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REGULATING FINTECH FOR SUSTAINABLE DEVELOPMENT IN THE PEOPLE'S REPUBLIC OF CHINA

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Abstract

The rapid rise of financial technology (fintech) in the People's Republic of China (PRC) inevitably generates financial risks. To prevent and resolve these risks, the government has regulated many fintech application areas, including peer-to-peer lending, third-party payment, cryptocurrency, etc. Additional measures such as financial standardization, infrastructure, and investor protection have also been strengthened to promote sustainable fintech development. The PRC is striking a balance between encouraging fintech innovation and reinforcing regulation. This study reviews both the PRC's regulations and supportive approaches.

Keywords: financial technology, fintech

JEL Classification: G2, G15, O16

Contents

1. INTRODUCTION

The People's Republic of China's (PRC) financial technology (fintech) market is expanding at an astonishing rate. By the end of 2015, the PRC had become the biggest online financing market in the world, with total transactions exceeding $150 billion (Li 2015). In the PRC, the primary fintech areas include payments, online lending, digital wealth management, insurance, and digital banking. In payments, the PRC's big tech mobile payment services reached CNY14.5 trillion in 2017, the largest in the world, with a ratio of 16% to gross domestic product (Frost et al. 2019). According to a consulting agency iResearch, the market size of the PRC's third-party payments reached CNY312.4 trillion in 2018, of which mobile payments accounted for 61.9%, almost triple that of the US.

Financial risks also arise alongside rapid fintech development, and provoke calls for regulatory guidance to mitigate fraud. The risks of fintech pertain to financial stability, consumer protection, competition in and efficiency of the financial sector, and illegal activities (PBC 2014). Fintech does not change the essence of financial risk, but instead makes financial risks more hidden, unexpected, contagious, and systemic. Ezubao, a P2P lending platform, is a notorious example, whose failure exposed the default risks of the P2P lending industry. Ezubao, which was set up in July 2014, ceased operation in December 2015, and eventually shut down in February 2016, posted fake advertisements about its projects, and operated as a Ponzi scheme, with an estimated CNY50 billion and 900,000 investors involved.

A comprehensive regulatory framework for fintech has been developed. Since 2014, the annual government report has stressed internet finance, improved coordination of financial regulators, and high vigilance against accumulated risks. Before 2015, the policy environment is generally supportive of fintech innovations. Regulations have been markedly tightened after 10 major regulators jointly issued "Guiding Opinions on Promotion of Healthy Development of Internet Finance[1] (关于促进互联网金融健康发展的指导意见)" (Guiding Opinions 2015) on 18 July 2015. Guiding Opinions 2015 clarified the main financial regulators' responsibilities in supervising internet finance. Core principles of fintech regulation are defined as "legitimate supervision, appropriate supervision, category-based supervision, collaborative supervision, and innovative supervision (依法监管、适度监管、分类监管、协同监管、创新监管)". To further mitigate accumulated risks and facilitate healthy and sustainable development of internet finance, in October 2016, the State Council issued the Implementation Plan of Rectification Work of Internet Financial Risks (互联网金融风险专项整治工作实施方案). It specifies the targets, division of regulatory duty, and procession schedule of the rectification work. Currently, regulators are striking a balance between encouraging innovation and preventing financial risks.

2. FINTECH LANDSCAPE IN THE PRC

2.1 The Driving Factors of Rising Fintech in the PRC

The rise of fintech in the PRC is mainly driven by underserved demand for financial services, technological advances, and a supportive regulatory environment. First, financial demand of the real sector is the most fundamental driver of PRC fintech. While

[1] Internet finance could be viewed as an early version of fintech in the PRC. Both fintech and internet finance are based on synergy between finance and technology.

the PRC has deepened reforms in the last four decades, underserved demand for financial services still exists due to financial repression in some fields. Small and medium-sized enterprises (SMEs) have limited access to bank loans due to severe information asymmetry, and residents' financing and investment needs are largely unmet due to backward development of the capital market. In addition, residents have higher requirements for the convenience of financial services. All these leave room for non-bank financial service providers. As indicated in a survey, PRC SMEs' fintech adoption rate reaches 61%, much higher than the US (23%), UK (18%), South Africa (16%), and the global average (25%).

Second, technological advances have significantly boosted financial supply. Digitization of financial information reduces information asymmetry, disintermediation lowers costs and improves efficiency of financial services, and networks have extended coverage of financial services. The PRC's fintech success is largely leveraged via existing social media platforms and the large e-commerce ecosystem, through which tech companies collect huge volumes of customers and transactions. Other technology applications also boost fintech development, including smartphones and e-commerce, and emerging technologies such as big data, artificial intelligence, and blockchain.

Third, the PRC established a fintech innovation-friendly regulatory system and a sound policy environment. Many countries have tightened financial regulation since the global financial crisis in 2008, and fintech has risen to provide services to high-risk customers whose financing needs are not met by traditional banking. The PRC has provided a supportive environment, including investment in digital infrastructure and light regulation at the early stage of fintech development (Zhang and Chen 2019). The measures are effective for enhancing market efficiency and promoting financial inclusion. Vast quantities of capital have been attracted to the PRC's fintech market, creating economies of scale.

2.2 Fintech Landscape in the PRC

While traditional institutions and many startups are rising, the PRC's fintech market is nonetheless dominated by internet giants such as Baidu, Ant Financial, Tencent (known as "BAT") and JD Finance, which use their large customer bases and datasets to build an integrated ecosystem of financial services, including payment, financing, wealth management, insurance, etc. (Mahoney 2019). Table 1 lists the primary fintech areas of both traditional financial institutions and leading fintech companies in the PRC.

2.2.1 Traditional Financial Institutions Expand to Fintech

Traditional financial institutions embrace technology advancement to improve service, explore business model innovation, and strengthen risk management. They either partner with technology companies, or spin off their own fintech, or both.

Firstly, traditional financial institutions adapt to meet the increasing needs of customers. Traditional banks improve the accessibility and convenience of financial services via online banking, mobile banking, reconceiving bank branches, and collaborating with third parties. For example, Bank of China spun off a separate company named BOC Consumer Finance, while it also partnered with Tencent to launch a fintech laboratory. In addition, the Industrial and Commercial Bank of China partnered with JD Finance to digitize their services, while the Agricultural Bank of China collaborated with Baidu, and China Construction Bank with Ant Financial.

