Master's Thesis

The Rise of Internet Finance: Global Development and Practice in China

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Zhang Xinting

The Rise of Internet Finance: Global Development and Practice in China

A thesis presented

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Zhang Xinting

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Seoul National University
Seoul, Korea

The Rise of Internet Finance:
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Rhee Yeongseop

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International Area Studies

Graduate School of International Studies

Xinting Zhang

Confirming the master's thesis written by Xinting Zhang

August 2016

Chair______Cheong Young-Rok______(Seal)

Vice Chair______Ahn Dukgeun______(Seal)

Examiner______Rhee Yeongseop______(Seal)

THESIS ACCEPTANCE CERTIFICATE

The undersigned, appointed by

The Graduate School of International Studies
Seoul National University

Have examined a thesis entitled

The Rise of Internet Finance: Global Development and Practice in China

Presented by **Xinting Zhang**

Candidate for the degree of Masters of International Studies,
And hereby certify that the examined thesis is worthy of acceptance.

Committee Chair	Cheong Young-Rok	(Signature)
Committee Vice Chair	Ahn Dukgeun	(Signature)
Examiner	Rhee Yeongseop	(Signature)

Abstract

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Zhang Xinting
International Area Studies
Graduate School of International Studies
Seoul National University

Fintech, the combination of finance and technology, has been the hot spot worldwide, both in the business world and academic world. While Fintech tends to be associated with western countries, the development of internet finance in China is also worthy of attention. Recent years have witnessed the unprecedented growth of China's internet finance, which is leading a paradigm shift in the financial sector. As a market-driven response to China's long-standing repression of the financial services industry, the current boom of internet finance in China is set to revolutionize finance in China.

This newborn industry has experienced an influx of a variety of new entrants, not only in traditional financial institutions but also Internet companies with financial services ranging from third-party payment, peer-to-peer lending, crowdfunding, financial search engine and transaction platform, and other disruptive financial innovations.

China is enjoying a remarkable growth in the internet financial market compared with other developed countries. This paper argues that the rapid development of China's internet finance is a result of economic development gap and an imperfect financial system. Despite the fact that internet finance in China shares many similarities with western prototypes, their differences are distinct and significant. In brief, Internet finance is Fintech with Chinese characteristics.

The emergence of internet finance has been changing the competitive landscape of financial sectors in China, and there is no doubt that internet finance will continue to develop rapidly in China with a more inclusive regulatory environment.

Key words: Internet Finance, E-finance, Fintech, China

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I. Introduction

Technology has been changing the world in every aspect. The third industrial revolution, which is driven by internet technology, does not only turn manufacturing digital, but is also likely to bring about a paradigm shift in financial sector, indicating a democratization of finance. Fintech, the emerging industry combining internet technology and financial services, is quickly developing and impacting the traditional financial industry throughout the world. Particularly, Fintech in China, which is called Internet Finance (互联网金融) in Chinese, has been enjoying a remarkable growth during recent years.

The current boom of internet finance in China is a market-driven response to China's long-standing repression of the financial services industry. Powered by technological progress and rapidly changing customer behavior, the boom of China's internet finance could be attributed to three contributors - the proliferating online economy, digitalization of social networks, the inefficient financial system where there is a huge mismatch.

The rapid development of internet finance has gained widespread attention from the public to the government, from media to academy. Some people argue that the active performance of internet finance in China will probably make the unfledged financial system much messier, while some assert that internet finance under appropriate regulation could be complementary with the traditional financial services and conductive to China's economic transformation. This has also been highly covered by the mass media which led to this study exploring more on the nascent financial form and the role it plays in China’s New Normal economy.

Media coverage and Public concern

Internet finance has currently been a trendy word frequently appearing in discussions in the news media. According to Baidu Search Index, searches for the word started from 2013 and the number of the searches has been on the rise overall, significantly from 2015, the year when internet finance achieved considerable attention in China in both academic field and practical discourse. Thanks to the high exposure on the media, Internet finance becomes the chat of the tea-table instead of an unattainable idea. The huge attention from the media and general public in turn has been bolstering the development of internet finance in China, and thus attracted increasing public concern.

Technology development

The boom of digital technologies, such as big data and cloud computing, is fueling a heated market for internet finance as well. There is a growing emphasis on big data and the possibilities which lie within it in the financial industry. Big data possesses profit making opportunities and challenges for the internet financial sector in particular, owing to its technological grounding, and we’re just at the beginning of seeing what such a large mass of data on consumers and transactions can create. Financial innovators take the advantage of IT innovation to create new profit sources and understand customer preferences better.

Policy support

Internet finance does not only enter the public consciousness, but also catches the attention of the government. Internet finance has been put into the annual government work report in three consecutive years. In 2014, the work report mentioned internet finance by focusing on the healthy development of Internet banking – improving the mechanism for coordinating financial oversight and ensure that no systemic or regional financial risks occur, while the government work report of 2015 put emphasis on the function of internet finance - developing inclusive finance and ensuring equitable access to financial services for all market entities. The latest work report delivered in 2016 noted that Chinese government would make effort to ensure Internet finance to develop in line with regulations, and make a major push to develop inclusive and green finance. With the support of Chinese government and policies, it is the very time for the prosperous development of internet finance in China.

