

Research on Risk Management in Internet Banking

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Abstract: In recent years, China's economy has undergone tremendous transformation and market competition has become increasingly fierce, which has led to significant development in the innovation and reform of China's financial industry, and Internet banking has become the focus of public attention. Internet banking is an emerging model of financial inclusion. The Internet faces a variety of risks and challenges, such as the lack of a comprehensive risk assessment system, insufficiently strict identification of customers, and imperfect regulatory mechanisms. The solution of these problems is of great significance to ensure the healthy development of the Internet financial industry. This paper will discuss from the following perspectives: firstly, it introduces the characteristics and development trend of Internet banking; secondly, it analyses the main risk factors currently faced by Internet banks; and finally, it provides some referential suggestions on the future development of China's Internet banks, which is expected to lay a foundation for the formulation of inclusive financial policies in the future.

Keywords: internet banking; internet finance; risk management

1 Internet banking

1.1 Meaning

Internet banking is a combination of information dissemination sites and transaction sites, where users are able to obtain information about the bank's products and services through information dissemination sites, and complete all the business operations they used to do in traditional banks through online transactions on the transaction sites. The emergence of Internet banking stems from the development of Internet technology and users' need for real-time banking services. People expect to be able to obtain exchange rate information, find personal account information, and enquire about personal loan services continuously and quickly in a 24-hour period. Later, a variety of needs slowly evolved, such as online payment needs, low-cost information and consulting needs and multiple types and personalised needs .

Table 1 Operations of Internet Banking

save money in a bank	raise a loan (from e.g. a bank)	pay (money)	P2P finance
close an account	remittance	e-ticket	investment management
electronic credit	account management	currency swap	Financial information

1.2 SWOT analysis

Table 2 SWOT analysis of internet banking

<p>S (Strengths)</p> <p>Huge market potential</p> <p>Lower cost inputs</p> <p>Utilise the model more efficiently</p> <p>The financial electronic system has been basically formed</p> <p>Development experience abroad</p>	<p>W (disadvantage)</p> <p>Legislative oversight is not yet complete</p> <p>Relatively poor financial networks</p> <p>Poor social credit</p> <p>Relative lag in mindset</p>
<p>O (Opportunity)</p> <p>New Financial Services Products</p> <p>A new financial services model</p> <p>A new model of financial operation</p>	<p>T (challenge)</p> <p>competitive pressure</p> <p>a safety hazard</p> <p>regulatory difficulty</p>

1.3 Characteristics

Firstly, Internet banks do not need to have fixed business locations and business hours. Compared with the fixed business locations and business hours of traditional banks, users can log on to Internet banking via the Internet to do the business they need at any time online, without the constraints of time and place.

Secondly, the business focus of Internet banks and traditional banks is different, and the business of pure Internet banks is a supplement to the business of traditional banks. Currently, the credit resources of traditional banks are mismatched, and their main services are state-owned enterprises and listed companies, which do not lack financial resources. Small and micro enterprises with insufficient capital and weak strength are often not favoured by traditional banks, and it is difficult to apply for large loans, but Internet banking is not a good choice.

Thirdly, Internet banks are highly efficient. Internet banks do not set up physical outlets and branches in urban and rural areas like traditional offline banks. Users can open accounts and conduct business online through mobile phones. It saves the cumbersome procedures and waiting time in the traditional counter mode.

2 Risk Management in Internet Banking

Compared with traditional transaction methods, Internet banks have a more intuitive and friendly operating experience, rich business information and rapid user response. However, due to the small scale of the Internet bank, the capital strength is not strong, which makes its overall anti-risk ability is not as good as that of large commercial banks, so the Internet bank also has higher requirements for risk control than traditional banks .

2.1 Technical security risks

With the spread and rapid development of Internet technology, more and more people know about Internet banking. But at the same time, compared with the risks of traditional transaction methods, Internet banking hides more risks in terms of technical security. For Internet banks, technologies such as verification of customer information, data protection and protection of consumers' private information have high requirements. In addition, the rapid growth of Internet banks cannot be separated from the outsourcing services undertaken by third-party organisations. Therefore, how to regulate these organisations becomes a major challenge for Internet banks.

