

# *Research on Risk Management and Risk Prevention Measures of Internet Financial*

Ma Ersai

*Zhejiang Tongji Vocational College of Science and Technology, Hangzhou, Zhejiang, 311231, China*

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**Abstract:** This article introduces the importance and principles of risk management in Internet finance, and analyzes the classification and characteristics of risks in Internet finance. In addition, the article proposes measures to prevent Internet finance risks, including compliance management, risk assessment and monitoring systems, internal control and risk management frameworks, as well as customer education and risk awareness cultivation. Finally, the article explores the future trends of risk management in Internet finance, discusses the impact of technological innovation on Internet finance risk management, as well as emerging risks and corresponding strategies. Through comprehensive discussions on risk management in Internet finance, this article aims to provide guidance for relevant practitioners to strengthen their risk management capabilities and enhance the security and stability of Internet finance.

## 1. Introduction

With the popularity and development of the Internet, the Internet finance industry has gradually emerged, bringing convenience and innovation to people's financial services. However, Internet finance also comes with a series of risks. Especially with the rapid advancement of information technology and the continuous evolution of financial models, risk management in Internet finance has become particularly important. The right risk management strategy can not only protect the interests of users but also maintain the stability and sustainable development of the financial system. This article will focus on exploring the importance and principles of risk management in Internet finance and propose corresponding preventive measures to address the increasingly complex challenges of Internet finance risks. Through in-depth analysis of the categories and characteristics of Internet finance risks, we will provide effective management methods and reference opinions for relevant practitioners to ensure the security and sustainable development of Internet finance.

## 2. The Importance and Principles of Internet Financial Risk Management

### 2.1. Importance of Internet financial risk management

The importance of risk management in Internet finance is reflected in several aspects. Firstly, the characteristics of Internet finance determine that it is more susceptible to various risks compared to

traditional financial institutions. For example, Internet finance platforms face risks such as credit, market, legal, and operational risks, which can result in users' financial losses, disrupt the order of the financial market, and even threaten the entire financial system. Secondly, the rapid development and innovation of Internet finance are constantly changing the landscape of the financial market but also bringing new risk challenges [1]. For example, the emergence of virtual currencies, the application of smart contracts, and other emerging technologies and financial products have brought unprecedented risks to the financial market. Therefore, risk management in Internet finance not only needs to address traditional risks but also needs to adapt to the monitoring and management of emerging risks to ensure the stability and security of the financial system. In addition, the globalization nature of Internet finance increases the complexity of risk management. The borderless nature of the Internet allows financial transactions to cross borders, and financial risks can also be spread through global networks. Therefore, risk management in Internet finance needs to focus on domestic regulation and risks while staying in sync with international standards and cooperation mechanisms to tackle the challenges of cross-border financial risks to economic stability. In conclusion, the importance of risk management in Internet finance lies in protecting users' interests, maintaining the stability of the financial system, and promoting the healthy development of the industry. By establishing comprehensive risk management systems and effective preventive measures, the impact of financial risks on users and the financial market can be reduced, thereby promoting the sustainable development of Internet finance.

## 2.2. Principles of Internet financial risk management

The principles of risk management in Internet finance include the following:

(1) Comprehensive Principle: Risk management in Internet finance should cover all aspects and business areas, including business planning, product design, regulatory compliance, information security, customer identity verification, etc. This ensures the security and controllability of the entire Internet finance business chain.

(2) Combination of Quantitative and Qualitative Principles: Risk management in Internet finance requires both quantitative assessment based on scientific models and risk indicators, as well as qualitative judgment based on professional experience and common sense. The combination of the two can comprehensively and accurately assess and manage risks.

(3) Prevention as the Main Principle with Precautionary Measures as Supplementary: Risk management in Internet finance emphasizes prevention as the main approach, which means reducing the probability of risk occurrence through comprehensive risk control measures and regulations before risks happen. At the same time, precautionary measures should also be considered. Even with sufficient prevention work, contingency plans and flexible risk response measures should still be established to deal with potential risk events and emergencies.

