Annual Meeting of the New Champions 2018

2018新领军者年会

The 4th industrial revolution and the innovative society

第四次工业革命与创新型社会

Financial Risk Prevention: New Technology and Its Application

金融风险防范：新技术手段及其应用

Annual Meeting of the New Champions 2018

2018 新领军者年会

Financial Risk Prevention: New Technology and Its Application

金融风险防范：新技术手段及其应用

Financial Risk Prevention: New Technology and Its Application

Tian Lihui
Nankai University

Abstract: The application of advanced technologies such as the Internet, big data, and block chain has brought new financial risks. Internet finance can easily lead to widespread and systematic risks due to its complexity and volatility of price. Big data brings business and technical risks. Block chain is exposed to security threats and digital currency financial crimes.

Preventing these risks requires upgraded techniques. In big data, this means protecting user information privacy, regulating the use of big data and establishing big data intellectual property protection mechanisms. In block chain, specific supervision technology has to be developed for monitoring digital monetary flow and breaking the dynamic bottleneck of block chain supervision.

The combination of financial innovation and IT technology has created new ways for financial risk prevention. These include IT and big data for information sharing and decision-making; big data technology to ensure security of financial transactions; infrastructure

building in inclusive finance; information sharing platforms and financial credit reporting system for green finance.

The goal of the financial risk prevention is to promote the development of the real economy. To be specific, the task is to steer flow of capital, solve the mismatch between the financial market and the real economy, provide new financing options for the small and medium enterprises, promote the industrial transformation and upgrading, and make dynamic economy and society.

Catalog

1 Accumulation of risks in the development of financial technology

1.1 Means Innovation and Service Integration: The Development of Financial Technology

The combination of information technology and financial innovation has created financial technology for risk prevention. Internet, big data, cloud computing, artificial intelligence and block chain have helped identify, measure and evaluate credit. Through the driving of two core elements of data and technology, financial technology promotes the transformation and upgrading of traditional finance to service intellectualization, convenience, low cost and so on.

At present, the development of financial technology in China is accelerating the integration of service online and technology and financial products. Most domestic financial institutions have realized the transition from traditional management to financial networking. For example, the “e-ICBC” launched by ICBC includes three platforms: “e-purchasing e-commerce platform”, “melting e-link” instant messaging platform and “melting e-line” direct banking platform. In addition, “e-ICBC” also includes a series of Internet financial products such as “ICBC e-payment”, “Yi Lian”, “Net Credit”, “ICBC e-investment” and “ICBC e-contribution”.

The country attaches great importance to the application of financial science and technology. The “13th Five-Year National Informatization Plan” clearly points out that the basic development

and frontier layout work of seven strategic frontier technologies, such as the Internet of things, cloud computing, large data, artificial intelligence and block chain should be accelerated, and the structural reform of the traditional backward management mode should be promoted. With the support of policy encouragement, China's online payment has reached nearly half of the global total, much higher than other countries.

1.2 Internet Financial Risk: Formation and Characteristics

The combination of new Internet technology and financial industry has created a new financial mode, Internet finance. Internet finance is a new financial industry, relying on the Internet tools such as cloud computing, big data analysis, social platform and search engines to achieve financial services such as capital lending, transaction payment and information intermediation.

The three main characteristics of Internet finance are as follows. The first is universal benefit. Internet Finance attaches great importance to the development of the small and medium customer market. The second is big data. Internet finance uses cloud computing, psychology and behavioral theories to conduct data analysis, greatly improving the efficiency of information utilization. The third is convenience. For example, the follow-up service is done by "balance treasure" to complete, which also embodies the "customer feeling first" the Internet spirit.

