

# Internet Finance in the Big-data Age

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**Abstract.** With the flourishing development of e-commerce, Internet enterprises have accumulated a huge amount of user data, and gradually obtained the needs and preferences of users. It provides financial services from the initial simple payment to transfer remittances, credit loans, asset management, and insurances, besides, has core competitiveness of 'data utilization', constantly mining, analyzing and studying the increasing amount of data, so as to tailor services for customers. In the era of big data, the rapid development of Internet finance also has a certain impact on the traditional financial industry, because it has altered the operation level. Furthermore, the application of big data in Internet finance is personalized, and a customer precision recommendation model based on network is established. The goal of this essay is to find out multiple applications of Internet finance and differences with banks. In respect of research result, the public really relies on it and meanwhile faces to risks. Last but not least, the continuous exploration of Internet finance is essential, as it can take the era of big data to the next level.

**Keywords:** Internet Finance; Big Data; Technology; Credit.

## 1. Introduction

Internet finance is characterized by strong transparency, high participation and collaboration. It is an emerging financial model arisen from online payments, cloud computing and social networks. In terms of business innovation, Internet finance adopts the strategy adjustments, responding to the market quickly, unlike traditional banks that do not tolerate high pressure. Following this, is the innovation on Internet regulation, despite transactions occurred on online platforms, it is able to trace every step and detail, which provides a new way of supervision. To be succinct, the research is implemented in the sights of industries, customers and traditional banks, and contributes to transformation as well as risk prevention.

## 2. Clear Targets of Internet Finance

Internet finance penetrates deeply into the financial field by using the latest technologies such as cloud computing and big data, and has transformed the development pattern of traditional finance, especially promoted the meaningful upgrading of brick-and-mortar banks. Moreover, it provides accurate consumer information to companies through real-time analysis and integration of huge amounts of structurized (images, audio) and unstructured data. Due to the enormous amount of data and privacy, many Internet companies have unique high-performance collection tools, such as Scribe in Facebook. E-commerce and statistics departments use big data to reflect the basic situation of market, effectively analyze transaction data, identify market trading patterns, and help decision-makers to come up with profitable strategies. After further dividing customers, you can target products and advertise to achieve precise marketing. Through the research of customer transactions and bills, to master the customer's consumption habits, thus precisely predict behaviors in daily life, hence financial institutions and platforms have clear objectives.

In other words, the big data used by Internet finance is the real business expenditure data of merchants and users, which is formed via accumulation, based on these data, investors can evaluate and judge the debtor's credit level and the corresponding repayment ability, therefore, to offer reasonable goods for the capital demander. At the same time, the network technology must be highly advanced since this could determine the success or failure of a company to a certain extent. The expansion of the financial industry needs a large number of people, financial and material resources to support, and the opening of financial business cannot be separated from the collection, sorting and

analysis of information. By contrast, traditional financial institutions are relatively incomplete in the process of gathering financial information. Big Data is customer-oriented and meets the various needs of different customers. Under the cut-throat competition in the financial market, companies must change the outdated single-sales model and use up-to-date information technology to set suitable prices with demand elasticity of products.

Real-time computing and analysis capability is the primary focus of financial big data application, and businesses of finance require big data platforms to do so. Although big data technology is very advanced, it is just an invention of human design, which lacks certain subjective value and logic. Additionally, big data also has the selective coverage of problems. For example, in the social data analysis, the data usually correspond to some young people and urban groups, which has a great impact on the effectiveness and limit of big data.

### **3. Two Classical Applications of Big Data in Trade**

1. In cross-selling, big data can help companies match the most relevant products. The information an e-commerce company has about a client may contain the decisive factors for that customer's next purchase. Selling them the "indispensable" items (multiple complementary services or goods). To be succinct, Customer A buys a mobile phone from a link, subsequently, the salesman can point out that A hasn't purchased any charger or battery and sell extra merchandise.

2. High-frequency trading refers to the use of computer programs and hardware to quickly analyze, generate, acquire and send trading instructions for the sake of high profits, allowing for an enormous number of transactions to be made in a short period of time. It is starting to adopt the strategic sequential trading, that identifies and summarizes the deals of specific participants, mainly by applying financial big data. Trading speed is sometimes less than one second in stock market, and very small stock price changes are the ways for high-frequency trading to make money. Because of the extremely fast speed, the human power is completely incompetent, we can only rely on this pre-set programs to shoulder the burden.

### **4. Information Symmetry**

Furthermore, the sharing of financial resources on the Internet at present time has greatly reduced the information asymmetry, which is an important foundation for the existence of commercial banks. Under the Internet finance mode, the information between two parties is fully communicated, transaction is completely transparent, risk management as well as trust rating are entirely digitized. On the one hand, online business process reduces the construction fund and later running cost of setting up the physical workplace. On the other hand, clients do not have to wait in line, considerably improving the efficiency. Internet finance has changed the main way people trade. It is popular because customers can complete a series of operations safely on cellphone terminals, which absolutely reduces part of the cash business of physical banks. Programmers need to constantly improve financial trading functions and interfaces to keep it stable.