(4) Compliance Principle: Risk management in Internet finance must comply with relevant laws, regulations, and regulatory requirements. Financial institutions should establish sound compliance systems, monitor and comply with regulatory policies, update risk management policies and systems in a timely manner, and ensure business operations are compliant and meet regulatory requirements [2].

(5) Information Security Principle: Risk management in Internet finance requires the protection of users' personal and financial information. Financial institutions should implement security measures such as encryption, firewalls, security audits, etc., to ensure the security and confidentiality of Internet finance systems and users' information.

(6) Principle of Balancing Benefits and Risks: Risk management in Internet finance needs to pursue benefits while protecting user interests and maintaining the stability of the financial system.

Financial institutions should balance the cost and benefits of risk management measures based on business development and risk tolerance, ensuring the coordination of risk management and business development.

These principles serve as the fundamental guidelines for risk management in Internet finance. By following these principles, Internet finance institutions can better cope with risk challenges and achieve sustainable development.

### **3. Classification and Characteristics of Internet Financial Risks**

#### **3.1. Credit Risk**

Internet financial risks mainly include credit risk, market risk, operational risk, legal risk, and technological risk, among others. Among them, credit risk refers to the losses caused by borrowers or counterparties' default or breach of contract in internet financial transactions. Due to the openness and decentralization of internet finance, factors such as unclear borrower identity, uncertain collateral value, and information asymmetry increase the existence of credit risk. Additionally, internet financial platforms often exist only in virtual form on the internet, making it difficult to establish a comprehensive risk management mechanism, further challenging credit risk. The credit risk of internet finance mainly manifests in several aspects. Firstly, it is challenging to assess the credit status of borrowers or counterparties, making it difficult to accurately evaluate their repayment capacity or transaction risk. Secondly, virtualized transactions make it difficult to pursue and deduct, increasing the complexity of real-time risk monitoring. Moreover, the speed and scale of internet financial operations exceed traditional financial operations. Once credit risk occurs, it may rapidly spread and have a significant impact on financial system stability. Therefore, internet financial platforms and regulatory authorities need to strengthen the assessment and monitoring of credit risk to reduce potential damage caused by credit risk.

#### **3.2. Market Risk**

Market risk refers to potential losses caused by factors such as financial market fluctuations and market price changes in internet financial operations. The openness and globalization of internet finance make it more susceptible to market risk. In internet finance, market risk manifests mainly in several aspects. Firstly, the existence of internet financial platforms allows financial transactions to be conducted faster and on a larger scale. When the financial market experiences significant fluctuations, it may result in substantial value fluctuations of users' investment assets and lead to losses. Secondly, internet financial operations often involve various financial instruments such as investment and financing, and market price changes directly affect fund returns and investment returns [3]. Additionally, as intermediaries in transactions, internet financial platforms have linkage with various counterparties, and market risk occurrences may also lead to counterparties' default or failure to fulfill obligations. In order to manage market risk, internet financial platforms and regulatory authorities need to strengthen market monitoring and risk assessment, establish sound risk control mechanisms, and flexible response strategies. This includes enhancing market risk early warning mechanisms, improving risk management tools and models, and strengthening education and training on market risk. At the same time, internet financial institutions need to maintain close cooperation with financial markets, regulatory bodies, and other stakeholders, strengthen information sharing and risk coordination, and jointly cope with the challenges of market risk.

### **3.3. Legal risk**

Legal risk refers to potential losses caused by factors such as imperfect laws and regulations, changes in regulatory policies, and contract disputes in internet financial operations. The innovativeness and globalization of internet finance expose it to a series of legal risks. In internet finance, legal risks manifest mainly in several aspects. Firstly, internet financial operations involve laws and regulations from multiple countries and regions, and there are differences in legal systems and regulatory requirements among different countries and regions, which may pose challenges to legal compliance. Secondly, with the rapid development and innovation of internet finance, laws, regulations, and regulatory policies are constantly changing. Internet financial institutions need to promptly understand and comply with the corresponding legal requirements to mitigate legal risks. Additionally, internet financial operations often involve the processing of users' personal information and the signing of transaction contracts. Once contract disputes or incidents of personal information leakage occur, they may give rise to legal disputes and civil compensation. To manage legal risks, internet financial institutions need to strengthen compliance awareness and compliance management, establish sound mechanisms for identifying and evaluating legal risks, and ensure that business activities comply with relevant laws, regulations, and regulatory requirements. Additionally, it is crucial to maintain close cooperation with regulatory institutions and legal teams, stay informed about legal changes, avoid legal risks, and ensure the legality and compliance of business operations. Furthermore, internet financial institutions should enhance users' awareness of privacy protection, strengthen information security management, and prevent the occurrence of risk events that may lead to legal disputes.

