



温州肯恩大学  
WENZHOU-KEAN UNIVERSITY

**The influence of Yu'E Bao on Chinese bank deposit business**

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for the Bachelor of Science in Finance

by

SHEN Jiayi

1025785

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## **Abstract**

Yu'E Bao has grown rapidly since its launch in 2013. Its high returns and good liquidity have attracted a large number of users, prompting other fund companies to launch similar products. The capital and income of Yu'E Bao are mainly from banks, so what impact Yu'E Bao will have on banks has been a hot topic in the financial circle. Firstly, the paper analyzes the characteristics of Yu' E Bao. Second, the linear regression method will be used to quantitatively study the impact of Yu'E Bao on the deposit business of banks. After the research, it is found that Yu'E Bao has a negative impact on the deposit business of Chinese banks. Finally, this paper analyzes the impact of Internet finance on banks and proposes countermeasures for banks.

**KeyWords:** Yu'E Bao, Deposit Business, Chinese Banks

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# 1 Introduction and Background

## 1.1 Brief Introduction

Yu'E Bao is a balance value-added service created by the third-party payment platform Alipay. When a customer transfers money into Yu'E Bao, it is equivalent to buying Tianhong Zenglibao money market fund. And it has no minimum purchase limit. As a representative product of Internet financial innovation, Yu'E Bao is always open to debate. It can not only bring higher benefits to customers, but also can be paid and transferred out at any time, so it is widely recognized in a short time. Meanwhile, some professionals are also examining the negative impact of Yu'E Bao. Although Yu'E Bao brings convenience to customers, it also brings great challenges to China's banking industry.

In recent years, with the vigorous development of the third-party payment, the advantages of Yu'E Bao such as high capital allocation efficiency, low capital matching cost and convenient services make it gradually into the core business of Chinese banks and have a larger impact on survival of banks. Banks are short of liquidity due to customers' investment in Yu'E Bao and the Central Bank's tight monetary policy, which is bound to cause the inter-bank lending rate to rise. Yu'E Bao attracts funds with a much higher interest rate than the demand deposit rate of banks, and then lends the funds to banks at a higher interest rate, so as to realize the benefits of Yu'E Bao by moving deposits. As a result, banks have to use the original low-cost capital at a higher cost, which leads to a

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huge impact on banks, especially on the deposit business of banks. Therefore, it is of great strategic significance for the development of China's banks to deeply study the impact of the emergence of Yu'E Bao on the savings deposits of China's banks, to analyze how banks should position themselves in the face of the tide of Internet finance, to take measures to prevent the further loss of savings deposits, and to formulate future development strategies.

Above all, the impact of Internet Finance on banks has become unstoppable. Yu'E Bao attracts part of the deposits of Chinese banks, which will undoubtedly have a certain impact on banks. Although many scholars conducted a detailed study and analysis on Yu'E Bao and its influence, they did not conduct a quantitative analysis on it, but only stayed on the basis of policy theory. Considering that quantitative analysis may bring more reasonable results, this paper will conduct a quantitative analysis on the linear regression model of the seven-day annualized return rate of Yu'E Bao and deposit business of China's banks based on previous studies by other scholars, and further analyze the reasons and put forward proposals to banks.

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## **1.2 Thesis Statement**

This paper focuses on the impact of Yu'E Bao on the deposit business of banks and analyzes the reasons and puts forward proposal to banks.

## **1.3 Hypotheses**

H0: Yu'E Bao will not affect the deposit business of Chinese banks.

H1: Yu'E Bao will have a positive impact on the deposit business of Chinese banks.

H2: Yu'E Bao will have a negative impact on the deposit business of Chinese banks.

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## **2 Literature Review**

For traditional banks, Internet Finance may change the format of traditional banks. Financial products similar to Yu'E Bao have attracted some deposits of banks, which will undoubtedly have a certain impact on Chinese Banks.

