

## Association for Information Systems AIS Electronic Library (AISeL)

---

Eleventh Wuhan International Conference on e-Business

Wuhan International Conference on e-Business

---

5-26-2012

# A Study of Third-party Online Payment: Risk Control and Supervision Analysis

Xi Zhao

*Business School, University of Shanghai for Science and Technology, China, zhaoxixjtu@gmail.com*

Yingjun Sun

*Business School, University of Shanghai for Science and Technology, China, syj6677@126.com*

Follow this and additional works at: <http://aisel.aisnet.org/whiceb2011>

---

### Recommended Citation

Zhao, Xi and Sun, Yingjun, "A Study of Third-party Online Payment: Risk Control and Supervision Analysis" (2012). *Eleventh Wuhan International Conference on e-Business*. 95.  
<http://aisel.aisnet.org/whiceb2011/95>

This material is brought to you by the Wuhan International Conference on e-Business at AIS Electronic Library (AISeL). It has been accepted for inclusion in Eleventh Wuhan International Conference on e-Business by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# A Study of Third-party Online Payment: Risk Control and Supervision Analysis

*Xi Zhao*<sup>1</sup>, *Yingjun Sun*<sup>2\*</sup>

<sup>1</sup>Business School, University of Shanghai for Science and Technology, China

<sup>2</sup>Business School, University of Shanghai for Science and Technology, China

**Abstract:** In recent years, with the continuous development of E-commerce, the third-party online payment pattern is gaining increasingly popularity among users. Characterized by its convenience, high-credibility and safety, it has become the mainstream pattern of online payment. With its rapid development, the third-party online payment has drawn more and more attention among people from all circles. And the focus of the attention is on the risks of using this platform. In this paper, the author introduces the present development status of the third-party online payment. On the basis of that, the paper focuses on the risk analysis and supervision in the process of operation by employing scenario analysis and list technique. In order to prevent and control risks in the third-party online payment, we should study the third-party online payment market thoroughly and take all aspects into consideration. It will shape a healthy and stable development trend only when all parties related work cooperatively.

Keywords: third-party online payment, supervision analysis, risk control

## 1. INTRODUCTION

The third-party online payment has become the new form of online payment. In its early development, online payment is more reflected in the involvement of the traders and the bank. Since the existence of banks to provide online payment services for individual with high cost, imperfect social credit system, distrust, high risk of direct payments, the interests of both parties cannot be effectively guaranteed, which virtually limited the development of online payment. In order to solve these problems of online payment, the third-party online payment form came forward.

Third-party online payment is developed from the original tripartite process by adding the fourth party, third-party platform. So there are four parties involved in the payment process <sup>[1]</sup>. They are the buyer, the seller, the bank and the third-party platform. The third-party online payment platform plays the role as an intermediary to reduce the cost of banking services and eliminate the distrust of trading parties. Compared with the other methods of payment, it has the following characteristics. First, providing safe and reliable service, with its connection with the internet banking system, the third-party online payment realizes the encryption transmission of data among internet banking systems through a series of security certificates and digital signature and ensures the security of customer account transactions. Second, saving the cost of payment <sup>[2]</sup>, the third-party online payment company provides a unified application interface by cooperating with lots of banks. It allows users to make transactions with different banks on one payment platform rather than on the banks' specific channels. This efficient mode of payment saves cost and brings more social value. Thirdly, integrating information resources, the parties involved in the transaction will be integrated, which provides a unified solution for E-commerce activities in capital flow, information flow and logistics. Fourth, suiting small and medium micro enterprises, in early phases, small and medium micro enterprises use online banking or remittance when doing online business. But online banking and

---

\* Corresponding author. Email: zhaoxixjtu@gmail.com (Xi Zhao) , syj6677@126.com (Yingjun Sun)

remittance are restricted to financial and technical issue; it is difficult to accept payment from each bank, while the third-party online payment is an expedient way.

Due to the numerous advantages of third-party online payment, its development in China is in the ascendant. Alipay, Tenpay and Shengpay are leading internet payment companies in China. Their close connection with large E-commerce websites makes them grow faster and stronger. To CUP, Quick Money, CHINAPNR, led by the financial-based Payment Company, focusing on industry needs and to develop industrial applications has achieved very good results.

