

## Research on Personal Information Protection of Network Finance and Countermeasures

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**Keywords:** Network finance; Personal information; Privacy protection

**Abstract:** In recent years, with the implementation of the national "Internet +" strategy, network technology and financial market continue to be combined, China's online financial market has been rapidly developed, showing a number of outstanding Internet financial enterprises represented by alipay and tenpay, injecting new vitality into China's financial market. With the increasingly frequent activities of online financial customers, the efficiency of social capital operation and residents' financial service experience continue to improve. But at the same time, the online financial market also presents a series of problems such as leakage of customers' personal information and online financial fraud. Based on the current situation and existing problems of the maintenance of Internet users' personal information under the background of Internet finance, this paper discusses the countermeasures to strengthen the maintenance of Internet financial personal information, hoping to further improve the ability of Internet users to maintain personal information under the environment of Internet financial life.

With the continuous development of Internet informatization, network technology and financial market are constantly combined, emerging as an emerging industry in China's relevant financial fields. Online finance has the advantages of reducing transaction costs, speeding up the efficiency of capital circulation, and easing the inaccuracy of transaction information. It can help both parties to complete transactions quickly through the Internet. But at the same time, due to the characteristics and defects of the virtual nature of online finance, the personal information security risks of online finance are relatively high. "naked bar incident" and other vicious events of online finance occur frequently, and even seriously affect the property and personal security of online financial consumers to some extent. With the development of network finance, it is urgent to strengthen the protection of network finance personal information and reduce the risk of network finance personal information security.

### 1. Great Potential for the Development of Online Financial Market

Internet finance is an emerging financial service business form combining financial industry and Internet technology. The characteristics of Internet technology, such as openness, collaboration and sharing, can re-create the financial business form and have a profound impact on the current financial form. The difference between Internet finance and traditional finance lies in the different media used for financial services. Internet technology and mobile Internet technology enable traditional financial services to have a series of characteristics such as high transparency, strong participation, good collaboration, low central cost and convenient operation.

Relying on the Internet, Internet finance with the primary forms of third-party payment, P2P lending, crowdfunding and information-based financial organizations has been rapidly emerging in recent years, which has formed a comprehensive and in-depth impact on the forms and concepts of financial trading. The valuation of Internet finance remains at a high level. The current price-to-earnings ratio (TTM) of Internet finance sector is 73 times, which is above the average valuation of 62 times from 2006 to 2017 (except the extremely high valuation in 2015). The Internet finance boom started in the second half of 2014, and the third-party payment, P2P and consumer

finance have become the hot spots in the market. Based on this, Internet finance was once hailed as an industry with savage growth. However, after 10 years of development supervision and Internet finance have gradually become familiar with each other. With the establishment of China Internet finance association, standardization and safety have become the main melody of industry development, which also means that the originally loose policy environment has a tendency of tightening. After 2016, the industry also clearly felt the industry winter, the concept of Internet finance went down the altar, a decade of barbarism, once the curtain fell. However, Internet finance has not disappeared. Instead, financial technology is spreading like wildfire, continuing the legend of Internet finance. Table 1 shows the major regulatory policies of China's Internet finance industry in 2018.

Table 1 major regulatory policies of China's Internet finance industry in 2018

Time	File Name	File Content
2018.3.28	Notice on intensifying rectification of asset management business and acceptance work through the Internet	The essence of carrying out asset management business through Internet is kaizhen asset management business. As a financial business, the asset management business belongs to the franchise industry and shall be subject to capital supervision
2018.5.21	Plan for modern financial system during the 13th five-year plan period (2016-2020)	Shadow banking, asset management products, Internet finance and other financial activities should be a prudential policy framework, so as to achieve full coverage of all financial institutions, businesses, activities and their risks through macro-prudential management and financial supervision
2018.8.10	Notice on compliance inspection of P2P online lending institutions	Compliance inspection puts forward general requirements, including unified standards, full amount of hard cover, true and accurate, inspection and modification combination
2018.9.1	Notice on further dishonest punishment of online goods industry	Crack down on malicious dishonest behavior in the online goods industry, and gradually establish and improve the punishment mechanism for dishonest behavior in the online loan field
2018.10.10	Administrative measures on anti-money laundering and anti-terrorism financing for Internet financial institutions (trial)	It has standardized the anti-money laundering and anti-terrorist financing work of Internet financial institutions
2018.10.19	Regulations on management of blockchain information business (soliciting draft)	The blockchain information service provider shall file the blockchain information service record management system of the state Internet information office within 10 working days from the date of providing the service
2018.12.14	Interim measures for the management of gold accumulation business, interim measures for the management of gold business on the Internet of financial institutions, and notice on matters related to gold asset management business	It is true that the agency sales of gold products by Internet institutions shall be put on record by financial institutions to the people's bank of China, and the Internet institutions selling gold products on a commission basis shall meet the requirements of actual registered capital and make restrictive provisions on the specific consignment behaviors
2018.12.25	Market standard negative list (2018 edition)	The negative list of the financial industry has been established

## 2. The Personal Information of Online Financial Customers is Seriously Invaded

Personal financial information refers to the personal information obtained, processed and saved by financial organizations through access to the credit investigation system, transaction system and

other systems of the people's bank of China when conducting business. The information mainly includes: personal identity information, personal assets information, personal account information, personal credit information, personal financial trading information, financial trading derivative information, and other personal information acquired and saved by financial organizations in the process of establishing business relations with individuals.