Although the deposits attracted by Internet Financial Products at this stage compared with bank deposits are little, it is more attractive than current deposit and short-term financial products in traditional banks, thus changing the financial habits of traditional users, and people gradually start to accept Internet Financial Products. Especially when people are disappointed about share value and gold, the emergence of Yu'E Bao invigorates the Internet financial market (Zhang, C., & Zhou, Y., 2015).

Since the launch of Yu'E Bao in June 2013, studies on the influence of Internet Financial Products represented by Yu'E Bao on the banking industry have been conducted at home and abroad.

### **2.1 Characteristics of Yu'E Bao**

Luo Ji (2014) stated that the essence of Yu'E Bao is that Alipay buys a kind of monetary fund for customers, realizes the redemption of "T+0", and achieves the arrival of funds in real time. Yu'E Bao's own characteristics of low threshold, flexibility and high revenue attracted the majority of young users.

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## **2.2 The Impact of Yu'E Bao on Bank Deposits Business**

Yu'E Bao's short service time and convenient channels make it gradually enter the core business of Chinese banks, and Yu'E Bao has a great impact on the survival of Chinese banks. Banks will lack liquidity due to customers' investment in Yu'E Bao and the central bank's tight monetary policy, which will surely lead to the rise of inter-bank lending rate. Yu 'E Bao attracts funds with a much higher interest rate than the demand deposit rate of banks, and then lends the funds to banks at a higher interest rate, so as to realize the benefits of Yu'E Bao by moving deposits. As a result, Chinese banks have to use the original low-cost capital at a higher cost, which leads to a huge impact on banks, especially on the deposit business of banks (Li, J., 2015).

## **2.3 For Personal Deposits**

Li Yujing (2018) claimed that when Yu'E Bao first went public, its high interest rate quickly attracted people's attention. However, as time goes by, the interest rate of Yu' E Bao decreases and banks take various measures to improve their competitiveness, so the personal deposit business of banks is not greatly affected.

## **2.4 For Corporate Deposits**

For corporate users, the 7-day annualized return rate of Yu'E Bao is higher than the interest rate of corporate deposits of traditional banks in the same period. If companies transfer funds into Yu'E Bao, they can get higher returns and increase their income.

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Therefore, the high yield of Yu'E Bao will surely attract some unit users, which will have a certain impact on the deposit business of banks (Li, Y., 2018).

## **2.5 The Relationship**

The recent literature, published by Liu Dongqing (2014), focuses on analysis of Yu'E Bao's Value. The study uses a linear regression model. In this model, regression analysis was performed on the annualized rate of return per seven days of Yu'E Bao from 2013 to 2014 and the personal deposits data of general Chinese banks from 2013 to 2014 to determine their relationship. In order to study whether there is a long-term relationship between personal deposits and the seven-day annualized return rate of Yu'E Bao, Eviews is used to conduct linear regression, and ordinary least squares estimate is adopted to analyze the time series data. In the analysis of the time series, the stationarity test was first performed on the variable of 7-day annualized return rate  $X$  and the variable of personal deposits data  $Y$ . ADF unit root test was used to test its stationarity. Then the linear regression model is established for  $X$  and  $Y$ , the residual sequence of the model is generated, and the stationarity test of residual sequence was performed. It can be seen from the results of the regression model that the data of t-test is small, which fail to pass the inspection and indicate that the personal deposits of general Chinese banks has basically no long-term relationship with the annualized rate of return every seven days of Yu'E Bao. The liner regression method will be used in this paper.

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Other studies disagree with the finding. Chen Fang (2018) reports that the results of event-study analysis model show that the launch of Yu'E Bao is a negative news for commercial banks, which leads to the negative performance of commercial banks in the short term. As Yu'E Bao's yield rate is nearly 20 times higher than that of demand deposits in banks and Yu'E Bao does not affect the funds liquidity of customers, a large number of retail investors also transfer their funds from banks to Yu'E Bao, diverting deposits from commercial banks. However, after the launch of Yu'E Bao for a period of time, the impact on commercial banks will decrease and stabilize. This is because the capital transfer of Alipay users tends to end, and Yu'E Bao needs to develop new customer groups. As a new thing, Yu'E Bao is limited in its proliferation.