## 2. CHINA'S THIRD-PARTY ONLINE PAYMENT DEVELOPMENT SITUATION

Third-party online payment market currently has reached 50 institutions, of which there are 20 high-profiles. 2010, China's third-party online payment transactions reached 1.0105 trillion Yuan, breaking the one trillion Yuan mark, an increase of 100.1% than 2009, achieved annual double. Third-party online payment market concentration is very high, Alipay with 50.02% market share accounted for half market, TenPay and Quick Money with the second place and third place. It can be seen from Figure 1, 2011, our third-party online payment transactions will reach 1.72 trillion Yuan, the next few years the size of the transaction is still showing rapid growth.

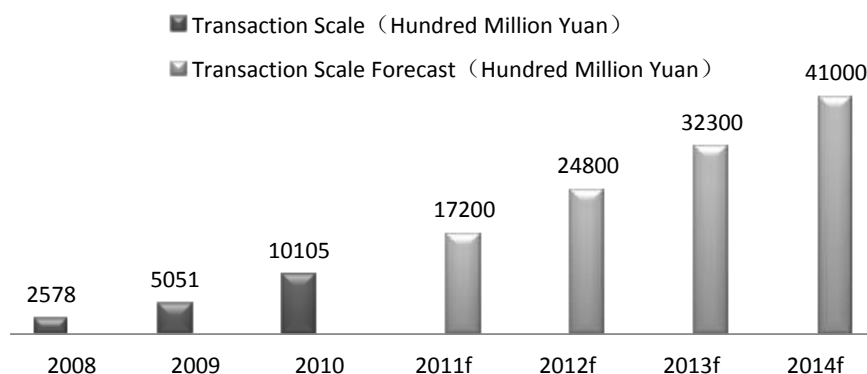


Figure 1. 2008-2014 China's third-party online payment transactions

### 2.1 Operators' market share

Alipay started by Taobao from its inception in 2003, ranking the top market share. In 2010, Alipay got 50.02% market share, again far exceeding the performance of other carriers won the first position of third-party online payment market. TenPay with 20.31% market share living in second place; Quick Money with a market share of 6.23% living in the third; Chinapnr with a market share of 6.12% in the fourth living. The four operators are in the first camp; its market share reached 82.68%. To a certain extent, that our third-party online payment market is in an oligopolistic stage, operators outside the first camp can't do this for a living in a short term<sup>[3]</sup>. The critical reason of Alipay occupies the long-term top 1 in the market is the efficient operation of Taobao<sup>[5]</sup>. On the one hand, Taobao, as China's largest online trading platform makes service for Alipay, on the other hand, Alipay supports Taobao to keep Taobao in functional order. Now, not only Taobao, but also many outside Taobao shops take Alipay as a mean of payment, the user covers the entire field of online transactions.

### 2.2 Operators' differentiation strategy

Alipay is established in October 2003, relying on powerful enterprise resource Taobao, has a huge user base<sup>[4]</sup>, supports platform diversification, and applies to various industries. TenPay established in 2005, as

Tencent's online payment platform, covers widely and has a very good integration with Tencent's platform. Founded in 2004, Quick Money is the one of the best independent third-party online payment operators, mainly for corporate and individual users with fast and secure integrated online payment service.

The third-party online payment market is relatively concentrated industries, the first camp four operators accounted nearly nine out of the market share, and show a dominant trend. Turnover leading operators, both in business or on the client side there is more competition. At this point, whether large or small carrier operators in order to better adapt to the market, take the difference of the business model is a good expediency.

**Table 1. Main differentiation strategies (by industry)**

Operator	2009 Strategies	2010 Strategies
Alipay	aviation, external B2B, normal pay	aviation, insurance, direct marketing
Tenpay	aviation, telecom prepaid, credit card	aviation
Quick Money	insurance, education, credit card	insurance, education, credit card

Differentiation within the industry still has fierce competition, so in order to be in a good position in the market, industry digging becomes inevitable. Some third-party online payment operators began providing solutions for industry as a whole vertical industry, for example, Alipay cooperated with Tenso (Japan), provided clearing services for Tenso international logistics business; Quick Money launched liquidation system for enterprises Group; there are also a number of major commercial banks, joint operators, and some companies provide E-commerce platform. Differentiation strategies for their respective operations to bring more customers, and also makes the online payment mechanisms become more mature.