Internet finance, the profound transformation of traditional finance propelled by both rapid development of Internet technology and a fundamental shift in mindset, tend to serve as a strong driving force of reform and progress in China's financial sector. The emergence of internet finance has been changing the competitive landscape of financial sectors in China, and there is no doubt that internet finance will continue to develop rapidly in China with a more inclusive regulatory environment.

The rest of this thesis is organized as follows. In Section II, related reports and papers are reviewed. Section III presents the picture of China's internet finance landscape in vertical axis of time and horizontal axis of structure. Section IV analyzes the characteristics of internet finance in China from three aspects - economically, socially and financially, and elaborates the similarity and differences between internet finance in China and Fintech in the United States. In the end, Section V comes to the conclusion and discusses some pertinent implications.

II. Literature Review

1. Underlying theories

To understand the definition of China's internet finance, it is necessary to review the concept of finance first. In the Cambridge Business English Dictionary, the definition of finance is 1) money borrowed from an investor, bank, organization, etc. in order to pay for something 2) the activity or business of managing money, especially for a company or government 3) the study of the way money is used and managed in the economy. It is defined as a branch of economics concerned with resource allocation as well as resource management, acquisition and investment. Finance deals with matters related to money and the markets. To sum up, the basic function of finance is monetary circulation, that is, to intermediate funds between those who need money and those who have extra money, in the form of direct financing and indirect financing.

Then comes to two important classic theories of finance – Transaction cost and information asymmetry, two elements suggested by Mishkin (1995) on why financial intermediaries exist in the real world.

Narrowly speaking, transaction cost is defined as "costs of the price mechanism" (Ronald Coase 1937 The Nature of the Firm). In other words, it is regarded as market trading fee. On the other hand, transaction cost has been broadly defined by Steven N. S. Cheung as any cost that arises due to the existence of institutions. Under the broad definition, many economists then ask what kind of institutions (firms, markets, franchises, etc.) can minimize the transaction costs of producing and distributing a particular good or service. In financial sector, some of the financial institutions exist in order to reduce the transaction cost of certain financial activities.

The theory of asymmetric information was developed in the 1970s and 1980s as a plausible explanation for common phenomena that mainstream general equilibrium economics could not explain. In simple terms, the theory proposes that an imbalance of information between buyers and sellers can lead to inefficient outcomes in certain markets. Regarding financial activities, some financial organizations are essential to play the role of alleviating information asymmetry.

Allen Franklin, McAndrews James and Strahan Philip (2002) introduce the concept of E-finance. They argue that E-finance technologies reduce asymmetric information because they lower the costs of communication, computation and data processing, thus allowing buyers and sellers of financial assets to have more equal access to information. In their opinion, there are three important trends in the financial services industry accelerated by the emergence of the internet - improved price transparency, differential pricing and transformation of distribution channels.

Lihui Lin, Xianjun Geng and Andrew Whinston take a new perspective to competition and challenges for financial institutions in the internet era (2001). Since the developments in e-finance, together with other financial innovations, are constantly bringing new challenges to finance theory and changing people's understanding of the financial system, they suggest differentiation of financial products and services is essential for business success and proprietary development of new services by utilizing IT will be the key.

Professor Xie Ping(2012), the first person who put forward the concept of the Internet finance in China, regards internet finance as the third way of financing, differing from direct financing and indirect financing, namely "Internet finance pattern". In his definition, internet finance is characterized by convenient payment, little market information asymmetry and direct transaction between borrowers and lenders. In other words, banks, brokers, agencies and other financial intermediaries don't work in this internet finance pattern, but still, internet finance is able to achieve the efficiency of resource allocation like direct and indirect financing do, and at the same time, promotes economic growth and reduces the transaction costs.

Yangtao(2013) views internet finance as the innovation of internet technology applied to financial activities. He argues that the key of internet finance is the transformation of financial system itself rather than technology, and it is the trend of financial disintermediation which has been revolutionizing the traditional financial industry, not internet technology.

