance, Credit Structure and Bank Risk-Taking

### *Regression Analysis of Risk Taking in Digital Finance*

This part explores the impact of the development of digital finance on the level of risk-taking of banks. Since it is believed that the risk taking of commercial banks in the previous period may have a lag effect and affect the risk taking of the current period, the Lrisk item of risk taking is added to the regression, and the benchmark regression analysis is made on the digital financial index and the non-performing loan ratio of commercial banks, and the conclusion is drawn as shown in regression (A) in Table 5. It can be concluded that the coefficient of the degree of development of digital finance is negative and significant at the 1% level, indicating that the development of digital finance can alleviate the information asymmetry between banks and lenders, improve the ability of banks to manage risks, and reduce banks' risk bearing.

### *Regression Analysis of Risk Taking in Digital Finance and Credit Structure*

This part further explores the joint impact of digital finance and credit structure on bank risk. In Table 5, (B) to (D) show the impact of the joint effect of commercial banks' credit structure and the development degree of digital finance on bank risk taking. It can be concluded from (B) that the common term coefficient between credit scale and digital finance is not significant, and it can be inferred that with the deepening development of digital finance, the change of credit scale of commercial banks has no significant impact on their risk taking; (C) In the regression, it can be concluded that when digital finance is further developed, the increase in the share of credit loans in loans will increase the risk taking of banks. It shows that with the development of digital technology, the information asymmetry has been alleviated, and more credit loans have been issued, so their risk bearing is also greater than before. (D) Regression shows that with the deepening of the development of digital finance, increasing the proportion of personal loans will lead to the reduction of bank risk, which can also indicate that the

development of digital finance will promote the increase of personal loans in the structure of credit customers, thereby reducing the level of risk.

**Table 5.** Digital finance and Credit Structure Return To Risk-Taking

	(A)	(B)	(C)	(D)
	Risk			
Lrisk	0.356*** (9.731)	0.346*** (9.386)	0.349*** (9.549)	0.360*** (9.917)
idex	-0.002*** (-8.722)	-0.004** (-2.455)	-0.002*** (-6.527)	0.000 (-1.367)
loan	--	-0.035 (-0.674)	--	--
crel	--	--	-0.011*** (-3.471)	--
perl	--	--	--	0.001 (0.178)
loan*idex	--	0.0001 (1.551)	--	--
crel*idex	--	--	0.0001* (1.682)	--
perl*idex	--	--	--	-0.0001*** (-2.597)
roa	-0.575*** (-6.596)	-0.581*** (-6.488)	-0.642*** (-7.399)	-0.532*** (-6.116)
edr	0.078*** (5.927)	0.074*** (5.545)	0.072*** (5.443)	0.084*** (6.389)
gdp	-0.020*** (-4.211)	-0.022*** (-4.362)	-0.020*** (-4.173)	-0.019*** (-4.079)
cpi	-0.076*** (-5.478)	-0.071*** (-4.965)	-0.062*** (-4.326)	-0.072*** (-5.121)
m2r	-0.017*** (-5.031)	-0.019*** (-5.279)	-0.016*** (-4.723)	-0.016*** (-4.562)
c	9.428*** (6.574)	9.904*** (5.084)	8.173 (5.615)	8.690 (6.061)
adj-R2	0.8084	0.8081	0.8117	0.8126

### 3. Robustness test

Instead of explanatory variables of the model, this part uses the coverage breadth of digital finance (bread) to replace idex for regression analysis test. The test results are shown in Table 6. The test results are basically consistent with the above conclusions, indicating that the model is relatively robust.

**Table 6.** Robustness Test

	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	<i>LOAN</i>	<i>CREL</i>	<i>PERL</i>				<b>RISK</b>