Considering the advantages of Yu'E Bao products, such as convenience, low investment threshold and high return rate, more and more low-income customers choose Internet fund products. Demand deposits are the source of funds with the lowest cost and highest quality for commercial banks. With the increasing scale of Yu'E Bao products, banks have lost more and more demand deposits and high-quality liabilities. Moreover, this trend has begun to affect bank term deposits, leading to a decline in the amount of deposits in the loan-deposit ratio of banks. In the long term, Yu'E Bao products will inevitably erode a small part of banks' profits (Xiao, 2018).

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In conclusion, these previous literatures are closely related to the scope of this study and provide directions of this research. The conclusions of whether the emergence of Yu'E Bao has an impact on general Chinese banks' deposits business are different. Some scholars say there is a negative relationship while some say there is no relationship. In this study, a linear regression model will be established respectively by taking the average 7-day annualized rate of return of Yu'E Bao from 2015 to 2018 as the independent variable and the personal deposits and corporate deposits as the dependent variable respectively. The test will contain more variable and the time span is even larger which can optimize test content.

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### **3 Features and Advantages of Yu'E Bao**

Yu'E Bao is a balance enhancement service launched by the third-party payment platform (Alipay), which has set up a standardized Internet financial management line for Alipay customers. When users transfer their Alipay balances to Yu'E Bao, they buy products of Tianhong funds, which means customers can not only receive interest, but also consume, pay and transfer at any time.

#### **1. An all-network platform**

Yu'E Bao mainly relies on Internet channels to promote fund products, so that each mobile Internet terminal can become the direct selling platform of the fund. Therefore, Yu'E Bao can break through the traditional space limitation and expand the promotion scope through the network. As of December 2019, the number of real-name verified Yu'E Bao users has exceeded 300 million, according to Tianhong fund's official website. This figure means that one in four Chinese people have opened a Yu'E Bao account, more than any fund or wealth management product in the past.

#### **2. Low cost**

Money market funds need to charge a certain management fee to earn profits from their clients, while Yu'E Bao has greatly reduced the cost of fund sales and operation, so it can realize the low-cost management of funds and enable users to obtain more profits.

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### 3. Good software terminal experience

Yu'E Bao can provide daily feedback on the operation of the money fund, and investors can learn about their own returns through the two indicators of ten thousand returns and the seven-day annualized rate of return. In addition, Yu'E Bao has developed software suitable for mobile phones and other mobile terminals to facilitate users to view and manage their accounts anytime and anywhere.

### 4. Low purchase threshold

The purchase threshold of Yu'E Bao fund is one RMB, which is in sharp contrast to the high threshold financial products of banks. This comparison reflects the difference between the target customer groups of Yu'E Bao monetary fund and banks. Traditional banks pay more attention to providing financial services to high-net-worth clients, while Yu'E Bao targets low-income and middle-income clients which meets the financial needs of ordinary people.

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#### **4 The Influence of Yu'E Bao on the Deposit Business of Banks**

Alipay is attractive to potential customers for three reasons: first, its low cost of taking deposits; second, the high liquidity of its financial products; and third, the high yield of its financial products. This attraction is on the rise, and in the long run it will hit hard the traditional deposit business of Chinese banks. Most of Alipay's customers are young people, who generally have less economic accumulation. They hope their spare money can increase steadily. Yu'E Bao is a kind of financial management mode, which is represented by the purchase of money funds to obtain profits. This activity must exist a certain degree of risk, but people have great trust in the credit of Alipay, so they believe that Yu'E Bao is not risky, and they can transfer funds to and from Alipay at any time and still gain profits. All these factors lead to more and more customers transferring idle funds into Yu'E Bao.

From the perspective of profitability, demand deposits are an important source of profits for Chinese banks. The emergence of deposit services like Yu'E Bao may replace demand deposits in banks and affect the profits of banks.

