

Research on Risks and Countermeasures Faced by Internet Financial Platforms

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ABSTRACT

With the rapid development of economic globalization and internet technology, internet finance has embraced new growth opportunities. Internet finance, an innovative evolution of traditional financial models driven by internet-based information technologies, faces various risks during its development due to multiple influencing factors. This paper analyzes the primary risks encountered by internet financial platforms during their operations, including technical risks, credit risks, compliance risks, and market risks, and proposes corresponding risk control strategies. The findings aim to provide references for the healthy development of internet financial platforms.

KEYWORDS

Internet Financial Platforms; Financial Risks; Countermeasures

1 Introduction

The rapid advancement of big data, cloud computing, blockchain, artificial intelligence, and other information technologies has given rise to internet finance, a novel financial model that has garnered significant attention in the financial sector. Internet finance refers to the provision of financial services and products to businesses and individuals through internet technologies and platforms. In recent years, the scale of internet finance has expanded rapidly, leading to the emergence of numerous internet financial platforms. Internet finance has evolved from offering single credit services to providing innovative financial products and one-stop financial solutions, covering diverse daily needs of users. By breaking the temporal and spatial constraints of traditional finance, internet finance has broadened the scope of financial transactions, extended services to long-tail customer segments, reduced financial costs and entry barriers, improved efficiency and convenience, and met society's diversified and personalized financial demands. This has significantly driven financial innovation and development.

The characteristics of internet finance—non-face-to-face interaction, cross-regional reach, high efficiency, openness, and sharing—constitute its competitive advantages. However, these features also introduce hidden risks, complicating financial regulation. Due to the relatively short development period of internet finance in China, effective risk prevention systems and frameworks remain underdeveloped, leaving gaps in risk control. Therefore, analyzing the risks inherent in internet financial platforms and enhancing their risk management capabilities hold practical significance for promoting the healthy growth of internet finance.

2 Development Status of Internet Finance

2.1 Sustained Growth in Market Size

In recent years, the Chinese government has introduced a series of policies to encourage and guide internet finance, supporting innovation and pilot programs, which have accelerated its development. Advances in technologies such as cloud computing, big data, and artificial intelligence have provided robust technical support for internet finance, enabling the delivery of more financial services and products, as well as enhancing financial intelligence, precision, and transparency. Small and medium-sized enterprises (SMEs) and individuals, who struggle to access services in traditional financial systems, benefit from the convenience, affordability, and flexibility of internet finance, driving rapid growth in demand.

According to the 2024–2029 China Internet Finance Industry Competition Landscape and Investment Planning In-Depth Research and Analysis Report, by the end of 2024, the number of internet finance users in China is expected to reach 760 million, a year-on-year increase of 17.7%, with young adults aged 18–24 accounting for 86.1% of the user base. The market size of China's internet finance-related industrial chain is projected to reach RMB 20.24 trillion by 2024, a 33% year-on-year increase, contributing over 15% to GDP. The third-party payment market has exceeded tens of trillions of RMB, dominated by Alipay and WeChat Pay. Internet banks such as WeBank serve nearly 400 million individual customers, surpassing traditional banks like China Merchants Bank and approaching the customer base of state-owned banks.

2.2 Expanding Coverage Areas

Internet finance continues to expand its coverage in terms of service targets, business domains, and service channels. Its beneficiaries have grown from individual consumers to include SMEs, rural areas, and low-income groups, promoting financial inclusion. Business areas have diversified from initial payment services to life payment, credit card repayment, education, healthcare, funds, and insurance. For example, Ant Group's Huabei collaborates with over 40 e-commerce platforms, covering millions of merchants and integrating online and offline consumption scenarios to provide installment payments and credit loans^[1]. Service channels have extended from PCs to mobile devices, internet of things, and social networks, enhancing accessibility.

2.3 Lagging Regulatory Framework and Incomplete Legal System

China lacks specialized laws for internet finance, relying instead on departmental regulations with limited legal authority. The existing separate regulation model conflicts with the mixed operations of internet financial institutions, creating regulatory gaps. For instance, micro-lending services fall under the purview of the China Banking Regulatory Commission (CBRC), while asset-backed securities (ABS) are regulated by the China Securities Regulatory Commission (CSRC), leading to oversight vacuums. Lax customer identity verification on some platforms—requiring only basic personal information for registration—has resulted in fake identities, multiple accounts per user, and vulnerabilities in anti-money laundering (AML) and customer due diligence (CDD). Insufficient oversight of third-party payment reserves also raises risks of fund misappropriation.