### **3.4. Operational risk**

Operational risk refers to the potential losses in internet finance caused by human negligence, technical failures, inadequate internal controls, and other factors. The high reliance on technology and system platforms in internet finance makes it more susceptible to operational risks. In internet finance, operational risks mainly manifest in the following aspects. Firstly, human negligence or errors can lead to business interruptions, incorrect transactions, and potential losses. Secondly, technical failures or system malfunctions can result in data breaches, transaction delays, and impact user experience and trust. Additionally, inadequate internal controls and improper employee conduct can also give rise to potential operational risks, such as internal fraud and data tampering. To manage operational risks, internet finance institutions need to strengthen internal controls and establish risk management systems. This includes establishing sound operational procedures and standards, implementing accountability mechanisms, enhancing employee training and management, ensuring operational compliance and accuracy. Additionally, internet finance institutions need to enhance technological infrastructure to ensure system stability and security, promptly detect and repair technical failures, and prevent operational risks. Furthermore, establishing robust risk monitoring and incident handling mechanisms to timely identify and address potential operational risks can help minimize losses. In summary, internet finance institutions should pay attention to and manage operational risks to secure stable business operations and protect the legitimate rights and interests of users [4].

## **4. Internet Financial Risk Prevention Measures**

### **4.1. Compliance Management Measures**

Internet finance institutions have taken a series of compliance measures to ensure the legality

and security of their operations. Firstly, they need to establish a sound compliance management system to ensure that their business activities comply with relevant laws, regulations, and regulatory requirements. They need to strengthen compliance awareness, provide compliance training, and ensure that employees understand and comply with regulations. Additionally, they need to establish compliance monitoring and evaluation mechanisms to timely identify and address compliance risks and ensure compliant operations. Secondly, internet finance institutions need to actively engage with relevant regulatory authorities and maintain close cooperation with them. They need to stay updated on changes in regulatory policies to ensure that their operations meet regulatory requirements. This includes actively accepting inspections and reviews by regulatory agencies, providing relevant information and reports to cooperate with regulatory work. Furthermore, internet finance institutions also need to enhance user risk education and investor protection awareness. They should provide clear product information and risk warnings to users, guiding them to make rational investments. They should also establish customer complaint handling mechanisms to promptly address user complaints and disputes and protect their legitimate rights and interests. Lastly, internet finance institutions need to strengthen information security management to ensure the security of user personal information and transaction data. They need to implement necessary technical measures and security protections to prevent information leakage and cyberattacks. Additionally, they can collaborate with security agencies to conduct risk assessments and security testing, promptly identifying and addressing potential security issues. In summary, compliance management is one of the important measures for risk prevention in internet finance. By establishing a sound compliance management system and strengthening cooperation with regulatory authorities, internet finance institutions can mitigate compliance risks and ensure the stable development of their business.