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## **5 Methodology**

### **5.1 Research Design**

As the most appropriate research design method, the correlational design is the most suitable method, because the purpose of the research is to ascertain the relationship between Yu'E Bao and deposit business of Chinese banks. And the research design helps to determine the different variables and ascertain the impact of independent variables.

According to the scatter chart, the amount of personal deposits and corporate deposits and the 7-day annualized return rate of Yu'E Bao have the characteristics of linear distribution, so linear regression analysis method can be adopted. Linear regression is a statistical analysis method that uses regression analysis in mathematical statistics to determine the quantitative relationship between two or more variables. In this paper, a linear regression model will be established respectively by taking the average 7-day annualized rate of return of Yu'E Bao from 2015 to 2018 as the independent variable and the personal deposits and corporate deposits as the dependent variable respectively.

### **5.2 Data**

There are three parts of the data.

First, the person deposits data between 2015 and 2018 is from Investigation and Statistics Department of the People's Bank of China.

Second, the corporate deposits data between 2015 and 2018 is from Investigation and Statistics Department of the People's Bank of China.

Third, seven days annualized rate of return of Yu'E Bao between 2015 and 2018 is from official website of Yu'E Bao. Because every seven days annualized rate of return is converted according to the average return level of the last seven days, the interest rate calculated by the week is based on the average level of the last week.

And all of three parts data need to be processed by averaging on a quarterly basis. Given the high frequency of the data, the results can be considered representative.

The table below is the original data from 2015-2018.

Time	seven days annualized rate of return (%)	Personal Deposits (100 Million Yuan)	Corporate (100 Million Yuan)
2015.3	4.4794	532088.68	547345.8574
2015.6	4.1527	534263.5131	571594.1447
2015.9	4.2329	542167.2351	595223.1583
2015.12	3.8155	545621.7686	614988.0519
2016.3	4.0144	576278.4577	633042.5481
2016.6	3.7463	581011.5323	666322.818
2016.9	3.3633	591156.8454	694863.6046
2016.12	4.1219	598349.393	718313.3317
2017.3	3.7477	637968.1604	719233.6819
2017.6	3.0346	635383.3775	748040.1869
2017.9	3.0554	640488.8033	767078.4786
2017.12	3.0751	643737.3434	786140.6683
2018.3	2.7424	679354.7767	782125.82
2018.6	3.0546	684320.2033	796888.49
2018.9	2.7275	696167.1033	810186.4067
2018.12	3.2237	711584.1333	814873.2767