2.2 Legal risks

In comparison with traditional banks, Internet banking has two distinct advantages: first, it uses electronic means to transmit information, including contracts, quickly; and second, it blurs the borders between countries, enabling customers to invest and transfer money quickly from any corner of the globe. However, this then poses new challenges to traditional regulations. The manifestation of legal risks in the development of Internet banking in China is equally relevant to the lack of relevant laws and regulations in China itself. Internet financial aspects of the relevant institutional norms and binding mechanism is not sound, the operation of China's Internet bank lacks a relatively standardised legal environment, which requires customers to judge for themselves in the process of trading whether it is in line with laws and regulations. When customers in the process of Internet banking operations found illegal, should stop the operation in a timely manner, and the police, the use of legal ways to protect their rights and interests. Only by actively promoting the improvement of China's Internet financial laws and regulations can we effectively protect the information security of Internet banking in the process of operation and consumer property security .

2.3 Credit risk

The main business of banks is to earn spread income through deposit and loan, and Internet banks are naturally no exception. Its basic business is still to earn spread income through deposit and loan business, of course, Internet banks also have other financial products as a platform to earn income . Deposit and loan business in the deposit business is not too risky for the bank, but the loan business has a lot of risk. Internet banks do not operate physically like traditional banks, but have a relatively stable and familiar customer base, and their business may come from all over the world. Although both traditional banks and Internet banks will use big data to first adjust the customer, but this does not guarantee that the customer in the transaction process to lose credit, can not pay back the loan on time, which is a bad debt

for the bank . When the accumulation of such cases reaches a certain number it will be a threat to the normal operation of the bank.

2.4 Operational risk

Operational risks are mainly triggered by human factors, and common operational errors are roughly divided into two categories: one is problems with the system, and the other is operator errors. Nowadays, the risks of Internet banking operations in China appear more frequently due to the following two main reasons: first, the problems caused by consumers' own mistakes, which are due to the fact that consumers, disregarding the safety and security, carry out operations involving their personal privacy information within websites with hidden risks, resulting in the theft of their privacy and information, which can be used by others to carry out unlawful and criminal behaviours. Secondly, the Internet bank's own system problems have triggered the blunder. This is mainly due to the fact that the Internet banking system itself has certain risks and is not absolutely safe. If the user carries out operations outside the normal procedure during the operation, this may bring losses to the user and the bank.

3 Promoting the construction of risk management systems for Internet banks

3.1 Focus on protecting users' information while guaranteeing data accuracy

Internet finance should ensure that stored data is not subject to unauthorised modification and that various data sources, such as transaction records and third-party data entry, are accurate, complete and reliable, or else it will face serious property damage, and the Internet bank will be exposed to reputational and legal risks. Because the services provided by Internet banks are routed through public networks, Internet banks' data are vulnerable to erosion and modification. At the same time, Internet banking's one-stop-shopping makes it more difficult to detect data accuracy problems and human fraud in advance. Internet banks need to do the following for this purpose: first, they need to ensure that the transaction process is legitimate and not easily penetrated; second, they need to safeguard the storage, input and modification channels of Internet banks' data, which are difficult to penetrate; third, they need to ensure that the transaction records are not subject to unauthorised modification in the course of the transaction; and fourth, that any intrusion attempting to tamper with the data can be detected.

3.2 Improvement of China's credit management system

Nowadays, the credit data of China's Internet banks mainly come from major social platforms and e-commerce platforms, and the authenticity and reliability of platform-to-platform data can't be doubted. Therefore, the central bank's credit collection system should be connected to the big data credit collection of each Internet bank, so that the breadth and depth of credit collection can be improved. In addition, China's government departments should also actively guide all kinds of credit agencies to carry out the interoperability and sharing of credit data, promote the establishment of a unified national credit database, break through the data silos, and then optimise China's credit management system from the national level, reduce the credit risk of Internet banks .

3.3 Controlling the operating costs of Internet banking

Analysed from the perspective of the Internet bank itself, the operation of the Internet bank should vigorously develop relevant scientific research talents, make use of advanced science and technology, strengthen the advantages of the Internet platform that can integrate its own resources and carry out big data analysis, look for the pain points faced by today's financial market, and launch innovative services and products that can satisfy the needs of the financial market, thereby reducing operating costs.

4 Conclusion

To sum up, the development prospect of Internet banking is bright. With the rapid development of China's Internet technology and the state's vigorous promotion of inclusive financial policies, Internet banks are booming. However, since Internet banks bear more risks than traditional banks, the state should improve the risk management of Internet banks, improve relevant policies and laws, vigorously develop relevant scientific research talents, and create a more comprehensive risk warning system.

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