Although the integration of the Internet and finance brings convenient services to customers, the combination of the two also poses risks. Compared with traditional financial risks, Internet finance still has risks such as network security and information leakage. Internet financial risks can be summarized into five categories: technical risk, business risk, legal risk, regulatory risk, and easy to spread and enlarge risk. The specific risk categories are shown in Table 1:

Table1 Analysis of the Categories and Causes of Internet Financial Risks

Risk category		Cause
Technical risk	Cybersecurity risk	Taking cloud computing as an example, cloud computing cloud services bring a significant increase in storage and computing power, while at the same time causing information to be "stolen" because it is too concentrated. On the other hand, it is easy to evolve monomer risk into system risk because of its open sharing
	Information disclosure risk	
	New technology application risk	
Business risk	Operational risk	Due to the lack of historical data, Internet insurance may have product pricing risks
	Liquidity risk	Internet wealth management products have a long investment period and are mismatched with shorter liability maturities
Business risk	Credit risk	There are many deficiencies in information authentication, credit evaluation and other information among traders
Legal risk		Improper operation may touch high-voltage lines that "illegally absorb public deposits" or "illegal fundraising"
Regulatory risk		Most emerging business models are in a regulatory vacuum
Easy to spread and enlarge risk		The Internet itself is a real-time, interactive, borderless medium, and financial risks are easily spread and fermented

The causes of Internet financial risks can be classified into two aspects. First, the high risk characteristics of the financial business itself. The financial service function of Internet Finance and traditional financial institutions has the same essence. Therefore, the high risks of the financial industry will inevitably be embodied in the Internet finance. Second, the characteristics of the Internet Finance magnify the risks. Because of the high degree of digitalization, the non-boundary and real-time characteristics of the Internet, the risks are easily diverged and expanded at the moment.

There are three characteristics of Internet financial risks. One is the complexity of risk types. The financial innovation products are more abundant and the management concept is more forward, with more complex structure and higher price volatility and leverage. Second, the possibility of systemic financial risk is greatly increased. Third, the risk diffusion speed is accelerated. The use of technologies such as payment and settlement of mobile terminals has accelerated the flow of funds. The use of networked currencies and electronic accounts has increased the difficulty of preventing and defusing financial risks, making it difficult for regulators and financial institutions to control the situation in a short period of time.

1.3 Big Data Financial Risk: Formation and Characteristics

At present, big data finance mainly faces two kinds of risks:

The first is the business risk caused by the big data financial

business, including credit risk, operational risk and legal risk.

The big data financial service of financial institutions is derived from the traditional financial institution service, so credit risk has a direct impact on the development of big data financial services.

The operational risks of big data financial services mainly include system accidents and unexpected events, as well as operational errors of employees or customers of financial institutions, such as oolong fingers, poor communication between customers and financial institution service personnel.

At present, the applicable laws and regulations of big data finance only modify the original relevant laws and regulations, and do not apply to the development of the actual big data finance business. In case of loss, it is difficult to find out the responsibility of big data financial business.

The second type is the technical risk caused by network information technology, including platform risk and security risk.

One is platform risk. Financial business service platform must be advanced trading platform system. Technology, platform, backwardness and service customers with different versions of the software, can lead to efficiency loss and information transfer risk.

The other is security risks. The security risks of Internet financial business mainly include the following aspects: first, financial service institutions. The internal information management of financial institutions may be flawed and lack corresponding countermeasures;

second, the customer side. Customers are not good at managing their own funds and account information, and risk prevention awareness is weak; the third is the transmission of information on the network technology platform.

1.4 Block chain financial risk: formation and characteristics

Block chain technology is a new distributed infrastructure and computing model and a decentralized distributed accounting database. The financial application of block chain mainly focuses on supply chain finance, trade finance, credit investigation, trade settlement, credit sharing, insurance, securities and other seven aspects.

The financial risk of block chain comes from the risk of block chain technology. Security threats are by far the most serious threat to block chain. Among them, block chain mainly faces 51% attack problem; second is the risk of financial crime. In the block chain industry, such phenomena are not uncommon as using digital currency for money laundering, illegal gambling, using the intelligent design of the contract and digital bills to defraud interest, using block chain technology of anonymity and so on.

The third is Internet trading risk. The Internet's main risks involved in financial services are credit risk, liquidity risk, legal compliance risk, operational risk, the traditional financial risks. At the same time there will be low market admittance threshold, high

debt ratio, false financial investment, financial illegal pyramid schemes, financing and financial risks.