Table 1: Leading Fintech Companies and Primary Fintech Areas in the PRC

		Traditional Banks and Insurance Companies		Large Fintech Companies			
Business Lines	**Market Description**	**Commercial Banks**	**Ping An**	**Baidu**	**Ant Financial**	**Tencent**	**JD.com**
Payments	Highly concentrated between Ant Financial and Tencent	UnionPay Quick Pass	E-wallet	Baifubao (Sep 2008)/Baidu Wallet (Apr 2014)	Alipay (Dec 2004)/ Alipay Wallet (Nov 2013)	Tenpay (Apr 2005)/ Wechat Wallet, QQ Wallet (Jul 2014)	JD Pay (Jul 2014)
Wealth management (Money market fund)	Market developing	Robo-Advisor/ Electronic	LU.com (Lufax, Sep 2011)/ Finance One Account	Bai Fa (Dec 2013)/Baidu Finance (Oct 2013)	Yu'e Bao (Jun 2013)/ Ant Fortune (Aug 2015)	Li Cai Tong (Jan 2014)	JD Finance (Oct 2013)
Credit/Lending	Significant start-up activity	Online bank/ Mobile bank/ Intellectualized reconstruction of branched	Orange Bank (Jul 2014)	Baidu Finance (Oct 2013)	Ant Credit (Jan 2015)/ Zhao Cai Bao (Apr 2014)	Weilidai (May 2015)	JD Finance (Oct 2013)
Banking (Digital only)				Baixin Bank (Nov 2015)	Mybank (Sep 2014)	WeBank (Jul 2015)	N/A
Insurance	Traditional institutions well-positioned		Ping An Insurance (1988)/ Zhong An Insurance (Nov 2013)	Bai An (Dec 2015)	Zhong An Insurance (Nov 2013)/ Yu'E Bao Universal Life (Feb 2014)	Zhong An Insurance (Nov 2013)/ WeSure (Nov 2017)	JD Allianz Property Insurance Company (Oct 2018)
Social Credit scoring	Highly concentrated		LU.com (Lufax, Sep 2011)	N/A	Zhima Credit (or translated as Sesame Credit, Oct 2015)	Tencent Credit (Jan 2015)	JD Credit (Feb 2014)

Source: Galvin et al. (2018), PwC (2016), and authors.

Secondly, traditional banks explore business model innovation. A typical example is direct banking, which has no branch network and does not issue bank cards, but offers products and services through online banking. It could be organized as an independent bank, a division, or a separate subsidiary of a bank (such as AIBank). Since the launch of the first direct bank by the Bank of Beijing in 2013, there have been more than 50 direct banks in the PRC, most of which adopt a divisional structure.

Thirdly, technology is widely applied to improve risk management. Big data technology is used to develop an early warning model of credit risk, as is the practice at the China Merchants Bank. To supplement existing customer verification techniques, banks such as WeBank adopt biometrics technology to use with mobile banking, bank counters, ATMs and other online and offline situations. In addition, artificial intelligence technology is used to identify and prevent fraud. For example, the Industrial and Commercial Bank of China applies security certification measures to each transaction.

Insurance companies invest in technology, emphasize online distribution, and work with technology companies. For example, insurance giant Ping An has developed many digital platforms and expanded into primary fintech areas including banking, wealth management, and payment (Table 2).

2.2.2 Fintech Companies

Fintech companies have broadly engaged in business lines, such as payments, wealth management, lending, digital banking, insurance and credit scoring (Table 2). Among all business lines, payments, which are highly concentrated among fintech companies, are the foundation upon which many other financial applications are built. The “BAT” companies control more than 80% of the PRC mobile payments market, of which Ant Financial’s Alipay takes about 50% market share, and Tencent’s Tenpay takes nearly a fifth. Social Credit scoring is also highly concentrated among fintech companies, while traditional institutions are well-positioned in internet insurance, especially life insurance. In addition, the PRC’s fintech giants have been rapidly expanding globally and have invested in next-generation technologies. Top technology priorities by Alibaba and Tencent include cloud computing, blockchain, artificial intelligence, etc. Fintech startups fill gaps in underserved markets, mainly in credit/lending (P2P) and wealth management. Typical examples of credit/lending startups include Qudian.com, ppdai.com, Dianrong.com, Yirendai. Wealth management (money market fund) startups including CreditEase, Golden Axe, Wacai, Suishouji. **In addition**, startups such as YeePay, Ping++ provide payment services, and eBaoTech and Cheche Tech specialize in online insurance.

2.2.3 Market Service Providers

E-aggregation platforms integrate the same type of services provided by different agents for a single entry point that improves customer experiences and reduces costs. For example, by turning financial institutions’ product information into standardized information, Rong360 builds a vertical search mode to help users to obtain appropriate financial services, and connects individual consumers, privately owned small business, small and micro enterprises with banks, small loan companies, and other financial institutions.

Banks’ and payment institutions’ digital identity authentication is mainly supported by market service providers, which currently use big data, digital certificates, and biometrics and other technology for this. iFLYTEK and Fosafer are forerunners in biometrics identification, covering facial, voiceprint, and fingerprint identification.

Distributed account technology applications are also explored in the PRC, especially in fields such as payment and clearing, securities registration and settlement. Some technology companies such as LinkTime, Bubi, and Bumeng have also started to provide enterprises with the underlying technology support and industry solutions of blockchain.

3. FINTECH REGULATION FRAMEWORK IN THE PRC

The regulation framework of internet finance (an earlier version of fintech in the PRC) was set up in July 2015, when the People’s Bank of China (PBC) and nine other ministries[2] jointly issued “Guiding Opinions on Promotion of Healthy Development of Internet Finance” (Guiding Opinions 2015). It clarified the responsibilities of the main financial regulators in supervising internet finance, encouraged financial innovation,

[2] The regulators include the PBC, Ministry of Industry and Information Technology (MIIT), Ministry of Public Security (MPS), the Ministry of Finance, State Administration for Market Regulation (SAIC), the Legislative Affairs Office of the State Council, China Banking Regulatory Commission (CBRC), China Securities Regulatory Commission (CSRC), China Insurance Regulatory Commission(CIRC), and Cyberspace Administration of China.

promoted the healthy development of internet finance, and clarified the regulatory responsibilities. Table 2 displays the PRC's fintech regulation framework, which is embedded in the existing financial regulatory framework.