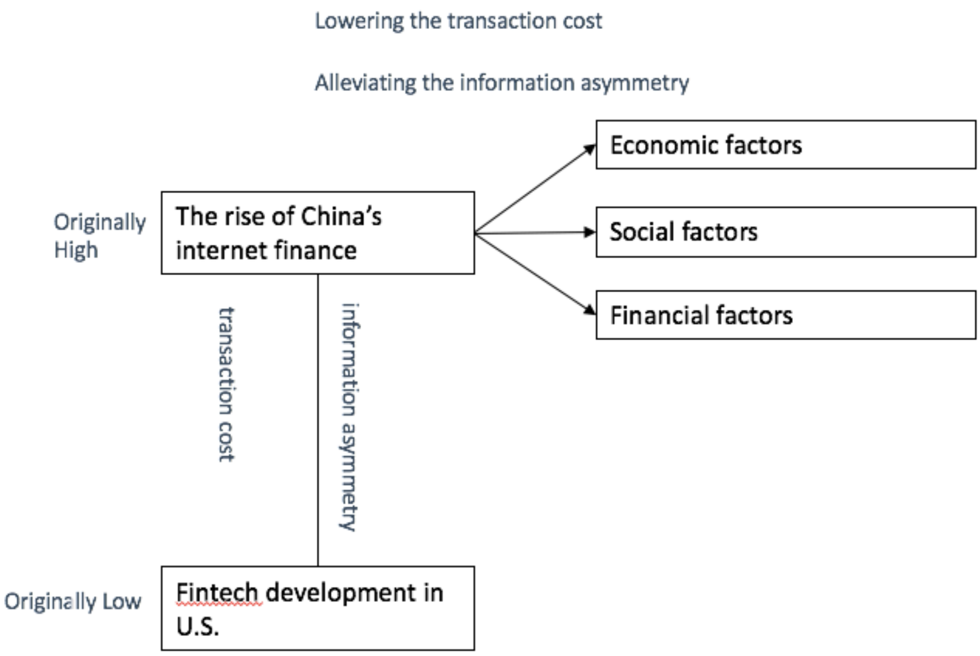
So far, not much literature has covered the research of internet finance, and theories of internet finance are still being developed. With limited academic resources but overwhelming media coverage, the fact that China's internet finance is burgeoning at an astonishing speed rather than Fintech in other countries worth a critical reflection on the reason for the explosive boom of internet finance in China.

2. Research design

Therefore, I put forward the research question: What is the characteristic of Internet Finance in China? - Why does China's internet finance boom so rapidly compared with other countries in recent years?

In order to answer the question, first, I intend to show the brief landscape of China's internet finance in vertical axis of time and horizontal axis of structure. Second, I would like to concisely discuss the reasons why China's internet finance is rising so rapidly compared with global market. Three perspectives are taken to answer the question, and also a comparative study is conducted to analyze the similarities and differences between internet finance in China and that of western countries. The analysis is based on two fundamental theories which are mentioned above - transaction cost theory and asymmetric information theory.

My hypothesis goes as follows: it is the imperfect financial system and uneven economic growth under the surface of the rise of China's Internet finance that leads to the prosperity of China's internet finance.



Graph 1 Analytic framework

III. An overview of current China's internet finance landscape

1. The development of China's internet finance

In 1997, China Merchants Bank set up its online bank and provided personal banking services online, marking the first internet bank in China.

In 2000, Bank of China and Industrial and Commercial Bank of China launched mobile banking in succession. Since then, mobile phone became a new vehicle allowing people to get access to financial services.

From 1997 to 2004, internet finance was still in its embryonic stage. In this phrase, the role of internet was to provide technical support for traditional financial institutions and enable them to expand their services on the internet.

It was not until 2004 when Alipay, the third-party online payment platform was launched by Alibaba Group that the combination of internet and finance in China step into a new stage.

2007 was also a significant year when PPDai was established in Shanghai, which marked online platform for peer-to-peer small unsecured loans first emerged in China.

In 2010, People's Bank of China established 'Administrative Measures for the Payment Services Provided by Non-financial Institutions', which required all non-financial institutions to obtain the license for payment business and become payment institutions to be managed and supervised under People's Bank of China. And in the next year, third-party payment service license was granted to 27 enterprises including Tenpay (under Tencent) and Alipay (under Alibaba).

In 2011, the online crowdfunding platform Demohour.com (点名时间) was established. As the pioneer in this field, it first introduced the idea of crowdfunding to Chinese.

During this period, P2P lending began to sprout while third-party payment grew up gradually, and the government started to keep a watchful eye on the newly emerged business. Internet turned from the technical supporter of financial institutions to the key player of innovation in the financial services.

In 2012, the concept of domestic Internet Finance was first put forward by Professor Xie Ping on CF40 Forum(中国金融四十人论坛). He presented his research on the Mode of Internet Finance(互联网金融模式研究) and put the internet finance into a systematic theory.

The year of 2013 is regarded as the first year of China’s internet finance because couples of remarkable events happened in that year.

In June, Alipay began offering Yu’e Bao(余额宝), an investment product which invests in funds managed by Tianhong Asset Management Co. Alipay users can put their money into the product and there is no minimum amount, and customers can withdraw their cash anytime. By the end of 2013, Yuebao’s assets under management was over 185.3 billion yuan and had attracted more than 43 million investors. The success of Yu’e Bao brought about dozens of similar financial products launched by other internet enterprises.

In July, CMB started their business on the platform of wechat, where customers are able to transfer money, recharge mobile phones, or make an appointment for a range of services, etc.

In October, Baidu launched its internet financial services platform, cooperating with various financial institutions to design and sell financial products. On the day of December 23, the trading amount exceeded 3 billion yuan.

In 2014, the terminology ‘internet finance’ first appeared in the Report on the Work of the Government.

