International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Research on the Risk of Sedging Funds of Third Party Internet Based on Monetary Theory

Juan Shang[1], Jie Yuan[2]

[1, 2]Xidian University, School of Economics and Management, Xi Feng Road, Xinglong Section 266, Xi'an, Shaanxi Province, China

Abstract: ***Based on the Internet technology, this paper introduces the influencing factors of the third party Internet payment into the traditional monetary analysis model of our country, and analyzes the influence of the development of the third party Internet payment system on the precipitation fund from the two aspects of money demand and money supply. Through the study we find that the third-party Internet payment scale and the generalized currency multiplier model of the empirical analysis of the results show that the expansion of third-party Internet payment is the result of the cash loss rate of Granger reasons.***

Keywords: third party internet payment; money supply; money demand; precipitation fund.

1. Introduction

The payment system is an important part of a national financial infrastructure, which connects different financial modules into an organic whole. The complete operation of the payment and settlement system is not only the core of the financial market and the effective operation of the economy, but also the monetary and An important link to economic activity links. Into the 21st century, along with the rapid development of Internet technology and e-commerce technology and innovation, to promote the rapid development of Internet finance, as the basic financial facilities to pay the Internet and consumers linked to the financial system, and as the backbone of the network to pay the third party Internet payment agencies, its customer service and business scope continues to expand, according to statistics show that in 2016 China's third-party Internet transactions reached 19 trillion yuan, year on year growth rate than 2015 growth has been greatly improved. Third-party Internet payment has been able to maintain this good momentum of growth, mainly due to the rapid development of Internet financial management, Internet finance and financial-based new industry is in the growth stage, the transaction size increased significantly, and more Internet payment is the main way. Among the many independent institutions with strength and credibility guarantee, Alipay and TenPay are still among the top two, accounting for 68.8% of the size of third-party Internet payment transactions. Third-party Internet payment agencies as a transaction fund transfer intermediaries, can be engaged in the storage of funds business, which formed a large number of precipitation funds. To pay treasure, for example, at this stage, Alipay average daily payment of more than 10 billion yuan, taking into account the time difference between the funds, Alipay annual precipitation funds have more than 30 billion yuan. In the context of the increasing size of the third party Internet payment, the amount of precipitation funds has been expanding, if not effective management of precipitation funds, China's financial system will have a great impact. Most importantly, the central bank and the commercial banks can not judge the use and fate of the precipitation funds, thus causing the central bank to supervise the precipitation of funds difficult and costly problems, and thus analyze the third party Internet payment generated precipitation risk, It is of great significance to maintain the stability of China's financial market.

2. Literature Review

Schumpeter put forward the theory of technological innovation in 1912 and pointed out that significant technological innovation would make significant changes in the areas related to the technology. For monetary theory, technological innovation means that a new production function is established. Nowadays, China is in an environment where the payment system has undergone major changes. The mutual integration of Internet technology and e-commerce technology has prompted the third party Internet payment in the payment system to be constantly changing and developing. The influence of the third party Internet payment on the monetary theory is studied from the Internet background, from the money multiplier, the motive of the currency, the motive of the currency and the motive of the speculation.

2.1 Study of third party payments

With regard to the study of third-party payments, scholars at home and abroad have established third-party payment issues on the basis of e-commerce research. In the early studies on third party payments, scholars at home and abroad mainly studied the principles of payment of third parties. Dan (2005) pointed out that the e-commerce online transaction process contains a lot of third-party credit agency services, which focuses on eBay's e-commerce online transactions in third-party organizations to provide third-party payment services. Secondly, in the study of the third party payment, mainly from the nature of the definition, safety supervision of these two perspectives to study, in which the nature of the definition and precipitation management there is a big controversy. On the definition of nature, Zhong Wei (2010) not only analyzes the future trend of the third party payment market, but also provides the train of thought for the supervision system of our country by referring to the experience of foreign supervision. In the aspect of safety supervision, Wu Xiaoyao (2011) takes the internal construction of the third party payment institution as the starting point, analyzes the status and advantages of the third party payment industry, and puts forward that the third party

payment enterprise can use its own advantages to realize the professional innovation and development.