Table 2: PRC Fintech Regulators

Regulator	**Responsibility**	**Reference**
PBC (established in 1948)	Internet payment	*Guiding Opinions 2015*
CSRC (established in 1992)	Crowdfunding Internet fund	
CBIRC (merged from CBRC and CIRC in 2018)	Internet lending (include P2P) Internet trust Internet consumer finance Internet insurance	
Local finance bureau (initiated by Shanghai in 2002)	Locally registered micro-finance companies, crowdfunding entities, etc.	National Financial Work Conference 2017

Committee	**Responsibility**	**Note**
Financial Stability and Development Committee	Oversee financial stability and related reform and development, including coordinating financial regulation	Established in November 2017 by the State Council
Fintech Committee	Strengthen fintech research and coordinate fintech regulation	Founded in May 2017, by the PBC

Self-regulation Associations	**Note**
National Internet Finance Association	Founded in 2014 by the PBC
Fintech Association (at city level)	Vary across cities

CBIRC = China Bank Insurance Regulatory Commission, CBRC = China Bank Regulatory Commission, CSRC = China Securities Regulatory Commission, CIRC = China Insurance Regulatory Commission, PBC = People's Bank of China, P2P = peer-to-peer.

Note: The CBIRC was founded in March 2018, when the PRC's central government implemented an institutional reform. The CBIRC is based on the former China Banking Regulatory Commission (established in 2003) and the China Securities Regulatory Commission (established in 1998).

Source: Guiding Opinions 2015 and authors.

According to the regulatory framework set in Guiding Opinions 2015, the PBC leads fintech supervision generally and is primarily responsible for regulating internet payments, including third-party payment. The China Securities Regulatory Commission (CSRC) is responsible for regulating crowdfunding and internet fund sales. The China Banking Regulatory Commission (CBRC), with its local offices and supervisory agencies, is mainly responsible for internet lending (including P2P and micro lending), internet trust, and internet consumer finance. The China Insurance Regulatory Commission oversees internet insurance regulation. In addition, the National Internet Finance Association (NIFA), which commenced operation in March 2016, is responsible for promoting industry self-regulation. During an institutional reform implemented in March 2018, CBRC and China Insurance Regulatory Commission merged to become the China Bank Insurance Regulatory Commission (CBIRC), and their regulation responsibility are also combined.

The National Financial Work Conference[3] in 2017 further clarified the regulatory boundary of local financial bureaus, which differ from the local offices of the PBC or CBIRC or CSRC. Local financial bureaus are responsible for approval and risk

[3] It is held twice a decade by the central government, deciding pivotal issues of economic development.

management of “7+4” financial institutions types.[4] Since internet-based sales channels enable fintech platforms to operate widely, their risks become externalized, rather than restrained by local markets. It is critical to improve coordination among the PBC, CBIRC, CSRC, and local financial bureaus.

Coordination mechanisms among financial regulators are markedly strengthened by setting up a committee under the State Council of the PRC. The Financial Stability and Development Committee was announced in July 2017 at the National Financial Work Conference, and had its first formal meeting in November 2017. The committee is headed by a vice premier, and aims to coordinate authorities’ overall financial reform strategies, including maintaining financial stability.

Among authorities, the PBC is a forerunner in regulating fintech and setting development plans. To augment regulations and policies surrounding fintech, and facilitate further international cooperation, the PBC announced a new committee on 15 May 2017 that seeks to investigate impacts of fintech development on monetary policy, financial markets, financial stability, payment, and clearing mechanisms. A meeting on 8 March 2019 described the principles of fintech supervision as “integrity, security, inclusion, and openness”, and set a development plan.

4. PRC FINTECH REGULATORY MEASURES

4.1 Regulatory Measures on Online Lending

4.1.1 P2P Lending

P2P lending in the PRC started in 2006 when the first platform CreditEase was founded, and its development has accelerated since 2011. Due to different levels of regional economic development and policy support, P2P lending platforms tend to be highly concentrated in few provinces, such as Beijing, Guangdong, Shanghai, Zhejiang. Total monthly P2P transaction volume reached a peak of CNY253.7 billion in June 2017, but subsequently fell to about CNY78.0 billion in August 2019, according to industry monitor wdzj.com. While P2P lending platforms had grown rapidly before 2017, the overheated market generated financial risks, including pooled investments and fraudulent practices by some platforms, as well as investors’ perception of the implicit guarantee of their fund.

The PRC government has been studying regulations of P2P lending since 2013. The Guiding Opinions 2015 and subsequent documents emphasize that online credit platforms are essentially an information intermediary rather than credit intermediaries, and define the business boundaries. P2P licenses are required to be registered with local financial authority. Online lending platforms are required to deposit client funds in a custodian bank, and P2P platforms must offer no guarantees to customers. Business boundaries are also set for the platforms, and prohibited behaviors include fundraising for self-use, principal or interest guaranteed, splitting the duration of the financing projects, asset securitization of debt, etc. With Guiding Opinions 2015, the PRC has implemented detailed measures on P2P lending, with the main ones listed in Table 3. The P2P regulations were mainly set by the former CBRC, with a “1+3” regulation system, which refers to one regulatory document on business activities and three guidance documents, respectively: the Interim Measures on Management of the Business Activities of Online Lending Information Intermediary (issued on August 2016),

[4] The “7” types of financial institutions refers to microlenders, financing guarantors, regional equity markets, pawn shops, financial leasing companies, commercial factoring companies, and local asset management companies; the “4” types of institutions refer to investment companies, specialized farmers' cooperative societies, social crowdfunding institutions, and local exchanges.

Guidance on the Documentation and Registration Management of Online Lending Information Intermediary (November 2016), Guidance on the Custody Business of Online Lending Fund (February 2017), and Guidance on the Information Disclosure of the Business Activities of Online Lending Information Intermediary (August 2017). Besides, the local financial bureau is responsible for institutional supervision of online lending information intermediaries in its jurisdiction.