The Fourth is legal risk. At present, there is still a legal blank in China and even other countries in the world about the legitimacy of issuing digital currency, the right to confirm the notarization, the digital bill, the intelligent contract and the proof. Regulations should be made for acts of suspected fraud, and products that actually use block chain technology should be encouraged. On the one hand, we should actively explore laws, regulations and regulatory policies, and set up research and regulatory departments. On the other hand, financial enterprises should pay attention to preventing risks while actively applying block chain technology.

2 New technical means of financial risk prevention and control

2.1 New technology of big data financial risk prevention and control

In the era of big data, people analyze huge amounts of data, create new products or provide new services, and bring greater value experience to customers. The government should formulate rational and effective regulatory measures to regulate the use of big data to protect the interests of the related people's legitimate rights and to promote the healthy development of financial industry.

2.1.1 Protect user information privacy in big data

It is not uncommon for users to use Internet financial products for trust and allow financial institutions to keep relevant data about their

search, browsing and trading, but to have their personal information stolen by hackers. The fundamental cause of this problem is imperfect laws and regulations and considerable economic profits, so it is imperative to formulate relevant laws and regulations.

First, improving the internal control mechanism of financial institutions. Financial institutions, as receivers and savers of user information, shall formulate corresponding rules and regulations to prevent the disclosure of user information caused by internal management mistakes and external hacker attacks. At the same time, the emergency measures for information leakage are formulated to avoid the further expansion of losses after the occurrence of information leakage.

Second, regulators should formulate corresponding punishment measures. The punishment measures include punishment to the user information disclosure unit and the illegal person who steals, buys and sells the user information illegally. Punishment to the user information leakage unit can reduce the occurrence of information leakage at the source. Penalties for stealing, buying, selling and illegally using user information can increase the illegal cost and reduce the illegal flow of user information.

2.1.2 Standardizing the use of big data

There are four ways to acquire big data: self-owned platform accumulation, transaction or cooperative acquisition, technical means

acquisition, user data and so on. Because the relevant laws and regulations system is not yet perfect, there are a lot of irregularities in data trading, and there are even illegal transactions and information theft chaos. Whether the company has the right to share the data accumulated on its own platforms through transactions still needs to be regulated by relevant regulations formulated by regulators. First, the regulatory authorities should specify the scope of use of different types of data according to the openness and privacy of big data finance, and prevent enterprises from abusing data through standardized use; second, the regulatory authorities should ensure the legitimacy of data access by data users and prevent illegal data access. Big data financial regulators should prevent data from being maliciously tampered with to guard against data risks.

2.1.3 Establishing the protection mechanism of large data intellectual property rights

Intellectual property protection is a way to safeguard the legitimate rights and interests of the people to promote the innovative development of technology and knowledge. The government should make effective measures to protect the legal property of big data and to prevent monopoly of big financial data by financial giants.

First, the regulatory body should formulate appropriate norms, guide relevant authors to legally establish a large financial database, and cooperate with the legislative department to formulate relevant laws and regulations to protect the copyright of big data finance and

to protect the rights and interests of related authors; second, the supervision organization should analyze the economic consequences of the oligopoly of big data finance, and formulate appropriate measures to prevent the financial data giant's big data financial monopoly behavior; third, the regulatory body should establish an effective legal transaction big data financial mechanism to rationalize big data; fourth, regulators should also effectively use big data finance for supervision when supervising and managing big data finance. In the era of big data, using modern big data methods to supervise big data finance can not only improve regulatory efficiency, but also save regulatory costs.

2.2 The new technical means of block chain risk prevention and control

2.2.1 Innovation and development of block chain specific industry supervision technology

Because block chain technology has characteristic of time-series data and tamper-resistant, it can be widely used in data justice, audit and supervision and can solve the information asymmetry problems in regulation. The application of block chain technology in the supervision of securities industry mainly includes three aspects: issuance of securities, registration and storage of securities, settlement and settlement of securities.

The first is the issuance of securities. In this process, there may be the following problems. First, information asymmetry between

investors and issuers; second, there is a conflict of interest between sponsorship and underwriting; third, the IPO information is incomplete. The lack of data has provided the conditions for fraudulent IPO data. The missing information can be recorded by the block chain, which can optimize the credit environment to a certain extent, improve the market efficiency, and reduce the hidden danger of conflicts between recommendation and underwriting.