2.2 Research on the Influence of Third Party Internet Payment on Monetary Theory

On the third-party Internet payment for the impact of monetary theory, from the current information can be found, foreign experts and scholars on this research less, the domestic experts and scholars for the supply of more research on the demand for more less. Li Nan (2014) proposed the third-party Internet payment by expanding the multiplier effect of the base currency to influence the money supply by reducing the transaction cost and the cash conversion cost and raising the fund interest rate so as to weaken the enterprise's currency. Total demand. Yang Yifan (2014) proposed that the effect of electronic money on money supply is realized through the currency creation mechanism. The effect of the third party Internet payment institution in enlarging the money multiplier is very significant. Therefore, the third party Internet payment affects the money by changing the money multiplier supply. (2016) The impact of the third party Internet payment on the narrow money multiplier with the cash loss rate, the reserve ratio and the third party Internet payment as the independent variable, the results show that the development of the third party Internet payment can be reduced by multiplying Number effect.

3. An Analysis of the Impact of the third Party Internet on Monetary Theory

3.1 The impact on money supply

Karl Brunner and Allan Meltzer established the money multiplier model based on the theory of monetary credit expansion. The hypothesis of the money multiplier model is that the money is in the form of commercial bank deposits, and the People's Bank of China only needs to set A reasonable legal deposit reserve ratio can control the credit expansion ability of the currency, so as to control the money supply of the commercial bank. This model establishes the formula of the money multiplier: m1 = (k + 1) / [k + r (1 + t)], in this formula, m1 represents the money multiplier, k represents the cash leakage rate, r represents the reserve ratio (which contains the statutory and excess), t is the regular The ratio of the balance of deposits to the balance of current deposits.

(1) Third party Internet payments will increase the cash leakage rate
Will increase the cash leakage rate is mainly reflected in two aspects. On the one hand, third-party Internet payments mainly occur in e-commerce activities, and third-party Internet payment transactions are deposited in the third-party Internet payment agencies, if such institutions do not deposit their own funds in the hands of commercial banks , Which in large part will make the cash leakage rate greatly improved; the other hand, third-party Internet payment companies in order to be able to attract a large number of customers in the transaction on both sides of the currency transactions, will take lower than the commercial bank fees or Is a fee-free practice, and then the funds for short-term investment, this will not only ensure the amount of customers, but also to ensure their own income, but to a certain extent, increased the cash leakage rate. Thus, the development of third-party Internet payments will increase the cash leakage rate.

(2) third-party Internet payments will increase the bank's reserve ratio
Third-party Internet payment agencies will be the customer's settlement funds for short-term investment into commercial banks, commercial banks in order to deal with third-party Internet payment agencies short-term funding needs, must hold more reserves to prepare for contingencies, Excess reserve for large commercial banks.

(3) Third party Internet payments will increase the ratio of the balance of time deposits to the balance of current deposits
Now, similar to Alipay's third-party Internet payment institutions, the yield is higher than the deposit rate of commercial banks, more and more customers will hold funds from commercial banks out of the funds into the third party Internet payments mechanism. Due to future uncertainties, most customers are more inclined to demand deposits, which makes the fixed life ratio increased.

3.2 The impact on money demand

The research on the demand for money belongs to the category of economics, so it is rich in its theoretical research. Based on the Keynesian theory of liquidity preference, this paper focuses on the influence of third party payment development on the three kinds of money demand for people's motives, preventive motives and speculative motives. The three motivations for money demand are the assumptions put forward by Keynes in "employment, interest rate, currency currency" in 1936. The function can be expressed as M = L1 + L2 + L3, and then the Keynesians do this three motivations Perfect and improved, and finally come to the optimal demand function.

(1) Tading motives
Money trading motive refers to the individual or the enterprise in order to cope with the needs of daily transactions arising from holding a part of the currency motive. In the theory of Keynesian theory, people's transactional motivations for money are related only to people's income, but Baumlo and two of the post-Keynesian scholar Baumlo and Tobin's "square root law" argue that trading motive's currency demand and currency inventory conversion (B), the transaction volume is proportional to (Y), inversely proportional to the interest rate (r), the optimal demand for the expression is:. In the context of the rapid development of third-party Internet payments, due to the support of Internet technology, this transaction has become more efficient, to a large extent can reduce transaction costs, that is, the conversion of money into goods for the cost of decline b , Due to the relationship between L1 and b in the same direction, so that the demand for money is reduced. Now the largest third-party Internet payment is mainly paid to pay treasure and TenPay, Alipay and TenPay is a network attached to a network of customer funds management platform, this platform will increase the pace of interest rate market, to promote interest rates r Of the rise, so that the demand for money declined. For the

transaction volume Y, the transaction volume in the short term the possibility of change is relatively small, so in the study, usually the transaction volume as an exogenous variable. The summary of the above changes is that reducing transaction costs or increasing interest rates can reduce the transactional demand for money on the market.