**Table 1 - Data**

## 6 Preliminary Comparison

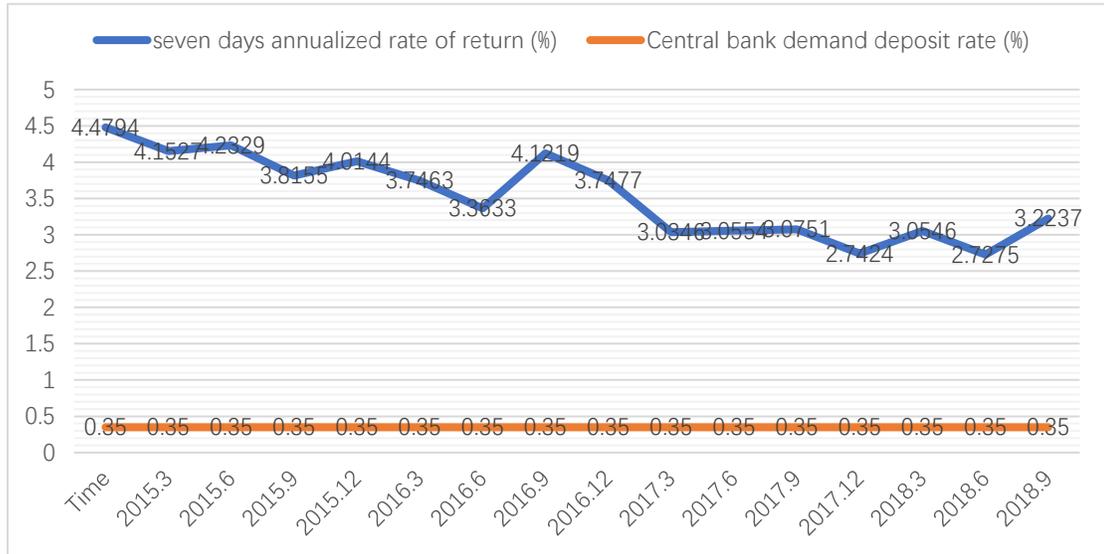
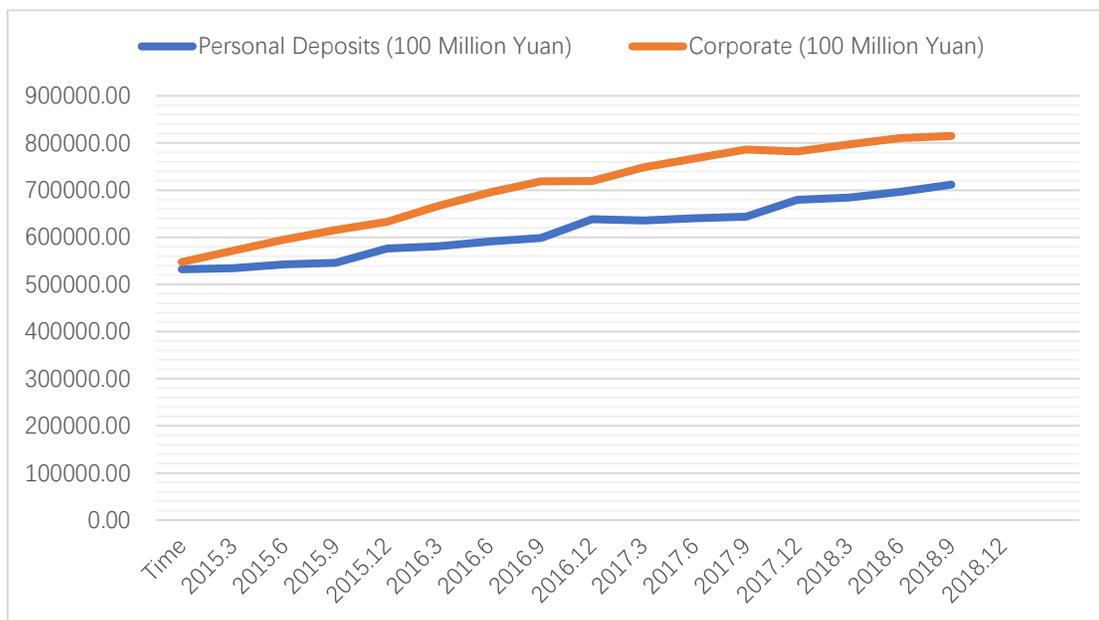


Figure 1

The chart above is the comparison between Yu'E Bao's seven days annualized rate of return and central bank demand deposit rate. It can be seen from the table that at present, bank deposits have advantages over Yu'E Bao only in terms of safety, while Yu'E Bao always has a higher yield than banks do.

For unit users, the 7-day annualized return rate of Yu'E Bao is higher than the traditional demand deposit interest rate of banks in the same period. If the unit transfers funds into Yu'E Bao, it can obtain higher returns and increase unit income. Therefore, the high yield of Yu'E Bao will inevitably attract some unit users, which will have a certain impact on the deposit business of banks.



**Figure 2**

Combined with Figure 1 and Figure 2, since 2015, the 7-day annualized yield of Yu'E Bao declined steadily, while unit deposits showed a trend of gradual growth. It can be preliminarily concluded that the high yield of Yu'E Bao has a great impact on the unit deposits of banks.