Table 3: P2P Regulations

Date	Regulators	Regulation Name	Regulation Name in Chinese
Aug 2016	CBRC, MIIT, MPS, CAC	Interim Measures on Management of the Business Activities of Online Lending Information Intermediary	网络借贷信息中介机构业务活动管理暂行办法
Nov 2016	CBRC, MIIT, SAIC	Guidance on the Documentation and Registration Management of Online Lending Information Intermediary	网络借贷信息中介备案登记管理指引
Feb 2017	CBRC	Guidance on the Custody Business of Online Lending Fund	网络借贷资金存管业务指引
Aug 2017	CBRC	Guidance on the Information Disclosure of the Business Activities of Online Lending Information Intermediary	网络借贷信息中介机构业务活动信息披露指引
Aug 2018	P2P rectification office	Notice on Compliance Inspection of P2P Online Lending Intermediary	关于开展 P2P 网络借贷机构合规检查工作的通知
Dec 2018	Internet rectification office, P2P rectification office	Opinions on Classified Disposal and Risk Prevention of Online Lending Intermediary	关于做好网贷机构分类处置和风险防范工作的意见 (175 号文)
Jan 2019		Notice on Further Implementing the Compliance Inspection and Follow-Up Work of P2P Online Lending	关于进一步做实 P2P 网络借贷合规检查及后续工作的通知（1 号文）

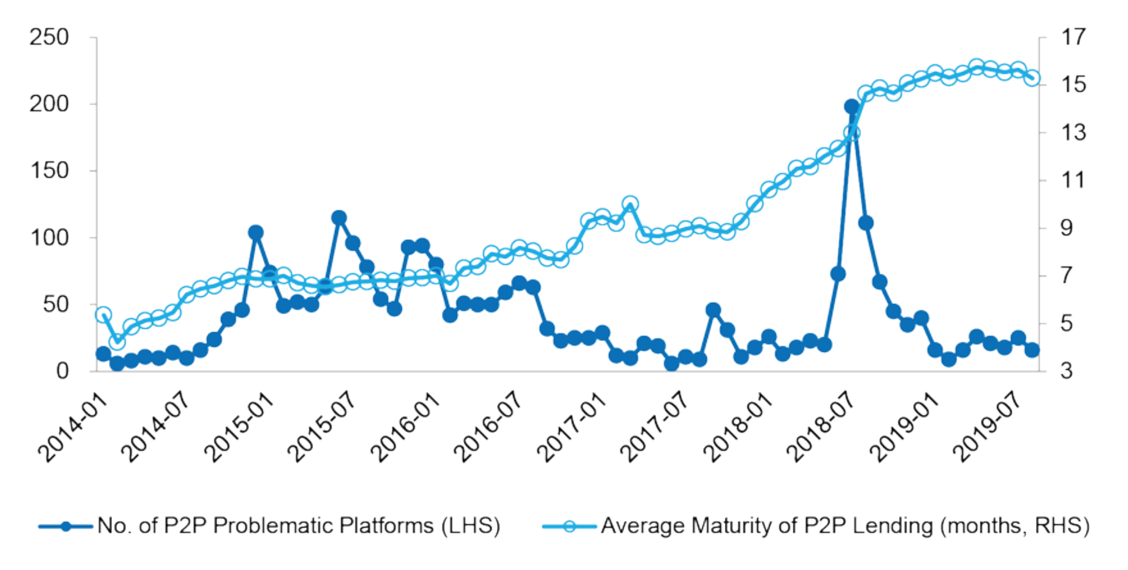
CAC = Cyberspace Administration of China, CBRC = China Banking Regulatory Commission, MIIT = Ministry of Industry and Information Technology, MPS = Ministry of Public Security, P2P = peer-to-peer, SAIC = State Administration for Market Regulation.

Source: Authors.

However, some issues of the P2P loan industry have not been rectified, and caused financial risk across the industry in the summer of 2018. One such issue is the implicit guarantee. P2P platforms circumvent the rule of no guarantee by relying on third-party guarantees for investor funds. During June to September in 2018, the number of closed and problematic platforms exceeded 100 per month, reaching 289 in July, with the number of problematic platforms reaching a historical peak of 194 (Figure 1).

Subsequent regulatory policies and compliance inspections, mainly by the State Council-established Leading group office for special rectification of P2P online lending risks (P2P rectification office, P2P 网贷风险专项整治工作领导小组) and the Leading group office for special rectification of internet financial risks (Internet rectification office, 互联网金融风险专项整治工作领导小组办公室) resolved P2P risks significantly.

Figure 1: P2P Risk in the PRC (January 2014–February 2019)



LHS = left-hand scale, PRC = People's Republic of China, P2P = peer-to-peer, RHS = right-hand scale.
Source: wdzj.com.

4.1.2 Online Microlending

Online microlending companies in the PRC are an "internet plus" result of traditional microlending companies, and should comply with the existing regulations for small loan companies. Microlending was encouraged by the PRC to alleviate the financing difficulties of farmers and small and micro enterprises. Online microlending companies need an additional license. A representative online microlending platform is Ant Credit. By the end of April 2019, 264 companies had obtained online microlending licenses (data from wangdai.com), accounting for less than 4% of the total number of microlending companies (quarterly data from the PBC).

The former CBRC and local finance bureaus are the main regulatory authority of online microlending companies. In May 2008, the PBC and CBRC issued "Guidance on Micro Lending Company Pilot (关于小额贷款公司试点的指导意见)", which empowered local finance bureaus (or related local authorities) to grant permission for setting microlending companies. A microlending company is not allowed to absorb public deposits, but instead should be funded by shareholders, donated funds, and no more than two banks. Moreover, the balance of funds from banks shall not exceed 50% of the net capital. The Guiding Opinion 2015 assigned microlending regulatory responsibility to CBRC. The National Financial Work Conference 2017 decided that the permission of setting and risk resolution of micro lending companies is a responsibility of the local finance bureaus.

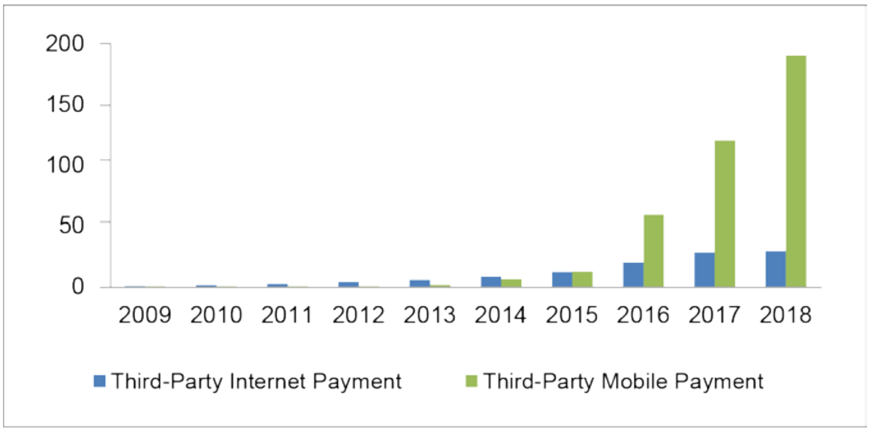
Risks accumulated as the online microlending market grew quickly from 2015 to 2017. Financial risks and social risks were hidden behind issues such as excessive borrowing, repeated credit granting, improper collection, abnormally high interest rates, and invasion of personal privacy. This is especially relevant to payday loans. In addition, online microlending companies are increasingly securitizing their online loans, which may generate contagious financial risks. For example, Ant Credit issues consumer finance asset-backed securities to circumvent regulatory restrictions on the maximum leverage ratio.