(2) Preventive Motivation

The precautionary motive of money refers to the motive of holding a part of the currency in order to prevent accidental occurrence. In the Keynesian theory, proactive motivations are another motive for income, and American economist Whalen suggests a model of preventive money demand, which he believes is that preventive currency demand is mainly due to their Uncertainty in future income and expenditure. Whalen proposed the root of the law. Cuban root law points out that the standard deviation of the function of the preventive money demand and the net expenditure distribution is proportional to the cost C of the conversion cash and is inversely proportional to the capital interest rate r. Where S represents the net future expenditure of the residents, leading to a change in this factor mainly depends on the price level, taxes, wages and the level of the country's social security system is sound and other factors, so S changes and choose the kind of payment means that the relationship is not , The impact of third-party Internet payments on the future net expenditure is not significant. For cash conversion costs, the development of third-party Internet payments can provide a more convenient service for businesses and individuals, reducing the difference between cash and electronic money, which, to a certain extent, reduces cash conversion costs and further reduces The demand for preventive money. In terms of capital rate, interest rate increases, which is similar to the change in interest rates in trading motives. To sum up, with the third-party Internet payment business boom and the prevalence of third-party payment, people demand for preventive money decline.

(3) Speculative Machine

The speculative motive of money is the motive for holding a portion of the currency in order to seize the opportunity to buy the securities in a favorable way. Cairns's theory of spending speculation has nothing to do with income, only with interest rates. Tobin argues that the factors that affect the demand for monetary speculative money are mainly interest rates and risks. He creates a theory of portfolio selection for money demand, which focuses on the balance of benefits and risks, Should be more diverse, and to meet the actual situation. When the interest rate level tends to 0, the probability that the interest rate will rise will be increased, and the price of the risky asset will be reduced. The demand for speculative money will increase, and the money will be held in the hands, In order to avoid risks; anti-interest rates to a certain limit, people's speculative money demand will be reduced. The impact of interest rates on today's third-party Internet payment platform is mainly due to the various cash asset management tools issued through third-party Internet payment platforms that offer higher rates of return than risk-free rates. From the flow of funds, the third-party Internet payment platform through the liquidity management tools on the innovation, the traditional sense of the risk-free currency transferred to the low-risk money market, this process does not affect the liquidity of funds, This approach to third-party Internet payment firms makes the boundaries between traditional risk-free currency demand and currency demand for risky assets vague, in a strict sense, reducing the traditional speculative money demand so that people do not have to Due to liquidity risk and opportunity costs to endure low interest rates.

Based on the three motivations put forward by Keynes, the third party Internet payment system can reduce the transaction motive, preventive motive and the motive of enterprises and individuals through the innovation of Internet technology, reduce transaction cost, reduce the cost of capital conversion and raise interest rate. Speculative motive.

4. Empirical Analysis

This paper selects the quarterly data for 2007: 1-2016: 4, which is analyzed in chronological order. Quarterly data from the People's Bank of China official website and iResearch network, and then through the relevant calculations.

(1) Unit Root Test

In order to avoid the pseudo-regression phenomenon of data in the following regression, we first test the five items of cash leakage rate, reserve ratio, third party Internet payment scale, fixed life ratio and generalized money multiplier.

$$\text{Log}(m2) = c + \alpha\log(k) + \beta\log(r) + \chi\log(zxl) + r\log(t) + \varepsilon \quad (1)$$

Where r represents the broad money multiplier, k represents the cash leakage rate, r represents the reserve ratio (where the reserve ratio includes the statutory reserve ratio and the excess reserve ratio), t represents the ratio of the time deposit to the demand deposit, That is, fixed life ratio, zxl said third-party Internet payment scale / 10000, c said constant, ε said error term.