The second is securities registration and depository management. The deposit and management system of securities dispersion in China is the basis for the application of block chain. The securities registration on the block chain shall be notarized by the whole chain notarization and kept on the block chain general ledger. In addition to the registration business, the business derived from registration, such as share splitting, equity distribution and stock pledge, etc. can be realized with the help of block chain and smart contracts. As a result, the role of traditional registration agencies will be weakened, thus saving relevant costs for investors.

The third is securities clearing and settlement. The original securities settlement has the following shortcomings. first, the settlement of the wrong link needs manual intervention; second, the cost is huge; third, the degree of centralized settlement is not high. The block chain technology makes up for the above deficiencies, records the settlement data on the block chain, ensures that the data is not tampered with, and effectively reduces the cost.

2.2.2 The realization of digital currency regulatory means of the model

There are three main modes of supervision in major countries (regions). One is regulation of industries such as Europe and Japan. The model focuses on the prudent management of digital money issuing institutions; second, China's Hong Kong, Taiwan represented as the category of banking supervision. In this way, digital currency is regarded as a savings business, and only commercial Banks or savings companies are allowed to issue digital currency; third, the service industry regulation represented by the United States. This approach treats digital money as a money service business, allowing non-financial institutions to participate in it and paying more attention to the regulation of products and services.

In general, countries' digital currency regulatory systems reflect the following three trends. First, the liberalization of market access barriers. These include: supporting more dynamic enterprises (such as mobile operators) to participate in the market directly; second, we will strengthen prudent management of issuers. Capital of the issuer, asset-liability ratio must be up to standard, forcing issuers to buy insurance, or set up a margin system, issue the proceeds of fixed flow and keep sufficient liquidity margin; third, we will strengthen protection for investors and introduce regulations to protect their legitimate rights and interests.

2.2.3 Breaking the dynamic bottleneck of applying block chain technology to supervision

The first is the technical threshold. At present, the block chain technology is still being explored and its security has yet to be demonstrated; second, the limited processing and trading capacity of bitcoin block chain limit its application in high-frequency trading; third, massive block chain data is difficult to backup; fourth, the characteristics of block chain challenge the effectiveness of regulation. Strengthening information disclosure is one of the main measures in supervision. The transparency and anonymity of block chain are contradictory characteristics, which greatly increase the difficulty of regulators; finally, there exists the contradiction between centralization and decentralization. At present, the regulatory systems of various countries are independent of financial institutions. Common regulatory measures require block chain authorization. The character of the block chain decentralization will be destroyed and its credibility will be greatly compromised.

3 Financial technology effectively supports the development of financial security

3.1 Financial science and technology services science and technology finance development

The “13th Five-Year National Science and Technology Innovation

Plan" requires policy banks, insurance, securities and other financial institutions to provide convenient financing channels, and to focus on the general tone of "mass entrepreneurship, innovation" so as to support small and medium-sized enterprises to carry out innovation activities. Financial technology innovations such as the Internet, big data, and block chain have provided strong technical support for the innovation and upgrading of financial products.

3.1.1 Internet financial technology effectively reduces information asymmetry and transaction costs

In the context of "Internet +", Internet technology has established a trading, information exchange platform and payment means for small and medium-sized enterprises and financial institutions, which has significantly reduced the information asymmetry and transaction costs of technology finance. The company publishes information about the goals, progress and financing of innovative technologies to the Internet financing platform. Financial institutions obtain relevant credits such as enterprise innovation projects and enterprise risks on these platforms, and analyze and make financing support decisions. Internet financial payment technology provides a convenient and efficient means of payment for financing transactions between enterprises and financial institutions, expanding the scale of transactions and improving transaction efficiency. The financing parties can realize the online settlement of the bank customers through the online payment platform provided by the bank, or

through the payment interface between the user and the bank provided by the third party. In addition, financial institutions have high requirements for data storage and computing, and often require high IT costs. If you share financial data with the network and use cloud computing technology to process data, and flexibly configure IT resources as needed, you can reduce the expenditure of resources such as IT equipment, and process large-scale data efficiently and cost-effectively.