To resolve the risks, regulations were significantly tightened in 2017. In April 2017, the CBRC successively issued two documents, namely "Notice on The Clean-Up and Rectification of Payday Loan Business (关于开展"现金贷"业务活动清理整顿工作的通知)" and "Supplementary Notes on The Clean-Up and Rectification of Payday Loan Business (关于开展"现金贷"业务活动清理整顿工作的补充说明)". In November 2017, the Internet rectification office issued the Notice on Immediate Suspension of Approval for Establishment of Online Micro Lending Companies (关于立即暂停批设网络小贷公司的通知), and urged provincial governments to suspend regulatory approval for the setting up of new online microlending companies, and to restrict lending across regions.

4.2 Regulatory Measures on Third-Party Payment

The fast growth of third-party payment in the PRC is largely driven by e-commerce and users' habits of conducting daily payments via mobile devices. By the end of 2017, the scale of third-party payment had increased from CNY540 billion in 2009 to CNY154.9 trillion in 2017. As consumers' internet habits shifted, the scale of third-party mobile payment jumped from CNY38.98 million in 2009 to CNY190.5 trillion in 2018, much higher than third-party internet payment (see Figure 2). Third-party payment is highly concentrated between Ant Financial and Tencent.

Figure 2: Scale of Third-Party Internet Payments and Third-Party Mobile Payments in the PRC
(CNY trillion)



Source: Wind Economic Database (https://www.wind.com.cn/en/Defult.htm [accessed 10 September 2019]).

The third-party payment market is well regulated, including issuing licenses and setting restrictions on customer provisions, information disclosure, etc. Key regulations on online payment are listed in Table 4. The industry has experienced rapid growth since 2010, without major problems or risks. The PRC introduced licensing regulations for third-party payments in 2010, and the PBC issued about 270 licenses in May, August, and December of 2011, June 2012, July 2014, and March 2015. The PBC undertakes on-site inspection and off-site supervision, and has the authority to suspend or revoke a license. In June 2013, the PBC implemented the Measures on Management of Customer Provisions on Payment Platforms, which requires the proportion of paid-in capital and daily balance of customer provisions to be no less than 10%. In 2015 and 2016, the PBC further clarified issues about management of network payment business of non-bank payment institutions, including their classification and rating. Moreover, third-party payment firms must disclose their fee items and standards to the public, and submit certain documents to the PBC, covering documents of business model, service, provisions deposit, internal control measures, and regular financial and statistical reports.

Table 4: Regulations on Online Payments

Date	Regulator	Regulation Name	Regulation Name in Chinese
Sep 2010	PBC	Measures on Management of payment Services of non-financial institutions	非金融机构支付服务管理办法
Jun 2013	PBC	Measures on Management of Customer Provisions on Payment Platforms	支付机构客户备付金存管办法
Dec 2015	PBC	Measures on Management of Network Payment Business of Non-Bank Payment Institutions	非银行支付机构网络支付业务管理办法
Apr 2016	PBC	Measures on Management of Classification and Rating of Non-Bank Payment Institutions	非银行支付机构分类评级管理办法
Aug 2017	PBC	Notice on Non-bank Payment Organization Network Payment Operations Shifting from the Direct Model to China NetsUnion Platform Handling	关于将非银行支付机构网络支付业务由直连模式迁移至网联平台处理的通知
Jul 2018	PBC	Notice of Requirements for Non-Bank Payment Institutions to Report Large Transactions	关于非银行支付机构开展大额交易报告工作有关要求的通知

PBC = People’s Bank of China.

Source: Authors.

An issue in the third-party model before 2017 was that regulators were not able to keep track of all capital flows, and risked partially losing oversight of the rapidly expanding payment market. In addition, big tech companies’ massive payment data was potentially monopolistic, resulting in an information gap and investor protection issues.

To enhance transparency and obtain information, the PBC established a centralized clearing platform in 2017, and issued the “Notice on Non-bank Payment Organization Network Payment Operations Shifting from the Direct Model to China NetsUnion Platform Handling” that August. The Notice mandated that any payment operations undertaken by third-party providers involving bank accounts must be processed by the NetsUnion Clearing Corporation’s (NUCC) network after 30 June 2018, and that providers must connect to the platform by 15 October 2017. NUCC was officially launched in 2018 as the designated platform for online settlement of non-bank payments. NUCC is subject to the supervision and regulation of the PBC.

NUCC improves market efficiency by lowering the barrier of the online payment market. It standardizes mobile transactions, and enables banks to get access to online payment businesses without signing bilateral agreements with different third-party payment companies. Some foreign banks have joined the NUCC network to meet the e-commerce payment needs of their clients. For example, Deutsche Bank joined with NUCC in March 2019, to expand its service offering in the PRC.

4.3 Regulatory Measures on Crowdfunding

In the PRC, equity crowdfunding emerged as an investment vehicle since 2012, but its development has been relatively slow due to institutional barriers. According to Article

10 Clause 2 of the PRC Securities Law, it is illegal to offer shares to non-specific individuals or to more than 200 specific individuals in public without regulatory approval. The 2014 government work report proposed to carry out pilot projects of equity crowdfunding, aiming to alleviate the financing difficulty and lower real economy costs. Alibaba, JD.com, and Ping An obtained the pilot qualification.

Equity crowdfunding is mainly supervised by CSRC. The private equity crowdfunding is self-regulated by the Securities Association of China, as implied by its document issued in December 2014, namely "Measures for The Management of Private Equity Crowdfunding (Trial) (Draft for Comments) (私募股权众筹融资管理办法(试行)(征求意见稿)". The Guiding Opinion 2015 assigned the CSRC as the regulator of equity crowdfunding; regulations were tightened in 2015 and 2016. In August 2015, the CSRC issued the "Notice on Special Inspection of Institutions that Conduct Equity Financing Activities through the Internet (关于对通过互联网开展股权融资活动的机构进行专项检查的通知)", and excludes non-public equity financing and private equity fund raising through the internet from the scope of equity crowdfunding stipulated in the notice. In October 2016, CSRC and 15 other authorities issued the "Implementation Plan for The Special Rectification of Equity Crowdfunding Risks (股权众筹风险专项整治工作实施方案)", which identified the rectification priorities and prohibited items of equity crowdfunding.