Webank(前海微众银行) was established in 2014. It is China's first private commercial bank established and China’s first online-only bank as well. One of its major shareholders is Tencent.

While Tencent was building its internet financial empire by constructing webank, Alipay, the affiliate company of Alibaba Group was rebranded as Ant Financial Services Group in the same year.

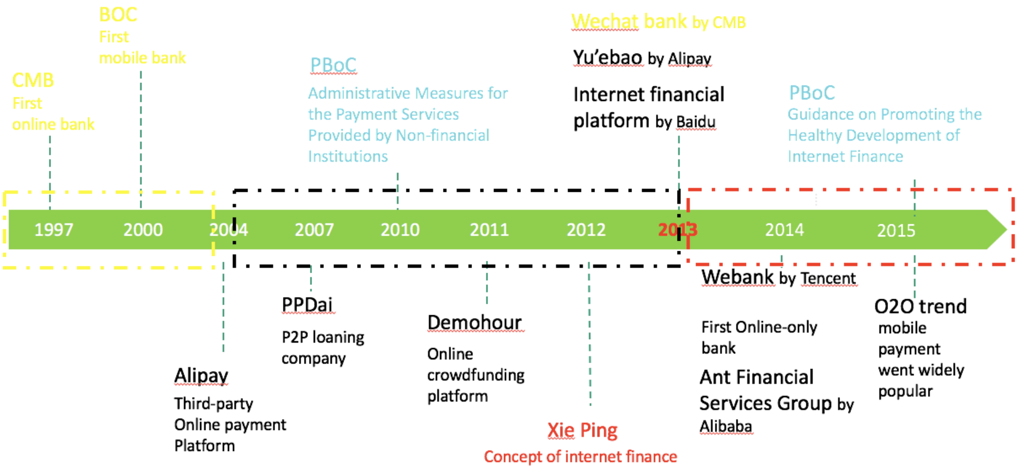
P2P companies proliferated in 2014. With the volume of the industry becoming larger and larger, the the competition became fiercer and fiercer, and the more the problematic issues happened more frequently.

In 2015, July 18, Chinese government issued Guidance on Promoting the Healthy Development of Internet Finance. Chinese government seeks to promote the development of internet finance and believes that these new technologies can have a positive impact on the traditional financial sector. However, the document also includes guidelines for reducing emerging risks such as fraud, money laundering, illegal fundraising, and the unauthorized disclosure of users' personal information.

Until the end of October, the cumulative volume of P2P transactions exceeded one trillion yuan.

Another trend in 2015 was that mobile payment went widely popular in China. People could pay by Alipay or wechat payment almost everywhere. The user terminal of internet finance was switching from pc to mobile.

From 2013 to 2015, internet finance experienced barbarian growth and therefore Chinese government strengthened supervision and increased regulation of internet financial activities. Under government regulation, the exponential growth of internet finance seems to be appropriately controlled, and China's internet finance is gradually embarking on the track of a sound development.



Graph 2 Chronology of internet finance in China

2. The structure of China's internet finance

At present, the main players of China's internet finance can be classified into two groups, traditional financial institutions and non-financial institutions. Traditional financial institutions impel the development of internet finance by E-commercialization of traditional financial services, while non-financial institutions take advantage of internet to drive innovation of financial services. Traditional financial institutions are making their operation and services digital to defend themselves from the competition, and Internet companies are coveting financial industry and expanding their business to make more money.

According to the research report on the trend of China's internet finance from 2015 to 2018, released by ThinkTank of China Internet Financial Industry, by the end of 2014, the scale of China's internet financing has reached RMB 10 trillion. Among them, the amount of payment is as high as RMB 9.22 trillion, while that of other forms of internet finance, such as P2P, crowd-funding, and money managing, is not more than RMB 1 trillion altogether. [1]

i. Third-party Payment

The term third-party payment basically origins from China, referring to the similar meaning of e-commerce payment in English. The name of third-party payment indicates that this kind of online payment is operated by independent organizations rather than banks. After signing with banks, they are entitled to realizing trade and funds transfer, as an intermediary for trade payment settlement, by making trade support platform connect to bank payment settlement system.

A typical third-party payment transaction process is as follows:

A buyer should first deposit money into the account of a third-party payment platform, and then the third-party payment platform will notify the seller that it has received the payment. The seller will deliver the product and after the buyer receives and checks it,

[1] 2015 年—2018 年中国互联网金融发展趋势研究报告.February 9, 2015. ThinkTank of China Financial Industry. http://www.a-cifi.org/pxzxview.asp?id=907

he/she can notify the third-party payment that merchandise is received, after which the platform will release the payment to the seller.[2]

Third-party payment was spawned by the prosperity of e-commerce in China. At its initial stage, the growth of third-party payment depended mostly on online shopping as it helped to build mutual trust mechanism between buyers and sellers while the credit system was still behindhand. In recent days, after the first stage of user absorption, third-party payment is going offline from online, from pc to mobile, further invading the territory of banks. For instance, you can find the scenes people paying by third-party payment ranging from taxis to restaurants, from supermarkets to convenient stores. It becomes a new lifestyle of Chinese people.