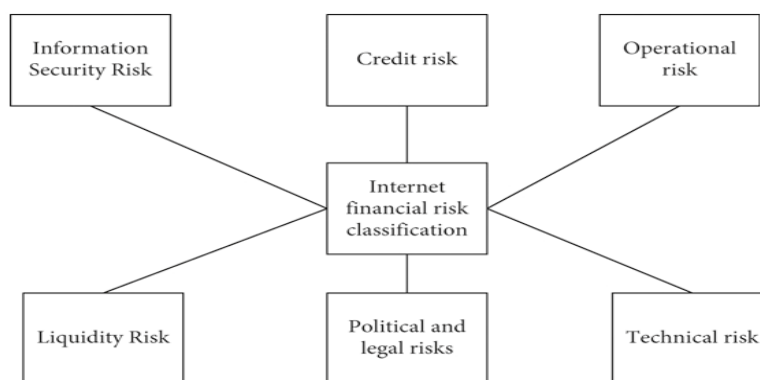
### **5. Credit and Loans**

The thinking mode of big data changes the traditional thinking of financial operation. First of all, it alters the mortgage culture of credit industry and promotes credit realization to become the mainstream. In the past, the process of lending money relied heavily on collaterals, which is a very vital reason why small and medium-sized firms cannot get loan services easily. In the long run, mortgage culture has a surely negative impact on the development of financial industry. To achieve the real change is to strengthen credit loans, establish credit mechanism. What is really safe is not the property, but the person's credit. The credit of a person or a group depends on many variables, and credit itself reflects a dynamic behavioral characteristics like assets, income, outlay, personality, social relationships etc. can all have an influence on assessment. A credit rating system is invented in

recent years, because of the maturity of big data technology. There is a good application in the Internet financial industry, however, if a company lacks a corresponding review of debtors' credit coefficient, this will cause default on the capital chain of the Internet loan platform.

In fact, Internet finance actually gives more opportunities to small and medium-sized enterprises, reduces barriers, and makes financing smooth. It has created more handy conditions and resources for them, optimized the investment environment with a new path, and keep pace with the times. It assists in the long-term running of Internet finance so that the economy is in a virtuous circle.

## 6. Internet Finance Risks



**Figure 1.** Six Risks of Internet Financial

Nonetheless, there are principal risks about Internet Finance.

- In this hidden network system and storage center, the existence of vulnerabilities are caused by technical security and personal privacy risks. For instance, it is a commonplace that sellers ask customers to download an unsafe application, subsequently, when users scan the hacked QR code for payment or even VIP registration, it may lead to serious leak of personal information.
- Negligence in online financial activities can create troublesome credit risks, such as a borrower who does not repay in full within the agreed period.
- Talking about operational risks, these problems are caused by the inadequate and weak regulations of Internet finance companies.
- Besides, it is the extension and variation of traditional financial liquidity risks in the Internet finance. For example, the risk that Internet financial corporations do not have access to sufficient funds in time in order to meet the payment of their debts when due.
- The relevant regulatory laws and political regulations are not perfectly compiled, in addition, lack of regulatory mechanisms and legal constraints. Governments have not yet established some access threshold requirements and industry norms; the entire industry is facing many policy risks. Internet finance must operate within the framework of laws, and also needs policy support from various aspects to reinforce enforcement. Creating a fair environment can protect the possessions of investors, additionally, severe punishment for malicious illegal trader is also a warning to others.
- Ultimately, there are inherent technical risks associated with the Internet, including technical security, hacking, and theft of account balances. The authenticity of a trader is difficult to identify, so the risk of fraud is also high.

Internet financial enterprises pursue decent service experience, emphasize convenience, and simplify procedures. For criminals and hackers who have already formed a black industrial chain by using the false identity information and bank cards. Big data can help enterprises to comprehend these suspicious behavioral characteristics and formulate targeted strategies as well as solutions. Hence,

the public can reduce losses by swindler recognition and early warning. To solve a wide range of risks faced by Internet finance in the era of big data, network protocol arises, which is established for the purpose that computers can safely exchange data and effectively fight against potential risks. In short, the network protocol is a handover rule between users, which protects consumer interests.

The development of the securities industry is also based on big data technology. We can accelerate the realization of the control over the securities market by collecting more and more useful data. Moreover, the insurance products formed on the basis of big data play a very vital role in the growth of this field. We can use big data technology to assess the risk of insurance pricing according to individual transaction information and relevant data, so fraud in insurance contracts can be supervised and exposed.

## 7. Traditional and Internet Finance

Finance and banking are actually service industries, so any of their transformation should not ignore the needs of customers. It is particularly important to let users directly feel the advantages of the Internet Finance. By the way, common progress in online and brick-and-mortar banks could be made in the process of information digitalizing and upgrading, and also inject more emerging forces into the traditional one. Numerous talents majored in Finance are now engaged in Internet-related work, which leads to the lack of elite employees in traditional banks. This means that banks must pay attention to the improvement of workers' professional and technical expertise as well as unique innovation capabilities.

In the traditional financial industry, in order to improve the security and credibility of money transactions, the bank's management regulations are stricter, but the corresponding rules also have significant restrictions on the flow of deposits. Today, people can pay directly for water, electricity and other utilities in the network platform, it is both timesaving and labor-saving. In the future, the data circulated market will be sounder. Financial institutions will have easy access to data on telecommunications, health care, travel and education. On the one hand, it will effectively promote the data integration of financial and other industries, making the marketing and risk control models of more accurate. On the other hand, cross-industry data convergence will generate cross-industry applications, enabling the financial industry to design more scenario-based products.

## 8. Conclusion

Internet finance is growing noticeably on the basis of traditional finance, expanding its business scope, increasing marketing channels, and making it convenient for clients to handle all sorts of business. From my own perspective, internet finance will be an indispensable payment platform in people's lives, and its development direction is full of expectations owing to big data.

Regarding the cost of customer acquisition, it has greatly changed the Internet era. Physical banks are still depending on offline outlets, relying on the counter staff to stimulate, and just accumulate a lot of low active customers. The revelation of Internet finance is much more than that, the transformation of banks is an inevitable trend. In the future, the focus of Internet finance should be placed on technology, such as the improvement of network credit, risk prevention and supervision. For Internet enterprises, they could focus on introducing talents and the cultivation. Ultimately, the entry threshold for Internet financial firms can be raised, and the review of enterprise qualifications should be made more standardized and comprehensive.

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