## 7 Results

The liner regression outcome between seven days annualized rate of return of Yu'E Bao and personal deposits in Chinese banks is showed on the table below.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.860097449							
R Square	0.739767622							
Adjusted R Square	0.721179595							
standard error	31766.02044							
observed value	16							
variance analysis								
	df	SS	MS	F	Significance F			
regression analysis	1	40159439844	4.0159E+10	39.7980712	1.92744E-05			
residual	14	14127120768	1009080055					
aggregate	15	54286560612						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	下限 95.0%	上限 95.0%
Intercept	936774.8472	51718.98127	18.1127861	4.1031E-11	825848.6647	1047701.03	825848.665	1047701.03
seven days annuali	-91159.096	14450.03828	-6.3085712	1.9274E-05	-122151.346	-60166.846	-122151.35	-60166.846

**Figure 3**

P-value is the basis to judge whether the H0 hypothesis is true or not. From the table, the P-value (1.92744E-05) is less than 5% while the significance level is settled to be 5%. So we reject the H0 which is assumed that there is no significant relationship between seven days annualized rate of return of Yu'E Bao and personal deposits in Chinese banks. And the coefficient of correlation is -0.86 that indicates the relationship is negative and strong. Therefore, there is a significant negative relationship between seven days annualized rate of return of Yu'E Bao and personal deposits in Chinese banks.

The liner regression outcome between seven days annualized rate of return of Yu'E Bao and corporate deposits in Chinese banks is showed on the table below.

SUMMARY OUTPUT								
<b>Regression Statistics</b>								
Multiple R	0.88889393							
R Square	0.79013242							
Adjusted R Square	0.77514188							
standard error	42371.9829							
observed value	16							
<b>variance analysis</b>								
	df	SS	MS	F	Significance F			
regression analysis	1	94632464614	9.4632E+10	52.7087327	4.15843E-06			
residual	14	25135389108	1795384936					
aggregate	15	1.19768E+11						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	下限 95.0%	上限 95.0%
Intercept	1199051.04	68986.79029	17.3808788	7.1431E-11	1051089.094	1347012.99	1051089.09	1347012.99
seven days annuali	-139934.97	19274.58229	-7.260078	4.1584E-06	-181274.838	-98595.103	-181274.84	-98595.103

**Figure 4**

From the table, the P-value (4.15843E-06) is less than 5% while the significance level is settled to be 5%. So, we reject the H0 which is assumed that there is no significant relationship between seven days annualized rate of return of Yu'E Bao and corporate deposits in Chinese banks. And the coefficient of correlation is -0.89, which indicates the relationship is negative and strong. Therefore, there is a significant negative relationship between seven days annualized rate of return of Yu'E Bao and corporate deposits in Chinese banks.

From the results, there is significant and negative relationship between seven days annualized rate of return of Yu'E Bao and personal deposits and corporate deposits in Chinese banks. Therefore, from the findings, Yu'E Bao has negative impact on deposits business on China's banks.

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## 8 Conclusions

This paper which takes Yu'E Bao as the representative of internet finance emerging products, through data and descriptive statistical analysis, analyzes the changing trend of the deposit business of Chinese banks after the emergence of Yu'E Bao, studies whether and how Yu'E Bao affects the savings deposits of banks in China, and analyzes the reasons for such influence, and then raises questions about how Chinese banks should deal with the impact brought by internet finance.

According to the linear regression outcomes, it can be seen that Yu'E Bao has negative impact on deposits business on China's banks. With the decreasing of seven days annualized rate of return of Yu'E Bao, the deposits in banks increase gradually.

There are two reasons for impact of Yu'E Bao on savings deposits in banks. First, Yu'E Bao's competitive advantage of high returns in the period is grow overspeed. Second, Yu'E Bao is an innovative product in the era of internet finance. It can harvest the long tail effect through low-threshold financial management, reduce liquidity risk by using big data technology, and support real-time consumption, a series of innovations that banks could not match at that time. In the long-term, as the process of interest rate liberalization accelerates, banks will sooner or later lift the ceiling on general deposit rates and the gap between Yu'E Bao and banks will narrow.