#### **4.2. Risk assessment and monitoring systems**

Internet finance institutions have implemented risk assessment and monitoring systems to effectively prevent risks and manage business risks. Firstly, these institutions establish risk assessment and monitoring systems to monitor and analyze business risks in real-time. This system collects and integrates various data, including business data, market data, user data, etc., to conduct risk assessments and warnings. By using advanced data analysis techniques and algorithms, potential risks can be identified and quantitatively evaluated, enabling the timely detection of anomalies and risk signals. Secondly, Internet finance institutions establish a series of monitoring indicators and mechanisms within the risk assessment and monitoring systems. By setting thresholds and monitoring indicators, they can monitor changes in various business and risk indicators in real-time and trigger warning mechanisms when the preset thresholds are exceeded. This enables the timely detection of risk signals and the implementation of corresponding risk control measures to effectively reduce potential losses. Moreover, internet finance institutions utilize risk assessment and monitoring systems for risk model establishment and optimization. By establishing reasonable risk models, they can assess and predict business risks more accurately, providing a scientific basis for decision-making. Additionally, appropriate preventive measures can be taken for different types of risks, enhancing overall risk management levels. In conclusion, internet finance institutions can achieve comprehensive monitoring and management of business risks through the establishment of risk assessment and monitoring systems. This not only allows for the early detection and response to potential risks, reducing the risk of losses, but also enhances overall risk control capabilities, ensuring the safe and stable development of businesses [5].

#### **4.3. Internal control and risk management framework**

Internal control refers to a set of systems, policies, and processes established by an organization

to ensure the effectiveness, compliance, and reliability of its business operations. Internet finance institutions achieve this by establishing internal control systems, clarifying the responsibilities and authorities of each department, and developing corresponding operating standards and processes. This ensures the accuracy and standardization of business operations and minimizes the occurrence of operational risks. Risk management framework, on the other hand, refers to the management system that an institution uses to identify, assess, and handle risks. Within the risk management framework, internet finance institutions develop processes and methods for risk identification and assessment, as well as risk management strategies and control measures. They categorize and grade risks, establish risk monitoring and reporting mechanisms, and implement risk warning and risk prevention measures. In the internal control and risk management framework, internet finance institutions may also establish specialized risk management departments or positions to oversee and manage the overall risk management of the company. They set risk management objectives and strategies, formulate and improve corresponding risk management policies and procedures. Additionally, they conduct regular risk assessments and internal control reviews to identify and rectify existing issues, ensuring the effective operation of the internal control and risk management systems. Internet finance institutions also strengthen employees' risk awareness and risk management capabilities through training. They provide relevant training and education to help employees understand and comply with the company's risk management policies and systems. By enhancing employees' risk awareness and risk management capabilities, they can better prevent and respond to risk events. Furthermore, internet finance institutions may collaborate with external professional organizations and consultants for risk management consultation and evaluation. By learning from the experiences and perspectives of professional organizations, they can further improve their own internal control and risk management frameworks, enhancing the level of risk management. In conclusion, internet finance institutions can effectively identify, assess, and control business risks by establishing internal control and risk management frameworks. Through standardized operating procedures and risk management measures, they can protect the interests of the institution and its clients to the greatest extent possible, ensuring the smooth operation of business activities.

## 5. Conclusion

In the field of internet finance, risk management is a crucial component. By establishing risk assessment and monitoring systems, internal controls, risk management frameworks, as well as implementing customer education and risk awareness cultivation measures, internet financial institutions can better prevent and manage various types of risks. This helps protect the interests of both institutions and customers, and promotes the healthy development of the internet finance industry. At the same time, as customers, we should also enhance our risk awareness, make rational investments, and protect our own financial security.

## References

- [1] Holt T J, Smirnova O, Chua Y T, et al. Examining the risk reduction strategies of actors in online criminal markets [J]. *Global Crime*, 2015, 16(2): 81-103.
- [2] Zhong Y, Li Y, Ding J, et al. Risk management: Exploring emerging Human Resource issues during the COVID-19 pandemic [J]. *Journal of Risk and Financial Management*, 2021, 14(5): 228.
- [3] Ke Q, Haasnoot M, Hoogvliet M. Exploring adaptation pathways in terms of flood risk management at a city scale—a case study for Shanghai city [C]// *E3S Web of Conferences*. EDP Sciences, 2016, 7: 21002.
- [4] Qi M, Gu Y, Wang Q. Internet financial risk management and control based on improved rough set algorithm [J]. *Journal of Computational and Applied Mathematics*, 2021, 384: 113179.
- [5] Sornette D, Maillart T, Kröger W. Exploring the limits of safety analysis in complex technological systems [J]. *International Journal of Disaster Risk Reduction*, 2013, 6: 59-66.