

Contributions to Finance and Accounting

Zhigang Qiu
Xiaolin Huo
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Fintech and Financial Risk in China

 Springer

Contributions to Finance and Accounting

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Chapter 1

The Development of FinTech in China



In the last decade, FinTech is probably one of the hottest industries in the world, which also has a rapid development worldwide. As an innovation for finance, FinTech can undoubtedly bring subversive changes to the finance industry, but at the same time, it also produces various risks. The FinTech development in China is in a leading position in the world, but FinTech industry in China is also well known for unregulated and speculative market, which brings huge risks for investors. The coexistence of both financial innovation and risks has attracted attention from both academia and policy makers, so this field needs future thinking and research. This book focuses on China' market and takes the development of FinTech and its accompanying risks as the main object, analyzing and discussing the economic principles of the development of FinTech. In the first chapter of the book, we give an overview of the development of FinTech industry in China.

1.1 Overview of FinTech in China

In this section, we first give the definition of FinTech, and then discuss the two main phases of FinTech development in China.

1.1.1 *Fintech: New Technology and Financial Services*

FinTech is the abbreviation of financial technology, which is composed of both financial services and new technologies. The Financial Stability Board (FSB) defines FinTech as technological innovation that can create new business models, applications, processes, or products in various fields in finance. New technologies include artificial intelligence (AI), Blockchain, Cloud Computing, Big Data (also referred to as “ABCD”), which can be applied into payment, financing, investing, insurance,

Table 1.1 New technologies and financial application

	Subdivision technology	Financial application
AI	Facial recognition	Financial account security
	Voice recognition	Intelligent customer service
	OCR	Document and bill processing
	Machine learning	Robo-advisor
Blockchain	Internet of things	Transaction in goods
	Distributed transfers accounting	Cryptocurrency
Cloud computing	Data storage	User database
	Computing capability	
Big data	User portrait	Product recommendation
	Credit reporting	Automatic credit rating

and regulation. Table 1.1 summarizes new technologies and their applications to various financial services.

In the view of this book, the core of FinTech is the big data dynamically generated in the development process of FinTech, which in turn promotes the rapid development of the industry. In fact, as shown in Table 1.1, new technologies are almost all related to big data. Although new technologies help big data generate great business values, the overuse of big data may violate the privacy of consumers.¹ Therefore, some new technologies, such as Edge Computing, Federal Learning (referred to as “EF”) are developed rapidly and are applied to crypto computing with privacy protection for big data. Generally speaking, FinTech is the development of the applications of big data and new data technology in the finance industry.

1.1.2 Differentiate Internet Finance and FinTech

In the last decade, China has become a world leading FinTech innovation center, with the highest FinTech adoption rate in the world (Ernest and Young 2019). We not only observe the emergence of international FinTech giants such as Alibaba, Tencent and JD, but also observe the development of global FinTech hubs such as Beijing, Shanghai, and Shenzhen. The development of FinTech in China is not plain sailing. In fact, before 2016, FinTech had another name, which called Internet finance, and the central government had high expectations for its development. However, due to the frequent bankruptcy of P2P platforms, especially the case of E Zu Bao, the name of “Internet finance” is rarely mentioned.² Therefore, people start to use the name FinTech instead.

Internet finance refers to the extension of the traditional financial business models by internet-based technology, and it is also regarded as the first stage of FinTech

¹We will discuss this point in more details in the subsequent chapters.

²The Chinese name of E Zu Bao is “E租宝”, and we will discuss this case in Chap. 3.

development. The models of Internet finance include third-party payment, peer-to-peer (P2P) lending, crowdfunding, Internet insurance and intelligent investment adviser. In terms of scale, third-party payment system and P2P lending platforms are the most prominent models. Third-party payment system is the starting point for the online business activities and can be seen as the infrastructure to collect big data, which has a positive effect on the development of FinTech. However, P2P lending has proved to be a failure and even terminated the name of Internet finance.

Although we do not mention the name of Internet finance anymore, it is the predecessor of FinTech. In fact, Internet finance is a major trial and error stage for the development of FinTech. During the development stage of Internet finance, Ali pay developed by Alibaba and WePay developed by Tencent have become the largest third-party payment systems in China. New business models and online social activities supported by third-party payment system have generated a large amount of data and created great business values. FinTech takes one step further and extends Internet-based technologies to more intelligent technologies for data analysis, which further promotes new business models and new financial products.