Virtual nature of network financial business, leading to a user's personal financial information tied together across different occupation, organization of circulation, are more susceptible to damage from financial internal and external network, once the damage, the sale and purchase of personal information, trading habits, industry situation and social relations are likely to be exposed, which may result in personal investment, credit and other property. The virtuality of network finance makes it difficult for many financial consumption infringement behaviors to be found in time. Besides, the fast transmission speed, deep influence degree, large number of people involved and great difficulty in proving evidence make it more and more difficult for customers to protect their rights.

## **2.1 Risk of Information Leakage.**

At present, personal information leakage is the biggest threat to online financial consumption activities. Once the personal information is leaked, the legal rights such as privacy right, industrial right and fair sale right will be damaged to varying degrees. There are three main reasons for information leakage: first, internal control is not in place. Due to personal information has huge commercial value, for the purpose of making a profit, the financial organization staff to illegal organizations or individuals may let the cat out of the customers such as industry, accounts, credit, business information, such as the consumption will be normal financial information for illegal buying and selling, this situation is particularly acute in the field of real estate, credit. Second, the lack of technical means. In online transactions, all kinds of trading information are transmitted or stored through the Internet, and the legitimate identities and real volunteers of both parties cannot be recognized through traditional face-to-face methods. There is a risk of illegal theft of identity, account, trading and other information. Third, customer safety awareness is not strong. Information leakage is sometimes due to the bad habits of online financial consumption, the lack of security vigilance, phishing site fraud and other factors formed.

## **2.2 Asset Safety Risks.**

Asset safety is the core problem that network finance consumption needs to deal with. At present, the maintenance of online financial consumption is lack of storage, innovation and response in terms of skill level and handling ability. Under the open environment of the network, customers' property safety faces risks. One is the security of the trading system. Hackers often through methods such as legal website links, targeting at the customer's information such as credit CARDS, trading accounts, after adding software, embedded viruses, illegal intrusion technique such as the trading system to steal customers all kinds of industries, customers in the network purchase, pay, evaluation and so on each link to have a bit perhaps carelessly fell into the trap. Release based on qihoo's "2018 China's Internet safety reports (personal safety)", in 2018, many things in the network security, qihoo company inventory out four network security incidents, the four major network security event contains extortion, dig a Trojan virus, fraudulent advertising, information leakage, covers all aspects of people's life, the Internet users throughout the value of which is Internet financial related issues such as credit fraud, illegal financing. Second, the security of funds. With the continuous growth of third-party Internet payment planning, the third-party payment service organizations represented by alipay have mastered the huge amount of money in online financial consumption. As customer accounts to deal with, although did not have the right to dispose of these funds, but can still on skills in the use of these funds within a certain time speculation, if a tissue for stocks, futures, options such as risk investment activities and other purposes, once the operation failure and loss cannot afford, difficult to return the funds to the customer's industry will encounter a serious threat to safety.

### **2.3 Risk of Fraud.**

The fraud risks faced by online financial consumption mainly come from three aspects: first, weakening the transmission of dangerous information. When selling financial products online, the income and risk publicize the imbalance, excessively publicize the product income, deliberately dilute the warning of danger, and induce customers to buy. As a result, many products fail to achieve the target income, and some even have negative income, which has caused a lot of financial consumption disputes. Second, deliberately vague product concept. For example, in recent years, the phenomenon of "deposit becoming safe" may also exist in online consumption. When the bank insurance cooperation marketing is safe, it does not tell potential customers about the product type, characteristics and other information in detail, and even carries out the false propaganda that "safety is deposit", misleading and inducing customers to "sign and sign" against the original intention, causing a lot of consumption disputes. Third, the outlaw network fraud. The criminals falsely claim that the formal financial organizations sell financial products by advertising and take high income as bait to cheat online financial consumption by faking formal financial organizations, shanzhai financial organization websites, phone calls, text messages and other methods.

## **3. Measures to Strengthen the Maintenance of Network Financial Personal Information**

### **3.1 Establish Laws and Regulations for the Maintenance of Internet Financial Personal Information.**

Financial information on the Internet now security maintenance gap, countries should from the Internet financial standards and speed up to two aspects of the Internet personal information maintenance related legal correction to formulate laws and regulations, then as soon as possible to the category of the Internet financial information shall be standard maintenance problems, to respond to financial high-speed Internet to carry out the problems in the process. On the one hand, the state should amend existing financial laws including commercial banking law, guarantee law, and bank supervision and handling law, and add relevant content on the protection of personal information of Internet finance, so as to better supervise the new financial forms brought by the development of Internet finance. When the time is ripe, a special Internet finance law shall be formulated to define the scope of Internet finance, market access standards, codes of conduct for trading, market operation standards and supervision and handling subjects. On the other hand, the law on the maintenance of personal information on the Internet should be hastily revised to build the constitution on the premise of the rules on personal dignity, the law on the maintenance of personal information on the Internet for the specialized maintenance of personal information as a driving force, and the criminal law on the severe invasion of personal information as a guarantee. Form a systematic and multi-level personal information maintenance network.