According to iresearch, the GMV of China's third-party online payment totaled 11.8 trillion Yuan in 2015, rising 46.9% compared with the previous year. By GMV, online shopping accounted for 23.2% in China's third-party online payment market in Q4 2015, fund transaction19.8%, flight travel 8.7%, telecom recharging 3.5%, B2B e-commerce 5.3% and online gaming 2.0%.[3]

The GMV of China third-party mobile payment attained 10.17 trillion Yuan in 2015, shooting up 69.7% compared with 2014, and its growth was much lower than in Q4 2014.

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[2] Chuanjin Jiang, Wenguan Song. 2011. The Innovative Profit mode of Third-party Payment Platform in China. International Conference on E-business & E-government.

[3] China's Third-Party Online Payment Market Confronts Increasing Fierce Competition. March 23,2016. http://www.iresearchchina.com/content/details7_20682.html

In Q4 2015, mobile finance, personal application and mobile consumption accounted for 38.9%, 32.3% and 26.0% separately in the third-party mobile payment market by GMV.[4]

ii. Peer-to-peer lending

Peer-to-peer lending is the practice of lending money to individuals or businesses through online services that match lenders directly with borrowers. Lenders often earn higher returns compared to savings and investment products offered by banks, while borrowers can borrow money at lower interest rates, because peer-to-peer lending companies can run with lower overhead and provide the service more cheaply than traditional financial institutions online.[5]

P2P lending originated in the UK and was developed in the US, before reaching a peak in China. Inspired by P2P platforms in the US, Ppdai went live online in June 2007 as the first P2P lending website in China. It was followed by the emergence of a number of major online lending platforms of a similar type, including Hongling Capital, Renrendai and Lufax. In recent years, China's online peer-to-peer lending sector has witnessed extremely rapid growth with multifold increases across all main indicators such as the number of investors, borrowers, platforms and business turnover.

[4] China's Third-Party Mobile Payment Market Shot up 69.7% in 2015. April 11,2016. http://www.iresearchchina.com/content/details7_21238.html

[5] Definition from Wikipedia. https://en.wikipedia.org/wiki/Peer-to-peer_lending

By the end of 2015, there were 2595 P2P lending providers, rising from 1575 in 2014. The trading volume reached 982.304 billion yuan, increased by 288.57% compared with that of 2014 (252.8 billion yuan). The number of investors and borrowers in 2015 was respectively 5.86 million and 285 million, almost four to five times the number of 2014.[6]

While peer-to-peer consumer lending has dominated developed country markets, there seems to be a much higher share of peer-to-peer business lending in China. According to a research by ACCA, it is estimated that peer-to-peer business lending could be in the range of 20% to 40% of all peer-to-peer lending in China. The high share of peer-to-peer business borrowing in China can be attributed to the large 'institutional' gap in the supply of finance to small, medium and micro enterprises.

iii. Crowdfunding

Crowdfunding is a way of funding a project by raising monetary contributions from a large number of people over the internet. It asks the pioneering enterprises and individuals to show their ideas and projects to the public in order to gain attention and support, and then obtain the financial assistance. Potential investors will assess and examine to decide whether they support the project or not.

There are two primary types of crowdfunding. Reward-based crowdfunding, also

[6] Data retrieved from Wangdaizhijia.com. January 7,2016. http://www.wdzj.com/news/baogao/25661.html

regarded as the narrow definition of crowdfunding, refers to the practice that entrepreneurs launch a business concept without incurring debt or sacrificing equity/shares by pre-selling the product or service. The other major type of crowdfunding is equity-based - the investors receives shares of a company in exchange for the money pledged.

Crowdfunding in China started on the year 2011 when the first crowdfunding website launched. Statistics show that till the end of 2015, there were 283 crowdfunding platforms in China, almost doubled the number in 2014, and ten times that of 2013. Most of them are reward-based crowdfunding. Crowdfunding platforms in China successfully raised 11.424 billion yuan with 72.3 million investors throughout the year 2015.[7]

Despite the rapid growth of crowdfunding in China, there are several challenges crowdfunding in China must overcome. Since China has an imperfect legal system, it is necessary to make it clear where to draw the line between illegal fund raising and crowdfunding for the sound development of it. Also, China's weak intellectual property laws do not provide adequate protection for entrepreneurs. Without a legal system that protects new ideas, the financial incentive behind innovation could be effectively eliminated.

The future of crowdfunding in China depends in part on how investors and entrepreneurs

[7] Data retrieved from Wangdaizhijia.com. January 12,2016. http://www.wdzj.com/news/baogao/25767.html

balance these societal obstacles with the potential benefits of crowdfunding.[8]

iv. Internet financial portal

Internet financial portal is a platform where people can search, compare and buy various financial products and services. As the third party of the investments, the key function of it is to connect the financial products from financial institutions with the customers on the internet. Internet financial portal does not only collect and help to sell financial products, but also collects the investors' data, analyzes their needs and preferences, and gives personalized recommendations, and thus contributes to the transformation of financial industry from product-centered mode to customer-centered mode.