2.4 Increasing Complexity of Risk Types

The fast transaction speeds, online operations, and cross-regional nature of internet finance amplify risk complexity and control challenges. Money laundering risks are prominent, as criminals exploit fake information and shell platforms for fraud, turning platforms into passive or active laundering tools. Rapid cross-border fund transfers complicate AML efforts, as single-country regulation proves inadequate. Multi-platform borrowing is prevalent, with 41% of users borrowing from 2–3 platforms simultaneously, leading to debt accumulation^[2]. Young users are susceptible to “zero-interest” or “interest-free installment” marketing tactics, resulting in irrational borrowing and over-consumption. Credit assessment systems based on single-platform transaction data fail to capture cross-platform behaviors, accumulating subprime loans. Data leaks in third-party payment platforms and collusion between internal staff and external criminals further exacerbate security risks.

2.5 Technology-Driven Innovation Alongside Security Risks

Big data and artificial intelligence drive continuous innovation in internet finance. Applications include Sesame Credit scoring, anti-fraud deep learning systems, and blockchain for transaction traceability. Multi-dimensional data (user behavior, social networks) enhance credit modeling and operational efficiency. However, platforms with insufficient technical investments often rely on low-quality third-party systems vulnerable to security breaches. For example, a 2020 incident involving tuition fraud targeting college freshmen exposed data leakage risks^[3]. Some platforms lack disaster recovery systems, heightening risks of system paralysis^[4].

3 Risks Faced by Internet Financial Platforms

3.1 Technical Risks

Technical risks refer to service interruptions, data breaches, or transaction failures caused by system vulnerabilities, network attacks, or technical malfunctions. As technology-driven internet financial platforms, technical risks have always been challenges that internet financial platforms must confront and resolve. The daily operations of internet financial platforms rely on stable and efficient technological support. With the rapid development of fintech, internet financial platforms must continuously update and iterate their technologies to maintain competitiveness. However, rapid technological iterations may also lead to compatibility issues or system instability^[5]. Technical malfunctions or system vulnerabilities could result in service interruptions or user data breaches, severely damaging user experience and platform reputation.

As network attack methods become increasingly sophisticated, the risks of data breaches and system intrusions faced by internet financial platforms continue to escalate. Attackers use malware, phishing attacks, or DDoS attacks to steal user data or disrupt normal system operations. Such attacks not only negatively impact user experience but also trigger user distrust in platform security. Additionally, once user data is leaked, it infringes on user privacy and may subject the

platform to legal disputes and regulatory penalties.

3.2 Credit Risks

In the financial sector, information asymmetry is particularly pronounced. Financial transactions typically involve substantial information, which is often asymmetrical. Information asymmetry leads to inaccurate assessments, increasing non-performing loan (NPL) ratios and fraudulent activities, thereby exposing platforms to credit risks. In the consumer finance sector, some users may fail to repay loans on time due to income declines during economic downturns, or they may use false information or malicious cash-out schemes to obtain credit limits, raising platform NPL ratios. On e-commerce platforms, unscrupulous merchants may engage in fake transactions or fraudulent practices to embezzle platform funds, resulting in direct financial losses, potential legal disputes, and increased operational costs.

Although internet financial platforms can leverage big data and artificial intelligence to assess user creditworthiness, some users may provide false information or exploit system vulnerabilities to inflate credit scores and obtain higher credit limits. This not only increases credit risks but also undermines the fairness and accuracy of the credit system. Furthermore, internet financial platforms rely on single data sources for credit assessments. For users lacking traditional financial data, incomplete data may lead to evaluation biases. Cross-platform data sharing remains challenging, making it difficult to identify users' multi-platform borrowing behaviors.

3.3 Compliance and Regulatory Risks

Compliance and regulatory risks manifest in various forms, including uncertainties arising from industry policy changes and severe consequences due to non-compliant operations leading to regulatory penalties. Policy changes are a primary source of compliance risks. In the financial industry, regulatory adjustments are often sudden and unpredictable. As financial regulatory policies continue to evolve, internet financial platforms must swiftly adapt to new legal requirements; otherwise, they may face legal penalties, operational restrictions, or even forced market exits. For example, the People's Bank of China's 2021 Regulations on Non-Bank Payment Institutions imposed stricter requirements on payment institutions' business scope, capital requirements, and anti-money laundering measures. This policy raised compliance demands for third-party payment platforms while increasing their operational costs and management complexity.