To formulate and improve the relevant standards of online financial consumption is the fundamental way to guide the normal development of online consumption and promote the healthy development of online finance. To "non-financial organizations serve to handle method" and the detailed rules for the implementation, "prepaid card payment organization to handle method", "pay organization cover handle method" and other regulations, on the basis of continuous refinement of third-party payment industry standard system, from the organization access, network registration, account for, electronic authentication, digital signature, clearing services, electronic funds transfer, contract format terms, etc., for Banks, franchise organization, non-financial payment organizations pay a body such as the Internet, mobile payment business such as standardizing.

### **3.2 Strengthen Administrative Intervention and Improve Channel Access Mechanism.**

Previously, the state banking regulatory commission clearly mentioned to do a good job in sorting out Internet finance related matters. For example, it required that "online fake loan information intermediary organizations should carry out affairs in compliance with the law, ensure the legal source of lenders' funds, and stop fraud and false publicity. We will strictly implement the

relevant rules of the supreme people's court on the interest rate of fake loans, and shall not illegally lend money at high interest rates or collect payments by violence." Review about to enter the Internet channel, the financial markets should be tougher, but only the regulator's control is not enough, the industrial and commercial tax and other relevant departments regularly check the relevant service channels, improve the channel access mechanism, strict supervisory channel management qualification, about some skills do not pass, there is a danger of serious channels and regulatory gaps developing Internet financial service channel gray technique and give severe punishment, cut unqualified illegal organization. Prevent vicious competition and increase the risk of personal information security, complete its smooth, healthy, orderly development under administrative supervision.

### **3.3 Improve the Construction of the Channel itself and Reduce the Risk of Personal Information security.**

(1) Strengthen the internal management of personnel. Due to the characteristics of Internet credit, there are a lot of people who contact with customers' personal information in the channel. On the one hand, it is necessary to reasonably plan its own business process, so as to achieve a balance between efficiency and personnel. What's more important is to carry out awareness of staff information leakage prevention, establish information security control mechanism, and clearly punish the intensity, which is helpful to reduce information security risk.

(2) Improve credit risk control. Risk control can be said to be the cornerstone of credit, risk control if there is a problem, there will be serious consequences, not only seriously affect the Internet credit channel itself, and perhaps even endanger social stability. At the same time, improving the risk control level of credit channels and showing high-quality lenders in front of the lenders can also improve the lenders' trust in the channels, and then reduce the demand for fake lenders' information and reduce the risk of information leakage.

(3) Add the application of relevant new technologies. Internet related technologies are updated rapidly. Due to cost factors, some channels use older software skills, making it easy for hackers and other personnel to obtain database information about personal information in channels. Along with this, the replacement and maintenance of hardware is easy to add information security risks because of its professionalism. In this regard, channels should enhance their own skills team and equipment level, better deal with possible information security risks.

### **3.4 Improve Personal Information Security Awareness.**

Individuals are the owners of their own personal information, about the Internet loan channels and lenders with relevant personal information organizations and individuals, the use of their own data should be timely control, use should be returned or destroyed in a timely manner. In addition, in the process of submitting the loan data, the information needed for the loan should be strengthened to prevent the loss of personal information and other security risks.

Under the conditions of market economy, financial consumption behavior is manifested as the free selection of participants. If the financial regulatory standards are too detailed and harsh, it may inhibit financial innovation. Therefore, effectively improving the financial quality of customers is the basis of reducing financial consumption problems and safeguarding the legitimate rights and interests of customers. On the one hand, it is necessary to improve the level of financial consumption knowledge of customers, enhance the ability to identify the dangers contained in financial products, and correctly select financial consumption activities. On the other hand, improve the customer's network security awareness, develop good network consumption habits, set up complex password, account and other authentication methods, the maximum limit to maintain personal information and industrial security.

## **4. Summarizes**

Financial innovation is a double-edged sword. The rapid development of network finance brings

convenience and benefits to Internet users, but this convenience is accompanied by many dangers. Dealing with the privacy maintenance of online financial individuals is conducive to the development of the financial market, and also has a very broad meaning for the completion of financial inclusive strategy. However, how to set up the network financial personal information maintenance supervision system is a particularly challenging task, to deal with this problem, not only to innovative financial supervision office concept as the basis, but also to the government, industry and customer joint efforts.

## **Acknowledgements**

Research result of shaanxi social science foundation project "research on personal information protection in network era"

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