3.1.2 Big data technology helps provide effective information to aid financial decision making

Big data technology uses data mining and machine learning, artificial intelligence technology and other algorithms to refine the laws in the data, and to predict future development trends to guide financial institutions and enterprises to make investment decisions. Companies in the technology finance sector can use technology such as big data collection to expand potential users and to assess the risks of businesses such as lending. Big data technology can carry out user-side writing to financial institutions, expand and screen the target of investment, thereby promoting the development of technology finance and supporting start-up enterprises to carry out innovative research and development activities. In order to expand investment projects, financial institutions can extensively collect information on potential enterprises and products, help financial institutions make investment decisions, forecast investment returns,

and increase investment success rates. Big data technology can help financial institutions conduct risk analysis, use machine learning methods such as decision trees, neural networks, and random forests to propose an enhanced decision support model (EDSM), modify and optimize the enterprise credit risk assessment model, and evaluate the lending risk of small and medium-sized enterprises. Reducing the cost of credit analysis, improving the efficiency of risk assessment, screening high-quality enterprises and projects for financial institutions can help solve the financing difficulties of high-quality small and medium-sized enterprises and promote the development of science and technology finance.

3.1.3 Block chain technology ensures the security and accuracy of financial transaction data

Block chain technology optimizes information storage methods, provides decentralized services, and helps financial institutions better manage accounting information. It requires different nodes to build trust, record information together, improve the accuracy of information, ensure data not to be tampered with, so as to promote the development of the emerging field of science and technology finance. The block chain technology allows peer-to-peer payments, bypassing payment intermediaries and greatly simplifies the accounting process. In addition, financial institutions can conduct block list classification according to the openness of users, and construct public chain, private chain and alliance chain for data

storage. Financial institutions can use the private chain for centralized storage and management of transaction data, and broadcast transaction information with the alliance chain. In order to protect user data security and to prevent data from being tampered with, block chain technology for data encryption such as symmetric encryption algorithm will be safer and more effective to help the financial sector of science and technology to store information. Therefore, the block chain technology ensures the security and accuracy of the data of scientific and technological financial transactions, and helps financial institutions to deal with transactions and settlement information efficiently.

3.2 Financial science and technology contribute to the development of inclusive finance

3.2.1 Reinventing the good industrial ecology of inclusive finance

The emerging technologies represented by cloud computing, block chain, big data, and artificial intelligence are highly integrated with the financial industry. Financial technology is reshaping the ecology of the inclusive financial industry in a rapid situation. Emerging technologies are interdependent, and the expansion of financial technology into payments, loans, wealth management, insurance, securities, banking, credit reporting and other fields also makes finance more inclusive. Inclusive finance effectively compensates for the shortcomings of traditional finance, covering small and

medium-sized micro-owners and other groups to promote the development of the real economy. The World Bank released the latest Global Findex Data base on April 19, 2018, local time. As shown in Figure 1.1, in high-income economies, digital payments play a leading role in people's remittances and collections; but in developing countries, less than 60% of transactions are done by digital payments. Despite this, this number is still rising, from 32% in 2014 to 44% in 2017.

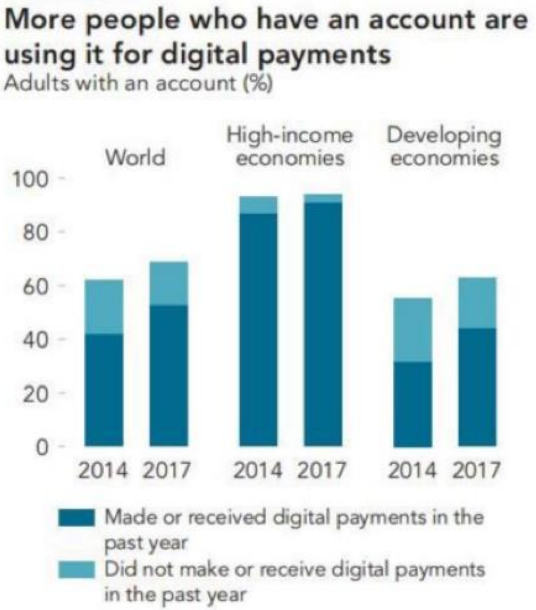

Figure 1 The proportion of people using digital payments in 2014-2017

3.2.2 Promoting the construction of financial technology infrastructure

The construction of financial science and technology infrastructure is an important guarantee for the smooth implementation of inclusive finance and an important means to solve the imbalance of financial resources. Under the background of mobile technology and the Internet, encouraging financial institutions to remote areas to provide safe and reliable online payment, mobile payment, such as financial services, and to promote the popularization of new financial products in the countryside can effectively improve the convenience and availability of financial services. At the same time, building a diversified channels of credit information collection and constructing more comprehensive credit evaluation system in rural financial market can provide better conditions for rural financial institutions which serve rural users.