Regulatory penalties are another form of compliance risk. Non-compliance may result in hefty fines, business suspensions, or legal actions, adversely impacting both financial health and brand reputation. Additionally, as internet financial platforms expand into overseas markets, the complexity and challenges of cross-border operations become major sources of compliance risk. Cross-border businesses involve multiple jurisdictions with diverse legal frameworks, requiring platforms to adapt to varied regulatory requirements at high compliance costs.

3.4 Market Risks

Macroeconomic fluctuations, intensified industry competition, and changes in market factors such as exchange rates and interest rates can all affect the operations of internet financial platforms, leading to market risks. In 2022, global economic growth slowed, increasing downward pressure. Reduced consumer willingness and capacity directly threatened platforms' consumer finance businesses, hindering revenue growth.

As the internet finance sector matures, numerous platforms and traditional financial institutions have entered the market, intensifying competition. Rivalry squeezes market share, and failure to secure sufficient market presence may undermine platform profitability and business expansion. Homogenization of financial products and services reduces user loyalty. To attract users, competitors often offer preferential interest rates or terms, triggering price wars that erode profits and exacerbate risks.

Beyond economic fluctuations and competitive pressures, exchange rates and interest rates also introduce operational uncertainties. For platforms engaged in cross-border businesses, exchange rate volatility impacts stability and profitability. Similarly, interest rate hikes increase user borrowing costs, reducing demand for credit products and diminishing interest income.

3.5 Operational Risks

Operational risks primarily arise from internal mismanagement, employee errors, or process deficiencies, causing service anomalies or financial losses. Though less pervasive than market risks, operational risks can profoundly impact user experience and platform reputation. In 2020, Alipay experienced a technical staff error that mistakenly froze some users' investment funds. This operational mishap disrupted normal transactions and raised user concerns about platform

security and reliability. While seemingly minor, the cumulative effect of operational risks can significantly hinder long-term platform development.

Rapid business expansion at internet financial platforms may outpace process design and internal controls, leading to inefficiencies, poor user experience, mismatched risk control capabilities, frequent employee errors due to inadequate training, and over-reliance on manual processes—all of which accumulate operational risks^[6].

3.6 Data and Information Security Risks

With rapid user growth and expanding business scope, internet financial platforms accumulate vast amounts of user data and transaction information. These data are critical operational assets and the foundation for personalized services. However, centralized data storage and widespread usage pose significant security risks. Data breaches, privacy violations, and misuse frequently trigger trust crises and legal disputes. In 2019, Alipay experienced a third-party data leak that exposed user transaction information. This incident not only raised user concerns about platform security but also highlighted the critical importance of data security in internet finance.

The widespread application of big data and AI enables internet financial platforms to analyze user data for personalized services. However, opaque data collection and overuse may spark disputes over user privacy rights.

4 Risk Management Strategies for Internet Financial Platforms

4.1 Strengthen Technology R&D

Internet financial platforms should increase investment in technology R&D, employing advanced encryption algorithms and firewall technologies to ensure secure data transmission and storage, preventing theft or tampering. Given the high complexity of platform systems, any technical vulnerability could be exploited by attackers. Thus, platforms must establish robust vulnerability scanning and patching mechanisms. Regular comprehensive security testing—including penetration testing and code audits—should identify and resolve potential vulnerabilities. Additionally, platforms should implement disaster recovery systems and emergency response mechanisms, forming dedicated teams to swiftly address incidents and minimize impacts. Detailed contingency plans and regular drills are essential to ensure rapid activation of emergency protocols.

4.2 Enhance Credit Evaluation Systems

Platforms should optimize credit evaluation systems by incorporating multi-dimensional data and refining credit scoring models. While most platforms rely on internal transaction data, integrating external sources—such as central bank credit systems and third-party data platforms—can build cross-platform credit databases. Machine learning algorithms can enhance the accuracy and timeliness of credit assessments through real-time analysis of user transaction behavior.

Strengthened risk monitoring, including blacklisting mechanisms and punitive measures for defaults, can deter malicious behaviors. High-risk merchants identified via big data analysis should face intensified scrutiny or termination. Platforms may also partner with insurers to transfer credit risks through credit insurance.