### 3. THE THIRD-PARTY ONLINE PAYMENT RISK ANALYSIS

Third-party online payment is new from recent years; its risks are complex and intertwined. It will take a long time to find statistics and confirmed these risks <sup>[6]</sup>. Using scenario analysis and enumeration method, with comprehensive analysis of the existence of third-party online payment risk, we list the main risks as follows:

#### 3.1 The legal risk

China's current third-party online payment of legal risk is mainly reflected in two aspects. First, the business nature is not clear. Third-party online payment service provider's biggest risk is facing the legal nature and the fuzzy scope of operations <sup>[7]</sup>. Third-party online payment service provider business scope trends to convergence with banking operations, but has not been a corresponding regulation of the banking business. Second, the legal liability blurred. China has no clear legal for online payment, once there are dispute between the parties of online transaction, such disputes is difficult to be protected by law.

#### 3.2 The financial risk

##### 3.2.1 The capital precipitation risk

Because third-party online payment platforms always adopt delay payment, the buyer's funds transfer to a third party's account first, and then third-party keeps the funds, when the buyer receives the goods and then confirmation the payment, money will be transferred from a third party to the seller. As online transactions continue to grow both in the scale and the user number, a large amount of money is deposited. These deposits are not subject to the law of capital requirements limit, making the capital an increased risk of precipitation.

### 3.2.2 The cash risk

Some third-party online payment transactions are not based on real transaction. The third-party online payment provided illegal channels for credit card cash.

### 3.2.3 The liquidity risk

The third-party online payment operators and users face liquidity risk mainly stem from the competition from other industry incentives and profit margins narrow<sup>[8]</sup>. If the seller is not received the deposits which kept by a third-party within the expected time, and this time they are short of inflow, the seller will affected by liquidity risk.

### 3.2.4 The virtual currency risk

For example, Tencent's Q coins once transacted 1Q = 0.98Yuan, and Tenpay platform has developed a whole system for Q coins, Q coins can be used for mobile phones, phone recharge and so on. At this point, electronic money played as a hard currency role<sup>[9]</sup>.

## 3.3 The market risk

There are also having risks like other market in the third-party online payment market, such as price, competition and distribution and other market risks. According to Michael Porter's five forces model analysis come to the following competition.

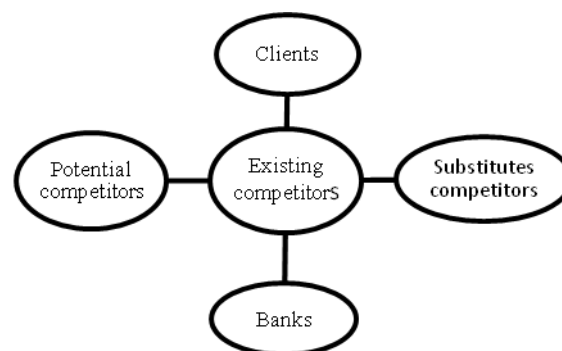


Figure 2. Market competition pattern analyses

In this model, given the source of five competitive forces, respectively they are suppliers' and buyers' bargaining power, the threat of existing competitors, potential competitors threats and the threat of substitutes. Operators of third-party online payment market are going through to fight a price war to take the stage. Many operators to take a free service strategy, the current operators are not having the bargaining power, once emerge service errors will result in the risk of customer churn. The presence of third-party online payment, bank definitely contributed. If a bank refuses to take a cooperative attitude, not provide the bank network interfaces, third-party online payment operator will be difficult to survive. Although, the current third-party online payment market is the few to monopolize the market situation, but in the long run, the strength of banks or other companies may also develop e-commerce operations of third-party payment platform themselves, will present the third-party online payment operators at risk. There are some third-party online payment alternative service, such as direct bank payments, postal remittance and cash on delivery services to some extent involved in the competition of online payment. The industry's existing third-party payment companies are more and more, and

what is unfortunate is that they appear homogeneous business. Competition in the market is bound to bring some non-legitimate means of competition, leading to relevant enterprises unnecessary threat.