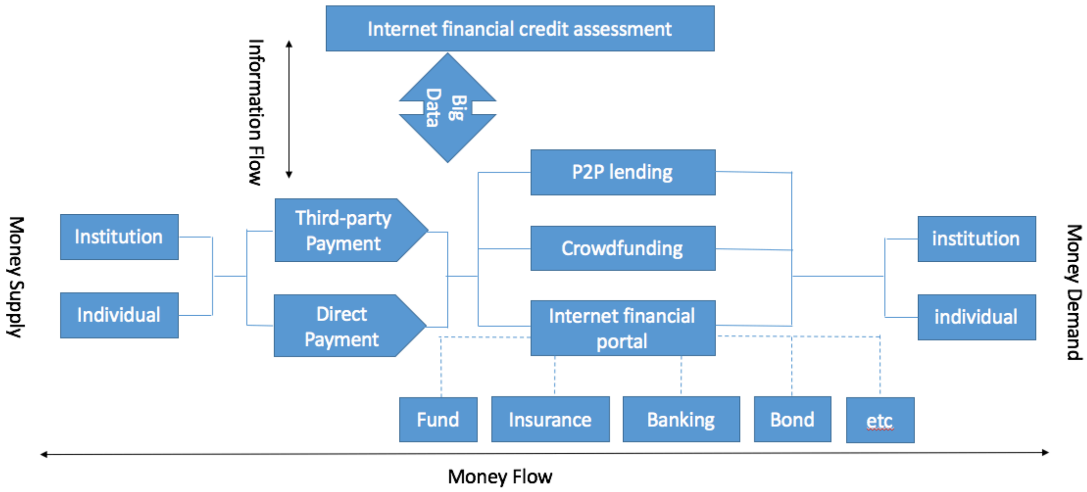
There are two kinds of major players. Some far sighted financial institutions establish their own internet financial portal to promote their own financial products. And more notably, an increasing number of non-financial institutions including large internet firms are competing for their share of this very lucrative market. For instance, Baidu Finance(https://8.baidu.com/) is the internet financial portal of Baidu, one of three giant internet companies.

Internet Company	**Internet Financial Portal**

[8] Tao Zhang, Christine Yip, Ge Wang, Qin Zhang. October 2014. China crowdfunding report. China Impact Fund of Dao Ventures.

Baidu (search engine)	Baidu Finance 8.baidu.com/
Alibaba (E-commerce)	Ant fortune
Tencent (social media)	LicaiTong qian.qq.com/
JD.com (online retailer)	JD finance http://jr.jd.com/
Suning.com (online retailer)	Suning finance http://jinrong.suning.com/
NetEase(online game)	NetEase finance https://8.163.com/

Table 1 Major internet giants and their financial portal platforms



Graph 3 The structure of China's internet finance

IV. The characteristic of Internet Finance in China

1. The characteristic of Internet Finance in China

i. From an economic perspective, offline economy goes behind online economy.

To evaluate China's internet finance, let's first take a broad look at the overall economic status in China. What cannot be overlooked when it comes to the rapid expansion of internet finance is the fact that the physical economy offline goes far behind the online economy.

Retail industry is the typical one. According to National Bureau of Statistics of China, retail sales of consumer goods in 2015 rose 10.7% to 30.09 trillion yuan, while the total online retail sales reached 3.88 trillion yuan, an increase of 33.3% over the previous year. To do a calculation, we can find that the share of online retail sales in 2015 was up to 12.88% in China, while the US E-Commerce sales as percent of retail sales last year was just a little above 7%.[9]

Besides, currently there is a trend that retailers are trimming its store count. It is estimated that over 10,000 retail stores in China were closed last year due to their poor sales turnover.[10]

Meanwhile, it is announced that Chinese ecommerce giant Alibaba Group Holding Ltd. sold goods worth more than 3 trillion yuan ($485 billion) in the fiscal year ending March 2016, surpassing $482 billion of revenues reported by Walmart in its fiscal 2016. Comparing the platforms to a province, Alibaba Group would rank as the 6th largest

[9] Data retrieved from https://ycharts.com/indicators/ecommerce_sales_as_percent_retail_sales
[10] 2015 主要零售企业（百货、超市）关店统计
http://www.linkshop.com.cn/web/archives/2016/347181.shtml?from=home_toprefer

provincial economy in China.[11]

ii. From a social perspective, people are used to online services.

From another dimension, look at the statistic of social media penetration in China. The third annual Kantar Social Media Impact Report showed that social media penetration in China has now reached half (51%) of the urban population, and the active accounts on the top social network in China compared to population is 47% while globally the number is 31% according to Digital in 2016 report released by We Are Social. As people tend to spend more time on virtual networking than they do on real life socializing, the popularity of internet social media leads to dozens of social problems. The topic about social media, seems to be an entirely different research, are inextricably linked to the rise of internet finance instead.