	(A)	(B)	(C)	(D)	(E)	(F)	(G)
<b>LRISK</b>	--	--	--	--	0.348***	0.350** *	0.357** *
	--	--	--	--	(9.354)	(9.514)	(9.770)
<b>BREAD</b>	0.002** *	0.020***	0.110***	- 0.002***	-0.003*	- 0.002** *	0.000
	(12.164 )	(4.726)	(25.783)	-(4.451)	-(1.763)	-(5.936)	-(1.198)
<b>SIZE</b>	0.769** *	4.243***	-9.946***	-0.071	--	--	--
	(30.770 )	(5.110)	-(11.766)	-(1.109)	--	--	--
<b>LOAN</b>	--	--	--	--	-0.037	--	--
	--	--	--	--	-(0.644)	--	--
<b>LREL</b>	--	--	--	--	--	- 0.009** *	
	--	--	--	--	--	-(2.822)	
<b>PERL</b>	--	--	--	--	--	--	0.001
	--	--	--	--	--	--	(0.198)
<b>LOAN*IDE X</b>	--	--	--	--	0.000	--	--
	--	--	--	--	(0.815)	--	--
<b>CREL*IDE X</b>	--	--	--	--	--	0.000	--
	--	--	--	--	--	(0.849)	--
<b>PERL*IDE X</b>	--	--	--	--	--	--	0.000** *
	--	--	--	--	--	--	-(2.843)
<b>ROA</b>	0.142** *	-3.142***	5.810***	- 1.002***	- 0.573***	- 0.632** *	- 0.531** *
	(5.649)	-(3.601)	(5.451)	-(12.020)	-(6.168)	-(7.212)	-(6.040)
<b>EDR</b>	0.034** *	0.226*	-0.852***	0.083***	0.074***	0.072** *	0.085** *
	(8.237)	(1.746)	-(8.393)	(6.479)	(5.463)	(5.380)	(6.457)
<b>GDP</b>	- 0.004**	0.232***	-0.075	-0.012**	- 0.021***	- 0.019** *	- 0.019** *
	-(2.196)	(3.579)	-(1.027)	-(2.389)	-(4.246)	-(4.027)	-(4.056)
<b>CPI</b>	0.022** *	0.979***	1.425***	- 0.076***	- 0.076***	- 0.066** *	- 0.076** *
	(6.340)	(7.562)	(10.244)	-(7.721)	-(5.292)	-(4.618)	-(5.416)
<b>M2R</b>	0.006** *	0.167***	-0.365***	- 0.026***	- 0.017***	- 0.015** *	- 0.015** *
	(5.156)	(3.575)	-(6.997)	-(6.974)	-(4.951)	-(4.417)	-(4.480)
<b>C</b>	2.526**	- 207.905**	134.634* **	12.141** *	10.367** *	8.533** *	9.066** *

	(A)	(B)	(C)	(D)	(E)	(F)	(G)
		*					
	(3.371)	-(8.478)	(5.263)	(6.536)	(5.247)	(5.838)	(6.339)
<b>ADJ-R<sup>2</sup></b>	0.9990	--	0.9556	--	0.9454	--	0.7525

#### 4. Suggestion for further study

Although the research in this paper has verified the impact of the development of digital finance on the credit structure and risk taking of banks to a certain extent, I am well aware that the degree of meticulousness and thoroughness of the research is still insufficient, the selection of indicators of credit structure is not fully covered, the measurement of bank risk taking is also one-sided, and the measurement of the development degree of digital finance is not accurate enough. Only the provincial panel data was selected for measurement, and it did not accurately indicate the level of digital financial development of each bank.

Therefore, it is hoped that more scholars will conduct more in-depth research on the impact of digital finance, credit structure and bank risk taking in the future, and conduct more comprehensive research on all aspects of bank credit structure. It is also hoped that some scholars can study the development indicators of digital finance of each financial institution from a more micro perspective, so as to promote the development of related research on digital finance.

#### D. Conclusion

Through empirical analysis of the data of 42 commercial banks in the past 11 years, this paper draws the following conclusions: First, the development of digital finance has an impact on the bank's credit scale, customer structure and credit structure. With the development of digital finance, the information asymmetry between banks and credit customers can be alleviated, the ability of banks to obtain information will be improved, and the operation process of banks will be further optimized through the popularization of digital technology. The development of digital finance will enable banks to increase their loan scale and promote the ratio of credit loans and personal loans, which also reflects the inclusive nature of digital finance. The deepening of the development of digital finance will also reduce the risk taking of banks. The integrated development of digital finance and commercial bank operations will help improve the efficiency of commercial banks in daily operations and their ability in risk prevention and control. Second, with the deepening of the development of digital finance, commercial banks' changes in credit adjustment have also affected banks' risk taking. With the deepening of the development of digital finance, the increase in the proportion of credit loans increases the commitment of banks, while the increase in the proportion of personal loans reduces the risk of banks.

The development goal of digital finance should be to solve the problem of capital allocation in the credit market in China's financial market as much as possible, and to prevent financial risks caused by maturity mismatch or structural mismatch as much as possible. Digital finance reduces the degree of information asymmetry in China's financial market, reduces the cost of banks to collect information, and promotes the development of China's credit business. Second, we should accelerate the development of digital finance and promote the integration of digital finance and commercial banks. The development of digital finance reduces the risk taking of banks and improves the ability of commercial banks to obtain information and manage risks. At present, the development of digital finance in China is still in the embryonic stage of exploration. In the future, more efforts should be made to support and encourage the development of digital finance, improve the risk prevention and control ability of China's financial market and the operation efficiency of financial institutions. Third, strengthen the supervision of the financial market, improve the market supervision system, build a more perfect risk management system, and promote the healthy and effective development of China's financial market. Fourth, all

financial institutions should actively explore the factors conducive to development, seize the opportunity in the rapid development of digital finance, and strive to make further progress..

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