### **3.4 The credit risk**

Credit risk is default risk, mainly refers to the transaction process the buyer, seller, third-party and bank contract the parties failed to fulfill the obligations of the economic risk of loss. Buyer or seller of default will cause third-party operating costs and other risks. Third-party online payment operator's breach of contract, will damage the interests of buyers and sellers. Seller defaults, the seller failed mainly within the agreed time to provide needed goods to the buyer, the default will give the third party and the buyer both the time and money loss. Bank's breach of contract, cause delay in settlement will result liquidity risk. Any party in the transaction default will bring unnecessary risk, therefore, to establish a sound credit system in China is extremely important.

### **3.5 The operational risk**

According to Basel II definition of operational risk, operational risk in this article refers to the user or operator-related illegal or improper operation and poorly designed business directly or indirectly arising from the risk of loss. On the one hand, third-party payment platform has not yet established a comprehensive safety management system; online payment security issue has become an important issue. On the other hand, third-party payment platform has not a uniform process, as the user's negligence, breach of internal staff and so will bring operational risk.

## **4. CHINA'S THIRD-PARTY ONLINE PAYMENT RISK CONTROL AND SUPERVISION ANALYSIS**

### **4.1 The regulatory status of third-party online payment**

Comprehensive monitoring is a necessary condition for the healthy development of an industry. To market access for third-party payment, the People's Bank of China in 2005, promulgated the "electronic payment guidelines (No.1)", clearly points out the domestic banking financial institutions to apply the guidelines for electronic payment services, but not third-party online operators included in the payment guidelines canonical object.

In October 2005, the People's Bank of China Payment and Settlement Company issued "payment and settlement organization and management approach (to seek the views draft)", the provisions of Article 2: The Office of the alleged payment and settlement organizations, is in accordance with relevant laws and regulations and the regulations in the office People's Republic established, payment and settlement services to participants of the corporate body. As a result, regulatory supervision of the expansion of electronic payment to such third-party online payment companies such non-bank institutions.

Payment and settlement associations' preparatory meeting, in 2009, decided to engage a third party online payment and other non-financial institutions engaged in payment and settlement business to register. July 2009, the registration is nearly complete. The central bank said the next step will be issue business licenses to part of the third-party online payment platform.

In June 2010, the central bank launched the "non-financial institutions to pay management approach", corresponding to the entry qualifications and responsibilities to make the relevant regulations. Early December 2010, the "non-financial institutions to pay for Services Regulations" promulgated, clear of third-party payment enterprises to apply for qualification for the payment of related financial services businesses to obtain the policy for a final interpretation. December 2010, the people's bank of China announced the 17 companies of third-party payment "to pay business license"

applications, which means that the implementation of the policy entered a substantive stage of operation.

## **4.2 The regulatory body's regulatory strategy**

China's third-party online payment of supervision should be based on the existing situation, taking into account the feasibility and efficiency. To market demand, urging the third-party online payment platform's business innovation, and flexibility for phased monitoring.

### **4.2.1 Improve the legal policy**

Because third-party online payment business is a profit organization, its business risk inherent in business process. And its flow of funds involved, there is a serious negative external effects, which must be bounded by its management and legal supervision<sup>[10]</sup>. In the regulatory process, we must first clear regulatory agencies, People's Bank of China, industrial and commercial administration management and information industry and the tax authorities should clarify their respective regulatory functions.

### **4.2.2 The legal relationship with consumers**

Currently, consumers and third-party payment platform to apply the existing legal provisions of contract law and tort law. In the contract, only the third-party unilateral has right to make the contract provision, which is unreasonable. It requires the introduction of the corresponding law, to maintain fair trade.

### **4.2.3 Create a good network of credit environment**

Online transactions, we must consider the integrity of the seller, if necessary, to avoid unnecessary losses. As a third-party online payment company is pushing hands in the e-commerce, also should play its due role for the network integrity.