The PRC has made continuous efforts in guiding the healthy development of equity crowdfunding. In July 2017, the State Council promulgated "Opinions on Strengthening Innovation-driven Development Strategies and Further Advancing Mass Entrepreneurship and Innovation (强化实施创新驱动发展战略进一步推进大众创业万众创新深入发展的意见)", to guide and encourage the standardized development of crowdfunding platforms.

4.4 Regulatory Measures on Internet Fund Sales

The scale of PRC internet funds has been constantly expanding since 2013. Yu Ebao, a money market fund investment product that was launched jointly by Alipay and Tianhong fund, became the largest money market fund in the world in 2017 in terms of total assets (Frost 2019). Data from the Wind Economic database show that the asset volume of Yu Ebao peaked at CNY1.69 trillion as of March 2018, and dropped to CNY1.03 trillion in June 2019 as other online money market funds grew significantly. Currently, internet fund sales institutions in the PRC consist of commercial banks, securities companies, securities investment advisory bodies, and independent sales institutions.

The fast growth of internet fund sales is driven by easy access, convenient payment services, and higher yield of internet money market funds (FSB 2019). An internet fund sales platform collects idle funds and invests in a related money market fund, which, in turn, invests in bank-negotiated deposits, earning a higher rate of return than deposits alone. Besides, it generally set the minimum investment as low as CNY0.01, provides "T+0" liquidity with its own capital cushion, and allows free transfers between bank accounts. By integrating fund sale platforms with payment systems, customers can get access to fund account openings, subscriptions, and redemption via mobile phones. However, internet money market funds engage in maturity transformation, credit, and liquidity transformation without a banking license, and have prompted disintermediation of bank deposits and increased social financing costs (Yao 2018). This is partially due to inadequate functional or integrated regulatory policy about internet fund sales.

The regulatory framework of internet fund sales is based on that of traditional fund sales. The CSRC is the main regulator, and Securities Association of China implements self-discipline management. According to a revised version of the PRC Securities Investment Fund Law, the CSRC revised and issued the "Administrative Measures for the Sale of Securities Investment Funds and the Rules (证券投资基金销售管理办法)" in March 2013, aiming to relax control and strengthen supervision. Other related regulatory measures include "Interim Provisions on the Management of Securities Investment Fund Sales Settlement Funds (证券投资基金销售结算资金管理暂行规定)" (issued in September 2011) and "Regulations on Information Management Platform of Securities Investment Fund Sales (证券投资基金销售业务信息管理平台管理规定)" (issued in March 2007).

Regulations have also been introduced to promote standardized and orderly operation of internet fund sales. In November 2009, the Securities Association of China released "Technical Guidance on Online Fund Sales Information System (网上基金销售信息系统技术指引)" for better standardization of the sales business. In March 2013, the CSRC also released the "Interim Administrative Rules for Securities Investment Fund Sales Institutions' Business Operations via Third-Party E-commerce Platforms (证券投资基金销售机构通过第三方电子商务平台开展业务管理暂行规定)", which specified the regulatory requirements on fund sales institutions and set out provisions regarding the qualification and business scope of third-party e-commerce platforms. As the market keeps developing, regulatory authorities constantly improve regulatory measures to ensure the sustainable development of the market and protect investors' interests. For example, in March 2018, the CSRC issued "Guidelines on Further Standardizing Internet Sales and Redemption Services of Money Market Funds (关于进一步规范货币市场基金互联网销售、赎回相关服务的指导意见)".

4.5 Regulatory Measures on Internet Insurance

The PRC is the second-largest insurance market in the world, while the insurance density is below world average. Data from the Insurance Association of China show that insurance premium incomes amounted to CNY3.8 trillion by the end of 2018. Internet insurance experienced explosive growth from 2012 to 2015, with the premium income increasing from CNY11.1 billion to CNY223.4 billion, and the penetration rate of internet insurance reached 9.2% in 2015. However, with the tightened policy environment, growth began to slow after 2016, with premium incomes declining to CNY188.9 billion, and the penetration rate drop to 5% in 2018.

CIRC supervision principles are established in "Interim Measures for the Supervising Internet Insurance (互联网保险监管暂行办法)", released in 2015. In addition to promoting healthy development and consumer protection, internet insurance regulations place great emphasis on maintaining consistent regulatory standards for both online and traditional insurance, and strengthening market exit management. Only registered companies and professional intermediaries are permitted to carry out internet insurance business. If these supervised companies do internet insurance business through a third-party online platform, it must obtain related qualification and meet certain requirements. The companies can determine suitable insurance products to sell online, but must not make any misleading advertisement. Internet insurance companies are also required to ensure platform safety and information security. Updates to these interim measures remain pending.

4.6 Regulatory Measures on Other Fintech Areas

Largely due to regulatory restrictions, the internet trusts market is less developed compared with traditional trusts and other internet finance types. In 2007, the CBRC issued the “Rules Governing Trust Companies (信托公司管理办法)” and “Rules on Trust Schemes of Collective Funds by Trust Companies (信托公司集合资金信托计划管理办法)”, which forbade trust companies from allowing non-financial institutions to recommend their schemes. In April 2014, the CBRC issued the “Guidance on Supervision of Risks of Trust Companies (关于信托公司风险监管的指导意见)”, which reiterated that third-party financial institutions are not allowed to sell trust products directly or indirectly. Against this backdrop, many trust companies set up their own direct marketing platforms, including CITIC Trust, Ping An Trust, and Zhongrong International Trust. The Guiding Opinion 2015 emphasized the requirements of qualified investors, matching customer risk tolerance with the risk level of trust products.

Internet consumer finance in the PRC is provided by commercial banks, consumer finance companies and e-commerce platforms. Representative institutions include China Merchants Bank, Mashang Consumer Finance, and Ant Financial. Supervision of consumer finance started in 2009 when the CBRC promulgated the “Administrative Measures on Pilot Consumer Finance Companies (消费金融公司试点管理办法)”, which specified requirements on consumer finance companies such as establishment, business scope, and operating norms. These measures were updated in 2013, with some requirements being loosened, including business scope and sources of funds, and they also expanded the pilot cities. In 2015, the consumer finance pilots were fully liberalized and applied to the whole country. In August 2016, “Interim Measures on Management of the Business Activities of Online Lending Information Intermediary (网络借贷信息中介机构业务活动管理暂行办法)” issued by the CBRC set the basic regulatory rules of internet consumer finance. The market is regulated by both the CBRC and local government financial authorities. Regulations of internet consumer finance have been further tightened after rectification of internet lending risks.