4.3 Optimize Compliance Management and Regulatory Communication

Platforms should establish dedicated compliance departments to monitor domestic and international regulatory changes, analyze policy impacts, and formulate adjustment strategies. Regular internal compliance training ensures employees understand anti-money laundering (AML), data protection laws, and operational protocols.

Strengthened communication with regulators—through regular meetings and compliance reports—helps platforms stay informed. For cross-border operations, engagement with local regulators ensures alignment with jurisdictional requirements. Active participation in industry standard-setting promotes self-regulation and standardized development.

4.4 Diversified Business Layout to Mitigate Market Risks

Additionally, platforms can actively explore lower-tier markets to broaden user coverage, deepen vertical scenarios to avoid homogeneous price competition, and strengthen partnerships with traditional financial institutions to co-develop joint products (e.g., co-branded credit cards such as “Bank + Huabei”), thereby sharing customer resources.

As the domestic market gradually approaches saturation, platforms should proactively expand into overseas markets to alleviate domestic competitive pressures. However, global expansion introduces new challenges, including varying regulatory policies, cultural differences, and market competition across countries and regions. When expanding globally,

platforms must enhance localized operations and compliance management to ensure smooth business execution. They should also design customized products tailored to regional user needs.

4.5 Optimize Business Processes and Strengthen Internal Controls

Internet finance platforms should regularly review and optimize business processes to ensure standardized and normalized operations at every stage. Platforms can adopt process automation technologies to reduce manual interventions and minimize operational errors. Platforms should also establish efficient risk early warning systems to monitor and alert abnormal transactions in real time, thereby significantly reducing the probability of operational risks.

Regular training on operational norms and emergency response should be conducted internally to enhance employee skills and risk awareness, strengthening internal control mechanisms. For employee misconduct, an internal whistle-blowing mechanism can be established to encourage anonymous reporting and foster a transparent and fair corporate culture.

4.6 Enhance Data Security and Privacy Protection

Internet finance businesses involve vast amounts of user data and transaction information. Given varying levels of sensitivity and criticality, platforms should implement data classification and hierarchical management based on these factors, strictly controlling data access permissions. Core data, such as payment information and identity details, should be protected with the highest encryption standards and restricted to authorized personnel only. A data classification protection mechanism improves management efficiency and mitigates data leakage risks.

Platforms should conduct regular security audits by engaging professional third-party agencies to comprehensively evaluate their data security systems, identify potential vulnerabilities, and implement fixes.

Additionally, user security education should be strengthened to raise awareness and reduce data security incidents caused by improper user operations. Platforms can disseminate knowledge on data security and privacy protection via app notifications, social media campaigns, and offline events. Regularly publishing data security guidelines can help users learn to set strong passwords, identify phishing websites, and safeguard personal information.

5 Conclusions

Currently, the internet finance industry has experienced rapid growth driven by technological advancements and economic globalization. However, the increasingly complex financial environment poses risks that require effective regulation and control to ensure sustainable and healthy development.

Risks faced by internet finance platforms are multidimensional and highly interconnected. Risk control demands a coordinated approach encompassing technology-driven solutions, compliance prioritization, data empowerment, and user education.

Meanwhile, relevant authorities should proactively guide the industry, fully recognize the hazards of internet finance risks, and enhance risk control capabilities through technological and policy innovations. In the future, with continuous technological progress and gradual regulatory improvements, the internet finance industry will embrace broader development prospects.

References

- [1] Ni Wufan, Fan Binglu, Li Mingsheng, Deng Siyu. Internet Financial Risk Identification and Prevention[J]. Cooperative Economy & Science & Technology, 2022 (18): 51-53.
- [2] Ren Junlong. Research on Internet Consumer Finance Risk Management: A Case Study of Huabei[D]. Jiangxi: East China Jiaotong University, 2023.
- [3] He Yiqun. Research on Risk Supervision and Countermeasures of Third-party Payment Platforms in Internet Finance[J]. Industrial Innovation Research, 2022 (03): 100-104.
- [4] Zhang Pu. Exploration of Money Laundering Risks and Anti-Money Laundering Mechanisms in Internet Finance[J]. Auditing & Finance, 2022 (05): 56-57.
- [5] Zhu Yijin. Research on Risk Management of A Internet Consumer Finance Company[D]. Guangxi: Guangxi Normal University, 2023.
- [6] Zhu Ziqing. Risk Analysis and Countermeasure Research of Internet Finance[J]. Financial Community, 2023 (28): 39-41.