2007: 1-2016: 4 Quarterly changes are:

Generalized currency multiplier	**10% level**	**t-Statistic**	**Prob.**	**Conclusion**
The original sequence	-2.6079	-4.2750	0.001	smooth
First order difference	-2.60906	-9.7314	0.000	smooth
Second order difference	-2.61581	-5.6965	0.000	Smooth***
Cash leakage rate	**10% level**	**t-Statistic**	**Prob.**	**Conclusion**
The original sequence	-2.6079	-3.1802	0.028	smooth
First order difference	-2.6115	-8.0925	0.000	smooth
Second order difference	-2.6128	-12.8851	0.000	smooth***
Reserve ratio	**10% level**	**t-Statistic**	**Prob.**	**Conclusion**
The original sequence	-2.6079	-1.7453	0.000	smooth
First order difference	-2.6090	-8.8389	0.000	smooth
Second order difference	-2.6128	-6.6160	0.000	smooth***
Live ratio	**10% level**	**t-Statistic**	**Prob.**	**Conclusion**
The original sequence	-2.7011	0.9297	0.411	unstable

First order difference	-2.6090	-10.106	0.000	smooth
Second order difference	-2.6128	-8.0895	0.000	smooth***
Third party internet payment scale	**10% level**	**t-Statistic**	**Prob.**	**Conclusion**
The original sequence	-2.7011	-1.1598	0.586	unstable
First order difference	-2.6128	-0.5281	0.873	unstable
Second order difference	-2.6128	-11.1953	0.000	smooth***

Note: * indicates a significance level of 10%, ** indicates a significance level of 5%, *** indicates a significance level of 1%.

The results of Table 1 show that the original sequence of variables m2, k, and r is the original hypothesis that there is a unit root at the 10% significance level, that is, the original sequence of these three variables is a stationary time series, and t , Zxl The original sequence of these two variables is non-refusing to exist for a unit root of the original hypothesis that the two variables of the original sequence are non-stationary time series. At the 10% significance level, the first-order difference time series of the remaining four variables except zxl reject the original hypothesis that a unit root is a positive time, that is, the first-order difference time series of the variables other than zxl is a smooth time Sequence, and zxl the case is the opposite, that zxl first-order differential time series is non-stationary time series. At the 1% significance level, the second order differential time series of all variables rejects the null hypothesis that the second order differential time series of all variables is a stationary time series.

(2) Granger causality test

The relationship between the third-party Internet payment scale and the generalized currency multiplier and the relationship between the cash leakage rate and the broad money multiplier is used to further study the relationship between the third party Internet payment and the cash leakage rate. Granger causality test is verified by Eviews8.0 results shown in Table II.

Table 2: k and zxl Granger causality test results

Null Hypothesis	Obs	F-Statistic	Prob.
K does not Granger Cause ZXL	38	0.39500	0.6768
ZXL does not Granger Cause K		8.05172	0.0014

Table 3: m2 and zxl Granger causality test results

Null Hypothesis	Obs	F-Statistic	Prob.
M2 does not Granger Cause ZXL	38	0.15218	0.8594
ZXL does not Granger Cause M2		3.23604	0.0521

In Table 2, k represents the cash leakage rate, zxl represents the size of the third party Internet payment, according to the prob. The value of the display we can clearly see: zxl is the cause of the Granger cause of k, and k is not the cause of zxl Ranger reason, that is, third-party Internet payments will lead to the emergence of cash leakage, resulting in an increase in cash leakage rate.

In Table 3, zxl represents the size of the third-party Internet payment, M2 represents the broad money multiplier, according to the prob. The value of the display we can clearly see: zxl is the cause of M2 Granger reason, and M2 is not The cause of the Granger cause of zxl, that is, the third party Internet payment will lead to the emergence of a broad money multiplier, leading to an increase in the money supply.