## **4.3 The third-party online payment business risk control strategies**

Third-party online payment platform plays a key role in e-commerce; the risk will directly affect the size of the normal activities of online payment. Third-party must improve their competitiveness and increase market acceptance. In order to achieve service goals and in the provision of diversified services, they should strengthen the chain of business cooperation and integration. Third-party online payment technology issues related to data storage, transmission, trading, and many other security issues. Companies should set out to develop new security techniques to guard against possible security risks. Third-party online payment companies in the user authentication, to provide more convenient and secure authentication mode. Improve the quality of employees, and reduce operational risk.

## **4.4 Bank's risk prevention in the third-party online payment market**

Whether as a third party online payment of principal or as an important participant, banks need to strengthen risk prevention. Reference to the relevant laws and regulations, norms participate in online payment services, improve the safety management measures. As a principal, the bank in the strict implementation of national policies, legal and financial context, should strive to improve their level of security, strengthening the hardware environment and software platforms, and strengthening the account authentication. As a participant, the bank should focus on the review of third-party online payment platform's strength and reputation, to choose the best partner.

## **4.5 The user of third-party online payment risk prevention**

First, the user should be rational to choose payment platform. Although banks and regulatory authorities have taken a third-party online payment of certain measures to avoid trading risk, but the user during the transaction still be sure to choose a high degree of integrity and high-security platform. Second,

the user should strengthen their sense of security transactions on the internet. Through secure internet channels, we can reduce the possibility of be stolen account information.

## 5. CONCLUSIONS

Payment has been a part of our focus area of e-commerce, the emergence of third-party online payment provides a good solution to the high cost and lack of credit mechanism problems in e-commerce. Third-party online payment has become an indispensable part of e-commerce for small and medium micro enterprises, and it supports a convenient and efficient mean of payment. To some extent, the third-party online payment market has played a positive role on the economic and social development.

Although the third-party online payment has many advantages, but our third-party online payment is still not mature, the process had also been seen to run more risks. In this paper, scenario analysis and enumeration method are used, and carried out a detailed risk analysis in the third-party online payment market. These risks are mainly legal risk, financial risk, market risk, credit risk and operational risk. Legal risk and financial risk are more serious.

In the risk control and supervision of third-party online payment market, all parties involved in this market, perspective to do works are related with them. Regulators must encourage market development, and exercise necessary restraint at the same time. Third-party payment companies improve their credit, no matter big or small company. Banks and customers should be in the specification under the guidance of the laws and regulations to participate related activities. The cooperation of market parties with each other is a strong guarantee for the healthy operation of the third-party online payment market.

## ACKNOWLEDGEMENT

This research was supported by Academic Discipline Project of Shanghai Education Commission (J50504).

## REFERENCES

- [1] Zhang Kuanhai. (2008). Financial and electronic payment. Peking University Press
- [2] Ma ning. (2009). Risk control research of third-party online payment. Xi' an Northwest University
- [3] Yao Huili. (2011). The third party online payment market research. E-commerce :( 15)76-78
- [4] Xu Yong, Liu Jindi. (2010). The third party payment credit risk analysis and supervision mechanism research. Science and Technology Management Research: ( 10)167-169
- [5] Dong Rentao. (2006). Alipay: the results show that the electronic commerce sees payment. E-commerce :( 02) 133
- [6] Zhou Lin. (2009). Third-party Payment: Both Opportunities and Challenges. Southwest Finance: (02)
- [7] Liu Hongjun, Xie Yongji. (2009). Third-party payment service provider funding and regulatory model of sedimentation. Science & Technology Economy Market: (10)
- [8] Ramaswami, Sridhar N, Strader, Troy J. (2002). The value of seller trustworthiness in C2C online markets. Communications of the ACM.: (45)45-49
- [9] Wang L. (2007). Pay attention to the negative impacts of Internet virtual currencies. Xinjiang Finance: (6) : 3 – 4
- [10] Li min. (2010). Risk assessment research of third-party payment credit based on vague general evaluation model. Practice and Application: (5)44-45