3.2.3 Speeding up the popularization of financial knowledge and the legal system

The G20 summit in 2012 has reached a consensus that the financial education national strategy and the financial consumer protection system should be regarded as the two key links in developing Inclusive Finance. Popularizing basic financial knowledge can improve the financial ecological environment and reduce the obstacles to financial services. On the one hand, it can improve the level of human capital, enhance the national innovation

ability and per capita productivity; on the other hand, the growth of the financial knowledge stock of the low income people can stimulate more effective financial demand and expand the depth and breadth of financial services.

3.3 Financial science and technology promote the development of green finance

The challenges of the environment and climate change facing the world are becoming more and more serious. With the deepening of the concept of sustainable development, green finance has become a new trend in financial development. As an emerging field, green finance is at the core of solving the problem of the availability of funds for green industries. Financial technology has provided stronger technical support for the development of green finance.

3.3.1 Promoting the development of green financial innovation strategy

The combination of technology, innovation and finance has made the rise of financial science and technology. With the development and application of Internet, cloud computing, large data, block chain and artificial intelligence, science and technology and finance are more effective in the development and application of credit collection, asset management, payment, liquidation, credit, risk management and other industries. It provides more advanced and more efficient technical support for financial development, and has realized the innovation and efficiency enhancement of service and

product development. Financial technology provides technological support for green financial development through technological innovation, helping to promote green financial development. First, financial technology is applied to the operation and management of green financial projects. Secondly, the difficulty of financing for small and medium enterprises is also a worldwide problem. The core problem is asymmetric information, and the green financing of small and medium enterprises is the same. Financial technology reduces the difficulty of small and medium-sized enterprises' green financing.

3.3.2 Improving the green financial information-sharing platform

Due to the lack of an effective information disclosure system, grassroots financial institutions understand that corporate environmental protection information can only be accessed through various environmental information platforms, environmental protection departments, and companies. However, there are problems such as low update frequency and untimely and asymmetrical information of environment of various platforms. It is difficult for financial institutions to obtain real and reliable environmental information of enterprises, which affects the development of green finance. Therefore, a complete enterprise environmental information disclosure system should be established to encourage and guide financial institutions to put some administrative rewards and

punishments, and other information into the green financial information sharing platform.

3.3.3 Strengthening the construction of green financial credit reporting system

The development of green finance requires a stable, comprehensive and sustainable credit reporting system. The development of new technologies such as big data has provided technical support for the establishment of a big data credit system. Establishing a financial credit database through scientific and technological means, forming a complete chain of data collection, integration and utilization and providing credit information services for green credit can help green finance development.

4 The goal of financial risk prevention and control: to promote the development of the real economy

4.1 Actively monitoring the flow of capital

Finance should serve the real economy. Financial technology is the deep integration of finance and technology. The new technologies such as Internet, big data, cloud computing and block chain have reduced the cost of financial institutions, improved the efficiency of financial institutions, and played an important role in solving the mismatch between financial and real economy and guiding the flow of capital.

First, it will help solve problems such as the mismatch between

financial markets and the real economy. This is mainly due to risk control and new profit points. Jingdong finance, with its application to financial technology, is the industry's first digital agriculture loan. Jingdong financial model embodies the financial in direct funds flowing into the role of science and technology, according to the quantitative model of agricultural production to help reduce risk, grasp the opportunity to occupy the rural loan market and open up new profit space.

Second, policy guidance and support is an important driving force for financial services to the real economy, and the development of financial technology is an important way to guide capital flow in a more market-oriented way. The development of financial science and technology can reduce the risk of capital investment in the real economy and improve economic returns. The Internet and big data can make customer risk identification more accurate and less costly. Financial institutions could legally through mining the scattered data in the Internet environment such as consumption of payment and application to judge the degree of probability of default and fraud, and to improve overall risk control ability.