5. Conclusions and policy Recommendations

With the continuous development of Internet technology and e-commerce technology, third-party Internet payment is also developing rapidly. The change of the payment system in our country provides a quick and credible basis for the transaction between commodities and the preferential settlement of the price. According to the empirical results show that the third-party Internet payment scale is led to the broad money multiplier and cash leakage rate expansion of Granger reasons, that is, the continuous development of Internet technology, third-party Internet payment scale is also in the process of expanding , The third-party Internet payment scale continues to expand, will inevitably lead to China's money supply continues to increase, the increase in the amount of money will lead to the flow of funds in the market increased. Third-party payment platform in the production of precipitation funds generally have two ways: a way for consumers to facilitate future transactions, ahead of money into the third-party payment platform; another way is in the transaction after the occurrence of the transaction, buy Home money into the third-party payment platform account to the third-party payment platform to transfer the goods transferred to the seller's account in the process, due to geographical problems, logistics problems and other reasons leading to the transaction from the occurrence to the completion of a certain time difference between the payment This period will stay in the third-party payment platform account, which formed a third-party payment platform for precipitation funds. The expansion of the third-party Internet payment scale will have an impact on both the way of precipitation funds, and the third-party Internet payment platform will lead to the risk of precipitation. For money demand, due to the development of third-party Internet payments, you can reduce the transaction costs or reduce the interest rate to reduce the business or individual trading currency demand, you can reduce the cash conversion costs or raise the level of interest rates to reduce the business and individual Preventive money demand, lower speculative money demand for businesses and individuals can be raised by raising interest rates, trading currency demand, preventable money demand and speculative money demand are reduced, thereby weakening the total amount of money demand for businesses and individuals.

Nowadays, China's financial system is in the process of continuous change, to promote the continuous development of financial innovation, and the development of financial innovation, will lead to the emergence of a large number of innovative products, in the absence of a complete regulatory system in the context of the financial system There will be unstable phenomenon, which will also reduce the central bank to a large extent for the control of the monetary system. In the third-party Internet payment system is booming, such as

Alipay, TenPay like third-party Internet companies are holding the amount of funds continue to expand, and third-party Internet payment companies tend to monopoly, which greatly increased the third-party Internet Payment for the money supply and the impact of monetary demand, for this phenomenon, we made the following suggestions:

Firstly, to limit the payment of third parties to the Internet to pay the enterprise to pay the settlement funds. Now, China's central bank for third-party Internet payment business control is relatively loose, which makes the third party Internet payment companies have a lot of precipitation funds, the central bank can not manage this part of the precipitation funds, and this part of the precipitation funds will increase cash leakage Rate and reserve ratio, weakening the central bank's ability to control the monetary system. The central bank in this limit the settlement of funds, on the one hand, you can strengthen the supervision of third-party Internet payment companies, in order to maintain the stability of the financial system; the other hand, can enhance their control of the monetary system.

Secondly, to develop a more stringent third-party Internet payment business access business review standards. Third-party Internet payment companies are thriving to influence money supply by changing money multipliers and by changing trade, preventive and speculative motivations to influence money demand. Relevant regulatory entities can reduce the impact of third-party Internet payment companies on money supply and money demand by controlling access standards for third-party Internet payment companies and controlling access. In addition, by controlling the access of third-party Internet payment companies and business audit standards, you can reduce the amount of precipitation funds held by third-party Internet payment agencies to achieve the stability of the financial system, making the financial system, monetary system and the economy in a balanced development.

Thirdly, the government and the central bank should encourage traditional financial institutions to enter the third party Internet payment industry, to prevent third-party Internet payment industry monopoly. Traditional commercial banks and CUP payment methods should broaden their business scope and gradually lead the business to third-party Internet payments. The traditional way of Internet can not only expand the scope of traditional industries, but also prevent third-party Internet payment business Monopolize, reduce the impact of third-party Internet payment companies on money supply and money demand, and reduce the size of third-party Internet payment agencies to reduce their holdings.

Finally, the government should clearly clear the deposit interest attribution. Nowadays, China's third-party Internet payment scale has been expanded, the amount of third-party payment agencies to precipitate the amount of funds is also in a growing stage, but the government has been on the precipitation fund interest attribution is not clear. For example, in the field of third-party Internet payment first Alipay, the relevant data show that Alipay monthly precipitation amount of the amount of the estimated amount of more than 10 billion yuan, a huge amount of precipitation is not conducive to the development of China's related industries. China's relevant government agencies should be clear third-party Internet payment agencies a large number of precipitation funds generated by the attribution of interest for the healthy development of related industries to create the conditions to provide a good development path.

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Author Profile

Juan Shang works as an associate professor in school of Economics and Management, XIDIAN University. Her specialization lies in consumer finance and behavioral finance.

Jie Yuan is now pursuing Master degree since 2016 under the guidance of Prof. Shang. Her specialization area is Fiance.