The emergence of Yu'E Bao has a real impact on Chinese banks, and the impact may

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be magnified as time goes on. Banks must take countermeasures to ensure that their position will not be shaken. Following the process of interest rate liberalization and raising the interest rate on deposits is a feasible way to reduce the loss of deposits in the short term, but banks themselves also have to pay the price of rising capital costs. Therefore, fundamentally, banks must optimize their debt structure and income structure. To optimize the debt structure, the first step is to increase the proportion of time deposits and long-term deposits in deposits, so as to enhance the stability of bank deposits. At the same time, faced with the decline of traditional interest margin income, banks should optimize the income structure, develop intermediary business and off-balance sheet business, increase the proportion of intermediary business income, and reduce the dependence on traditional deposits, so as to mitigate the impact of the decline in net interest income.

In a word, the rapid development of internet finance represented by Yu'E Bao has become a catalyst for the financial industry. Among them, the deposit business of banks is particularly impacted. Internet finance is a product in line with the law of market development. Faced with the threat and impact, Chinese banks need to reconduct strategic layout, actively reform, and accelerate business transformation, and work together with internet finance for the development of China's financial market.

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## 9 Limitations

1. Internet finance has brought great changes to people's financial management concept. This change will also affect the deposit business of banks, but the impact cannot be measured by data. Therefore, when we study the impact of Yu'E Bao on the bank's deposit business, we ignore this impact.

2. Although the case study of Yu'E Bao is a tentative study on the impact of bank savings deposit, due to the limited theoretical knowledge and research level, only the impact of Yu'E Bao on bank savings deposit business is considered, and it is not considered to study the impact of Yu'E Bao Monetary Fund on banks from other innovative perspectives, so the depth of analysis needs to be further improved.

I look forward to the guidance and help which are reviewed by you. And I will continue to seek for help in the future learning process.

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## 10 References

- Chen, F., & Zhou, W. (2018). An Empirical Study on the Impact of Internet Finance on Commercial Banks in China. Retrieved from <http://www.ijlret.com/Papers/Vol-04-issue-08/10.B2018111.pdf>
- Li, J. (2015). An Empirical Study on the Effect of Yu'E Bao to the Deposits in Chinese Commercial Banks. Retrieved from [https://file.scirp.org/pdf/JSS\\_2015122514395569.pdf](https://file.scirp.org/pdf/JSS_2015122514395569.pdf)
- Li, Y. (2018). Analysis of the Influence of Yu'e Bao on China's Credit Market from the Perspective of Currency Multiplier. Retrieved from [https://webofproceedings.org/proceedings\\_series/ECOM/ICEFBD%202018/ICEFBD075.pdf](https://webofproceedings.org/proceedings_series/ECOM/ICEFBD%202018/ICEFBD075.pdf)
- Liu, D. (2014). Quantitative Analysis of Yu'E Bao Based on Linear Regression Model. Retrieved from <http://www.doc88.com/p-1438572634620.html>
- Luo, J., Li, Q., & Sankhagowit, B. (2014). Financial Service in Cloud Computing. Retrieved from <https://web.stanford.edu/class/msande238/projects/2014/Ploutos.pdf>

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McLoughlin, K., & Meredith, J. (2017). The Rise of Chinese Money Market Funds. Retrieved from <https://www.rba.gov.au/publications/bulletin/2017/mar/pdf/bu-0317-9-the-rise-of-chinese-money-market-funds.pdf>

Xiao, Y. (2018). Understanding Yu'E Bao: the implications of Internet Finance development in China. Retrieved from <http://lib-sca.hkbu.edu.hk/trsimage/hp/14252961.pdf>

Zhang, C., & Zhou, Y. (2015). Internet Finance in China: An Event Study of Yu'E Bao. Retrieved from <http://arc.hhs.se/download.aspx?MediumId=2740>

Zhang, X. (2014). Analysis of the Yu'E Bao and Its Impact on the Financial Sector. World Journal of Social Science. doi:10.5430/wjss.v1n2p78