Retail industry, one of the way indicating the interaction between human and objects, as well as social networking which represents the interaction between people and people, display a much more active performance online and a steep recession offline. Internet finance rises in China under the circumstances that physical market lags behind cyber world in many aspects. People's dependency on online services such as online shopping and online networking provides a favorable environment for the incubation of internet

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[11] Jitender Miglani. May 5, 2016. Alibaba vs Walmart – Comparing Business Models, GMV, Revenues, And Profits
http://revenuesandprofits.com/alibaba-vs-walmart-fiscal-year-2016/

finance. To be specific, from mindset, as it is not special or new for people to make purchase decisions online, people will be accustomed to the idea of buying internet financial products provided that they are used to alike online services. In addition to people's choice, internet is also the choice of data's. The large amount of logistics data recorded by Taobao and tons of personalized user data stored in social media undoubtedly could offer massive and invaluable information for financial development, which traditional financial institutions is unable even to see the dust. Internet finance with big data is giving an opportunity to vitalize China's financial industry as a necessary choice that conforms to the trend of technology innovation.

iii. From a financial perspective, there is a severe regional imbalance of financial resources distribution.

While some regions have adequate bank branches and advanced services, some regions are lack of such opportunities for investment. Internet becomes a good platform for them to easily get access to financial products and ideas.

Chinese economic development has substantial misbalances between urban and rural areas, as well as eastern and western areas. The regional distribution imbalance of financial resources is one of the manifestation of the economic development disparity.

Regional distribution of banking institutions by the end of 2014 unit:%

	Outlets			Share of corporate bodies
	Share of institutions	Share of employees	Share of assets	
East China	41.0	45.2	58.4	37.2
Central China	22.7	20.3	15.3	23.9
West China	26.8	23.8	19.3	30.2
North East China	9.5	10.7	7.0	8.7
Total	100	100	100	100

Table 2 Regional distribution of banking institutions by the end of 2014[12]

Regional distribution of non-banking financial institutions by the end of 2014 unit:%					
Share of headquarters	East China	Central China	West China	North East China	Total
Securities	70.0	10.0	15.0	5.0	100
Funds	98.0	0.0	2.0	0.0	100
Futures	72.4	9.9	10.5	7.2	100
Insurance	87.1	3.4	5.6	3.9	100

Table 3 Regional distribution of non-banking financial institutions by the end of 2014[13]

[12] 2014 年中国区域金融运行报告（2014 China's regional financial operation report）. 2015. the People’s Bank of China

[13] 2014 年中国区域金融运行报告（2014 China's regional financial operation report）. 2015. the

According to the statistics, by the end of 2014, the number of banking outlets in East China account for 41% of the total number all over China, while there were only 9.5% locates in North East China. Particularly, East China took up more than half of the banking assets share, greater than that of the combined number of Central, West and North East China. When it comes to non-banking financial institutions, East China have an overwhelming advantage over the other regions in terms of the number of headquarters. Most of financial institutions are reluctant to set up outlets in rural areas owing to the relatively high network cost. There might not be a large amount of financial business as a result of the relatively low rural residential density.

Besides, the scale of financial services rural areas attained does not match the economic contribution of them. As the table shows, despite the fact that the value-added of farming, forestry, fishery and animal husbandry industries as a proportion of GDP is close to 10% in 2014, the loan ratio of them is less than 2% of all financial institutions loan balance. The imbalanced development of financial support among different industries, or financial development lagging behind economic development in rural area, leaves a tremendous room for internet finance to exploit the potential of rural finance.

	Loan ratio of these industries of all financial institutions loan balance	Value-added of these industries as a proportion of GDP

People's Bank of China

2010	1.4	9.9
2011	1.3	9.8
2012	1.2	9.8
2013	1.3	9.7

Table 4 A comparison of loan ratio and value-added proportion of farming, forestry, fishery and animal husbandry industries[14]

The problem is that, under the circumstances of the underdevelopment of financial institutions, the residents in rural areas have a poor awareness of financial investment, even though their demand for credit is substantial, and actually growing. Many of the banks in less developed regions provide few investment and financing services, and primarily focus on the basic deposit and remittance business, which is not conducive to cultivate consciousness of financial management and meet the potential demand for financial management.

While the traditional financial institutions failed to meet the need, internet finance gradually approach rural residents, taking advantage of the low barriers and popularity of internet.

According to the 36th statistical report on internet development in China, by June 2015

[14] Shuyuan Yan. 2015. 农业互联网金融报告（Report of Internet finance in Agricultural industries）. Tencent Thinktank

Chinese rural netizens accounted for 27.9% of the national total to reach 186 million, up by 8 million in six months, and the Internet penetration is 30.1% in rural areas. Via internet, the eyes of rural residents were opened to new ideas and concepts including new ways of financial management. Internet finance does not only help to raise their awareness of financial management, but also fills the service gap left by conventional financial institutions.