China's financial technology is globally representative. A large amount of evidence shows that China has always been in the forefront of the world in terms of FinTech adoption, the number of FinTech start-ups and the competitiveness of FinTech giants (Ernest and Young 2019; AIF 2020). The fast development of FinTech in China also raises several research questions. First, why does FinTech develop so fast in China? The business models of Alibaba's Taobao and Ali pay are not new. We observe similar model such as E-Bay and PayPal in the United States much earlier but with a relatively low speed of development. Second, what is the essence of rapid FinTech development in China? Is it different from that in other countries? Third, financial innovation usually covers customers that cannot be covered by the traditional financial system. In particular, financial innovations often solve the existing problems in the traditional finance system (e.g., asymmetric information). Then how does FinTech solve the problems in China? This book aims to answer the above questions. At the same time, in this chapter, we first provide a comprehensive introduction of the development of FinTech in China.

1.2 Development of FinTech in China

In this section, we discuss in detail the development of fintech at different stages in China, with a global comparison the development of different countries.

1.2.1 Computerized Finance (1980–2000)

IT Technology has Brought the Change

The era of computerized finance starts in the 1980s, which is the budding period of FinTech. At this stage, IT technology is used to realize the computerization and automation of financial business, so as to improve business efficiency. Typical examples include the computerization of bank accounting system, credit system and clearing system, as well as the establishment of ATM and POS machines. Computerized financial business has promoted a great change in finance industry. From then on, people can get rid of manual accounting and abacus. In the stage of computerized finance, the development relies on the technology of computers, and the traditional finance models do not have too many changes. Therefore, the key to financial computerization is to improve the efficiency of financial services.

1.2.2 Internet Finance (2000–2015)

A Rapid But Brutal Growth

Since the twenty-first century, with the popularity of the Internet and mobile phones, the Internet finance era has gradually formed. During this period, financial institutions begin to establish online business platforms to collect user information through the Internet or mobile phones terminals. The establishment of third-party payment system supports online business activities, leaving a large amount of data. Based on these data, new financial models are established, and the Internet finance stage begins. In this stage, Internet finance is essentially a transformation of sales channels of financial products. The most representative business forms include third-party payment system, P2P loans, crowdfunding, etc.

The year of 2013 is known as “the year of Internet finance” in which Ali pay proposes the on-line wealth management product, Yu E Bao, linking the funds in the third-party payment (Ali pay) accounts to the money market funds.³ Therefore, a new financial model different from the traditional banking system comes into being. Since then, China’s Internet finance has developed rapidly, and various new financial models have emerged one after another, from third-party payment, P2P lending, and crowdfunding to other businesses. From 2013 to 2015, Zhong An Insurance, the first Internet insurance company and WeBank, the first Internet bank are established in the FinTech industry in China, respectively. Moreover, there has been explosive growth in P2P industry, which finally becomes hidden dangers in the development of FinTech industry.

³The Chinese name is called “余额宝”.



Fig. 1.1 Payment structure of third-party payment

1.2.2.1 Models of Internet Finance

The name of Internet finance is rarely mentioned nowadays, but we still discuss its various models in this subsection. Nonetheless, those models are part of FinTech development.

Third-Party Payment

Third party payment is one of the typical applications of Internet finance, which refers to an independent institution or commercial bank that provides consumers with a transaction payment platform. It is divided into Internet payment and mobile payment. The transaction process of third-party payment is illustrated in Fig. 1.1.

By definition, a third-party platform can only act as a transfer intermediary, such as Fast Money.⁴ The initial development of third-party payment is only to provide a convenient payment service for platforms, such as Taobao. However, it finally competes with commercial banks. For example, to assist online transactions, the third-party payment can further provide credit guarantees for buyers and sellers in the online transactions, such as Alibaba, JD, etc. In this sense, the third-party payment plays the role of credit cards.

On May 18, 2011, the People’s Bank of China officially issued the third-party payment license, and 27 companies obtained the licenses, marking the official beginning of the Internet financial era. Ali pay, originated to the transactions in Taobao platform, becomes a milestone of third-party payment in China. In order to solve the problem of asymmetric information in e-commerce transactions, Taobao launches Ali pay secured transactions, successfully attracting a large number of customers, and gave birth to the third-party payment system. Although Ali pay looks like Taobao’s ancillary service, it soon becomes independent and was associated with many online and offline scenarios. In fact, Ali pay is everywhere in our daily

⁴ A third party payment system with Chinese name “快钱”.