4.7 Features of the PRC’s Fintech Supervision

The PRC’s fintech supervision is based on a clear division of responsibility among major financial regulators, related government ministries, and local financial authorities, and emphasizes coordination. For example, the MIIT supervises internet financial portals, and the MPS monitors service security and investigates suspected violations and other financial crimes related to fintech lending. In addition, local financial offices conduct prudential supervision over locally registered platforms, although fintech businesses are not subject to geographical restrictions. By clarifying the supervision responsibility of local financial offices and unifying regulatory practice across regions, arbitrage space could be eliminated.

The financial pilot mechanism is combined with the negative list approach to foster fintech and prevent financial risk. Regional financial pilot reform in the PRC indicates the government’s inclusive attitude toward emerging issues. Though different from the fintech sandbox, applying financial pilot mechanisms to fintech helps in judging its influences, and it aggregates valuable experience for reform at the national level. In the spirit of bottom-line supervision, fintech’s negative list is introduced because of regulatory lag, and it aims to prohibit activities that jeopardize sustainability. Taking the supervision of P2P lending as an example, fintech is defined as an information intermediary instead of a credit intermediary. The “Interim Measures on Management of the Business Activities of Online Lending Information Intermediary", issued in 2015, set a negative list for online lending platforms, and the following activities are prohibited: directly engaging in a lending transaction, facilitating/ promoting lending transactions, and engaging in high-risk financial business. The detailed rules released in 2016 enumerate 13 banned activities.

The government emphasizes collaboration and self-regulation in the fintech industry. NIFA[5] issues reminders and guidance about market risks in accordance with regulations, and sets up platforms for registration, information disclosure, and risk monitoring. The PBC also promotes deep integration of industry resources; for example, NIFA and eight market entities (including Zhima Credit, Tencent Credit, etc.) jointly initiated and established Baihang Credit in March 2018 as a PBC-approved, market-oriented personal credit institution that integrates personal and enterprise credit data from different institutions, and aims to improve financial inclusion and facilitate credit scoring of SMEs in the PRC.

5. ENSURING HEALTHY AND SUSTAINABLE DEVELOPMENT OF FINTECH IN THE PRC

Fintech plays an important role in the PRC, but its development has been unbalanced and inadequate, and has posed challenges to monetary policy and financial supervision. The PRC has made and will make constant efforts in improving regulation efficiency, encouraging innovation, enhancing infrastructure, setting fintech standards, and fostering the use of fintech in supervision.

5.1 Set Fintech Development Plans

The PRC State Council has announced guidances and plans on promoting technology development since 2015, for example, opinions on promoting cloud computing development (国务院关于促进云计算创新发展培育信息产业新业态的意见), an action plan to advance big data development (促进大数据发展行动纲要) in August 2015, and a development plan for artificial intelligence (新一代人工智能发展规划). These plans help to consolidate fintech in the PRC.

National fintech development plans will boost synergy between regulatory bodies, and improve the alignment of interpretation across national and local regulators. The Fintech Committee aims to clearly define development goals, primary directions, and main tasks. The PBC partnered with the National Development and Reform Commission at the end of 2018 to launch a trial fintech program in 10 cities and provinces including Beijing, Shanghai, and Guangdong.

On 22 August 2019, the PBC published its Fintech Development Plan (2019–2021). The Plan stresses the role of fintech as a "new engine" for high-quality development, highlights key tasks, and strengthens the need to build a fundamental and unified regulatory system, as well as applications for risks identification, prevention, and mitigation. In addition, the Fintech Committee aims to collaborate with industry and university researchers to sort out development status, application prospects, influences and challenges, and policy implications.

[5] NIFA currently has more than 500 member organizations, covering internet finance institutions in payment, investment, money management, and lending, as well as in banking, securities, insurance, funds, futures, trust, asset management, consumer finance, and credit reporting.

5.2 Establish a System of Fintech Supervision Rules

Prudent regulation of fintech must be strengthened systematically. The PBC plans to review current regulatory policies, evaluate fintech situations and trends, and form a complete and rigorous supervision system consisting of three mutually supportive parts, including supervision rules about basic general application, technology application, and security risks control. The PBC, as a leading regulatory authority for fintech, will continue monitoring developments of fintech and the financial stability implications.

5.3 Financial Standardization

Promoting fintech standardization is critical to form industrial synergy, enhance competitiveness, and optimize resource allocation. Standardization unifies various enterprises in coding rules, data format, report structure, and other aspects, which can effectively improve the efficiency of financial markets and curtail transaction costs. The China Financial Standardization Technical Committee was founded in 1991. The PRC became a member of the International Organization for Standardization (ISO/TC68) in 2004, and the PBC began releasing the China Financial Standardization Report in 2009. As of November 2018, there were 67 effective recommended national financial standards, and 242 financial industry standards, which were divided into six categories, including general, product and service, infrastructure (information technology), statistical, regulatory and risk prevention, and control.

Fintech constantly raises new requirements for standardization. Challenges include integrating fintech standards into those of the financial services industry. In 2017, the PBC and the China Financial Standardization Technical Committee and other regulators jointly issued the Financial Industry Standardization System Development Plan (2016–2020). The PBC also moved toward standardization of new fintech, such as the new standards about cloud computing and QR code payment.

5.4 Fintech Infrastructure

Well-built fintech infrastructure is important to maintain financial stability, enhance efficiency, and promote competitive neutrality. The PRC has made progress in building networks, payments, information, credit scoring, and other forms of infrastructure. For example, NUCC and its Non-bank Payment Organization Internet Payments and Clearing Platform have become critical components of the PRC’s financial infrastructure. All online payment services will route their transactions via the new platform, and NUCC will submit a clearing order to the PBC. Despite the complexity, the process does not impact the customer side.

Great emphasis has been put on information infrastructure. Many government authorities and institutions collect information about fintech products, firms and activities for their own use, which are not unified. For example, the NIFA collects information covering the following:

1) The Internet Finance Registration and Disclosure Services Platform that launched in March 2017 connects over 100 P2P platforms and facilitates disclosure of their institutional, operational, and financial information.
2) The Internet Finance Credit Information Sharing Platform integrates information to address problems such as "a single borrower borrowing from multiple platforms" and fraudulent borrowing.
3) The Internet Finance Statistics Monitoring and Risk Alert System collects a wide range of data and sets 23 rules to identify abnormal platforms and thresholds to caution against risks.
4) The Internet Finance Complaint Information Platform for financial regulators cracks down on activities in violation of laws and regulations.