Take Yuebao (Alibaba's mutual fund) as an example. The majority of the user addition comes from the underdeveloped region. The fourth and fifth tier cities experienced the top two fastest user growth in 2015, 48.1% and 45.5% respectively. The number of users from rural areas increased by 65% compared to that in 2014, and rural users accounted for 15.1% of the total number. That is, one in very seven Yuebao users is rural resident.

2. A comparison of Fintech in the United States and Internet Finance in China

The development of internet finance in China follows spring-up of Fintech in western countries as most internet financial products and services originated from developed countries where their conventional financial systems are robust.

However, some of the Chinese internet financial products seems to have a stronger vitality than their prototypes. For example, Yu'e Bao, the first online market fund in China has its original pioneer in the United States, that is, Paypal money market fund, which ended its life in 2011. Why did it happen? Why do similar services end up with different results in these two countries?

	International development	Chinese Practice
Third-party payment	Paypal(1998, U.S.)	Alipay(2004)
P2P lending	Zopa(2005, U.K.) Lending Club(2006, U.S.)	PPDai(2007)
Crowdfunding	Kickstarter(2009, U.S.)	Demohour(2011)
Internet fund	Paypal Money Market Fund (1999, U.S.)	Yu'e Bao(2013)
Internet insurance	InsWeb(1995, U.S.)	Zhong'an Insurance(2013)
Online bank	SFNB(1995, U.S.) Egg Banking(1998, U.K)	Webank(2014, Tencent) Mybank(2015, Alibaba)

Table 5 China's internet finance and its international prototypes

Firstly, internet finance in China and Fintech in U.S. rise under different circumstances in each country. Taking advantage of China's imperfect financial system and regulation, internet financial companies are able to develop under a flag of convenience. Also, while financial industry has been well developed before the boom of IT industry in the United States, China's financial industry develops at the same time with the prosperity of IT industry, which means, it is more likely for IT industry to harness its influence to involve itself in financial industry and change the system and rules. Furthermore, Chinese people are prone to saving money, in other words, individuals have relatively large amounts of savings to invest in internet financial products, while American people have consumption-oriented financial habit and their financial investments are mostly operated by institutions.

In terms of definition, Fintech has a broader meaning than internet finance. The word Fintech is composed of finance and technology, and thus Fintech refers to all technological innovation which contributes to the financial sector while internet finance in China mainly focuses on internet technologies. The aim of Fintech is to make financial services more efficient, but internet finance in China serves as supplement to traditional financial services.

In U.S., fintech industry is a world of start-ups, but in China, internet finance is dominated by several internet giants despite multiple start-ups. Internet giants, such as Alibaba, Tencent and Baidu are constructing their own Internet finance empires and competing with each other, whereas the competition between traditional financial institutions and internet financial newbies is severe as well.

		Fintech in U.S.	**Internet Finance in China**
Background	**Financial system**	Well-established system and regulation	Imperfect system and lack of regulation
	Financial habit	Consumption-oriented	Saving-oriented
	Industries development	Financial industry developed before IT	Financial industry and IT industry develop at the

<table>
<tr><td></td><td></td><td>industry</td><td>same time</td></tr>
<tr><td rowspan="2">Definition</td><td>Elements</td><td>Finance+Technology</td><td>Internet(IT&ICT)+Finance</td></tr>
<tr><td>Aim</td><td>Financial services efficiency</td><td>Financial services supplement</td></tr>
<tr><td colspan="2">Key players</td><td>Startups-dominated</td><td>Internet-giants-dominated
Startups-scattered</td></tr>
<tr><td colspan="2">Relation with traditional financial institutions</td><td>Integration</td><td>Competition</td></tr>
</table>

Table 6 Differences between Fintech in U.S. and Internet finance in China

V. Conclusion

Like socialist market economy in China, Internet finance is Fintech with Chinese characteristics. It is the economic development gap both industrially and regionally, as well as the imperfect financial system that gives internet finance a huge space to grow quicker than that in other countries where the financial system is efficient.

It is observed that the development path of China's internet finance is from online to offline, while it in U.S. is from offline to online. China's internet finance is rising under the condition of a developing economy rather than a mature financial system, so many financial products first emerge on the internet and then influence the traditional banking, while many online financial products already have a mature model offline in the United States.

Lastly, there is a fundamental difference of internet finance in China and advanced countries regarding their functions - internet finance is contributing to width expansion - building an inclusive financial system in China, while in U.S. Fintech is beneficial to the depth enhancement - improving the efficiency of finance.

To imagine the future of internet finance, it is undoubted that as an essential driver of China's economic reforms, it will continuously promote the liberalization and innovation of China's financial system.

In terms of the financial industry, internet finance is likely to accelerate the transformation of traditional banking industry. At present, traditional financial industry and the insurgent are still in intense competition. After a few years of adjustment, these two tend to achieve a reinforcing integration.

In terms of the economic development, internet finance is likely to unleash economic vitality and thus promote the transformation of economic structure by providing low entry threshold to medium small and micro-sized enterprises.

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