Third, the development of financial technology reduces the information asymmetry between the supply and demand sides of funds, and helps financial institutions to fully utilize funds while preventing risks. Online marketing has become an important marketing channel for financial products and financial services.

Financial institutions make predictions and judgments based on their interests, hobbies, and purchasing powers, thereby recommending financial services and products, minimizing costs, reducing marketing labor costs, expanding sales and increasing the economic efficiency of financial institutions.

4.2 Promoting industrial transformation and upgrading and enterprise innovation and development

In China, small and medium enterprises are not always well served by the financial sector. The financial science and technology development of new financing models, such as public financing, P2P net loan and small loan financing, provides new financing options for small and medium enterprises in China, and further stimulates the rapid and healthy development of enterprises.

First, financial technology not only broadens the financing channels for small and medium enterprises, but also improves the convenience of financing. Innovative financial services are characterized by fast loans, simple approval process and low cost. In addition, differentiated financial products make the demand for funds more suitable for financial services and play a positive role in the development of enterprises.

Second, the development and innovation of the financial industry can improve the efficiency of resource allocation and promote industrial optimization and upgrading. The change in payment methods brought about by the development of financial technology

will promote the improvement of operational efficiency of various industries and the extension of the industrial chain. From online banking, mobile banking to Alipay and WeChat payment, financial technology has brought more convenience to manufacturers and consumers. In the future, with the further improvement of human-computer interaction such as voice and face recognition and the application of payment methods, the service experience and operational efficiency of various industries will be greatly improved, and the innovation and development of the industry will be promoted. In short, the development of financial technology has a long-term positive correlation with corporate development and industrial structure transformation and upgrading.

4.3 Improving the vitality of China's social and economic development

From the perspective of the overall operation of the economy, the development of financial technology can greatly enhance the vitality of China's social and economic development.

First, with the development of financial technology, the risk control ability of traditional financial institutions has improved, and the emergence of new financial institutions has provided diversified financing channels for technology enterprises, especially small and medium-sized micro-technical enterprises. The support of funds promotes the innovation of the entity and the scientific and technological progress of the country. Science and technology and

innovation enhance China's international competitiveness and social and economic vitality.

Second, financial technology promotes the development of inclusive finance. With the deep application of advanced technologies such as artificial intelligence and big data, the risk of financial institutions is reduced. The efficiency of financial institutions serving the small and medium enterprises, the "three rural" and other inclusive financial entities is rapidly improving.

Third, financial technology promotes the development of green finance. The green industry is an emerging industry in China, and its development is of great significance to China's environmental protection cause and sustainable economic development. Green industry is faced with capital demand, and it is difficult to meet it only with government financial support. Therefore, it is necessary to develop green finance. The development of financial technology plays an important role in the screening of green projects, risk control, raising funds, and innovation in green financial products.

In short, in the context of the rapid development of financial technology such as the Internet, big data, cloud computing, artificial intelligence and block chain, it is necessary to increase the innovation of financial technology services in the real economy, and to build a unified and effective supervision. The platform will improve the supervision mechanism for financial institutions and financial products, and strengthen the self-discipline of financial

service institutions. Financial supervision through financial technology innovation effectively mitigates the contradictions between the financial technology service entity economy and the prevention of financial risks, and further enhances the vitality of China's social and economic development.

Research Team

Tian lihui, Director, Professor and Director of the Financial Development Research Institute of Nankai University

Ma Jing, Associate Professor, Institute of Financial Development, Nankai University,

Zhang Zhewei, Graduate Student of Financial Development Research Institute, Nankai University

Wang Zekun, Graduate Student of Financial Development Research Institute, Nankai University

Chen Yanzhu, Graduate Student of Financial Development Research Institute, Nankai University

Wang Yu, Graduate Student of Financial Development Research Institute, Nankai University

Annual Meeting of the New Champions 2018

2018新领军者年会

Financial Risk Prevention:
New Technology and Its Application

金融风险防范：新技术手段及其应用