The information infrastructure building is still in progress under the guidance of "Opinions on Promoting the Comprehensive Statistical Work of the Financial Industry in an All Round Way (关于全面推进金融业综合统计工作的意见)" that was issued by the State Council in April 2018.

5.5 Investor Protection and Education

Investor protection is the goal of financial supervision, and it is a critical part of financial regulations. Specific guidance for investor protection was issued by the State Council in November 2015, namely the "Guidance on Strengthening the Protection of Financial Consumers (关于加强金融消费者权益保护工作的指导意见)".

PRC regulators have engaged in multiple investor protection and education endeavors. First, a third-party depository and custodian scheme was introduced to ensure consumer security. Funds lent via a platform must be used legally and only for the purpose listed on the contract. Qualified banks act as third-party depository financial institutions, and are responsible for holding, managing, and transferring investors' funds in fintech institutions.

Second, information disclosure was reinforced. Fintech institutions are required to disclose operational and financial information in a timely manner, and are obliged to perform due diligence and assess information provided by lenders. Platform lenders are required to clearly inform investors of associated risks and prohibited activities.

Third, regulators strengthen management of investor suitability. Fintech institutions must assess investors' risk tolerance, and ensure consumers invest in proper products that suit their levels of risk tolerance. Advertisements for fintech and wealth management products should not mislead investors.

Fourth, financial consumer education is enhanced. Various forms of training help financial consumers learn about fintech, and improve financial literacy and risk management ability.

5.6 Strengthening the Application of RegTech

The government is exploring the application framework of RegTech, detecting financial risks more intelligently. Detailed tasks include the following: establish a database of digital regulatory rules in some selected regions and fields, develop a regulatory application program interface with extensibility, promote automatic data collection and intelligent risk analysis, accelerate the construction of a financial risk monitoring platform for mobile financial business. The government hopes to improve the security and integrity of financial transactions, and supervise cross-sector and cross-market financial activities.

6. DIGITAL CURRENCY IN THE PRC

6.1 Regulatory Measures on Cryptocurrency

According to 2018 PBC statistics, there were 65 initial coin offerings (ICOs) completed in the PRC through 18 July 2017, of which only five were launched prior to 2017. The cumulative funding of CNY2.6 billion accounted for 20% of ICO financing globally. Speculation in the cryptocurrency market can lead to an asset bubble and large volatility; cryptocurrency can also be used for illegal purposes without leaving a trace.

6.1.1 Early-Stage Risk Prevention

For investor protection and financial risk prevention, the PBC and five other ministries issued the *Notice on Preventing Risks of Bitcoins* (关于防范比特币风险的通知) in December 2013, which clearly forbids financial and payment institutions from running bitcoin-related businesses. The Notice defines bitcoin as a virtual commodity and warns citizens about their risks, but does not ban online trading of cryptocurrencies.

The PBC led on-site inspections of bitcoin and litecoin trading platforms in January 2017, focusing on problems such as operation beyond business scope, suspected market manipulation, money laundering, and fund security risks. The PBC also urges self-inspection and rectification of trading platforms in accordance with laws and regulations. On 30 August 2017, NIFA issued *Reminder about Preventing Risks from Investment in the Name of the ICO* (关于防范各类以 ICO 名义吸收投资相关风险的提示).

6.1.2 ICO Ban and Crypto-Trading Platform Regulation

The PRC has officially banned ICOs, restricted the primary business of cryptocurrency trading platforms, and cut their connection with traditional institutions. ICOs were outlawed in the *Notice on Preventing the Risks of Issuing and Financing Tokens* (关于防范代币发行融资风险的公告), issued jointly by seven regulators[6] on 4 September 2017. ICO financing is referred to as a kind of non-approved illegal fundraising behavior under domestic law, suspected of financial fraud, pyramid schemes, and other illegal activities. Since the date of the announcement, all types of currency issuance financing activities have ceased. For completed ICOs, the Notice allows investors to request a refund from the issuer.

6 Authorities backing the statement include the PBC, CAC, MIIT, SAIC, CBRC, CSRC, and CIRC.

The Notice made it clear that so-called virtual currencies are essentially illegal actions of public financing without approval. There are multiple risks in the issuance, financing and trading of tokens, including fake assets, business failure, and investment speculation. Investors bear their own investment risks.

The PBC takes a stringent stance against crypto trading. Trading platforms are no longer allowed to exchange fiat money and tokens, or provide information and prices for token trading. Financial institutions and non-bank payment institutions are strictly prohibited from providing ICO and cryptocurrency services, including opening bank accounts or providing registration, trading, clearing, or liquidation services.

The PBC monitors the ICO market, and identified several new forms of disguised ICOs as noted in a 2018 financial stability report. For example, platforms do not directly issue virtual currency to raise funds, but instead initially offer free “gift currency” and keep part of it for speculation. To this end, the PBC will prevent risks via early detection and disposal, rectify misconduct in the cryptocurrency market, and take a variety of measures to crack down on emerging legal issues.

6.2 Central Bank Digital Currency

The PBC has worked to introduce central bank digital currency (CBDC) alongside the yuan (the fiat currency). In November 2016, the PBC set up a Digital Currency Research Institute, which is responsible for developing CBDC infrastructure and research on potential influences and challenges. Many experts in developing blockchain technology, big data, cryptography, and system design have been recruited into the Digital Currency Research Institute.

The PRC’s CBDC may adopt a two-layer design. Its supply system will be integrated into the existing banking system, while adopting a centralized management mode rather than being based on distributed ledgers (Fan 2018). According to Yifei Fan, a Deputy Governor of the PBC, there are several advantages to adopting a two-layer design: (1) make full use of the existing resources of commercial institutions; (2) avoid financial disintermediation and crowding out effect on the deposits of commercial banks; and (3) avoid excessive concentration of risks if the central bank directly serves the public, and risks of regime shift in monetary policy transmission mechanism.

As suggested by Qian Yao, former Director General of the Digital Currency Research Institute, the PRC’s CBDC system should maintain centralized management for stabilizing value, and use distributed technology architecture to enhance system safety and access (Yao and Tang 2017). CBDC will adopt multiple mature technologies, including blockchain. The related technologies have been broadly investigated; for example, Xu and Zhou (2019) explored the economic functions of blockchain.

Although there is currently no announced timetable for deploying the PRC’s CBDC, the PBC has completed trial runs on the algorithms needed for a digital currency supply, and a trial run of digital currency based on blockchain technology. In the future, CBDC may lay a solid foundation for RegTech (Yao 2017).

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