Asian Journal of Law and Society (2023), **10**, 433–462
doi:10.1017/als.2022.7

RESEARCH ARTICLE

Wait-and-See or Whack-a-Mole: What Is the Best Way to Regulate Fintech in China?

Duoqi Xu[1], C. John Taylor[2] and Yuanda Ren[3]*

[1]Fudan University, Shanghai, [2]University of New South Wales, Sydney, and [3]Fudan University, Shanghai

*Corresponding author. E-mail: 20110270011@fudan.edu.cn

Abstract

Chinese fintech, initially taking the form as "Internet finance," is growing rapidly and poses great challenges to its financial regulatory authorities. Acclaimed as a new financial innovation, Internet finance was once accepted and even welcomed by the normally conservative Chinese financial regulators, who simultaneously adopted a wait-and-see strategy, to encourage such innovation and avoid overwhelming regulation. The benevolent regulation stance, however, bred rampant Ponzi schemes or fake financial innovation, resulting in tremendous monetary losses among lots of investors. To show a quick and active response, the central government popped into a whack-a-mole game, starting a four-year campaign of strict Internet finance regulation that has even cracked down on all the P2P lending platforms. This article analyzes the regulatory policy updates of Chinese Internet finance that is transforming to certain kinds of lawful fintech with difficulties, and that adaptive regulatory-organization restructure, regulatory-system optimization, and regulatory-model innovation would be more effective and constructive regulatory options.

Keywords: Internet finance; fintech; wait-and-see strategy; whack-a-mole game; fake financial innovation

1. Introduction

The period of 2018–20 marked a significant turn for Chinese Internet finance sectors as many online peer-to-peer (P2P) lending platforms left the market—some became insolvent, some were abruptly shut down by regulators, and others voluntarily restructured. These events prompted a reconsideration of the rationale of Internet finance and appealed to a set of transformed financial technology (fintech) regulatory frameworks in China. This article begins by distinguishing Internet finance and fintech in China, in order to examine the future of fintech and regulatory technology (regtech) through retracing the decade-long lessons on the regulatory path for Internet finance developments in China.

2. Conceptualizing fintech in China

The financial services industry has historically been a leader in technological innovation through contributions to sectors such as telecommunication, computation, and data management. Within just a few years, China has become a world leader in using the Internet and related digital technologies to improve financial services provision.[1] In order to

[1] Xu, Tang, & Guttman (2019), pp. 3–14.

empirically conceptualize fintech and its regulation in the Chinese financial market, a few questions need to be answered: What are the key differences between China's Internet finance and fintech? What is the intrinsic link between the fall of China's Internet finance and the changes to related regulatory and policy attitude? What is the trigger for China's emerging fintech sector?

2.1 "Fintech" vs. "Internet finance"

Internet finance is a specific term that covers a range of Internet industries and businesses (see Section 2.2.1) complying with China's regulatory rules. In contrast, fintech is a general term that incorporates digital innovation in or for the financial services industry. Although it is not specifically defined in China's Basic Laws or administrative pronouncements,[2] it is described as technology-enabled innovation in financial services in an official document issued by People's Bank of China (PBC)[3] who has cited the expression used by Financial Stability Board. Further, the term "fintech," compared with "Internet finance," puts an emphasis on the instrumental function instead of the industrial function in the context of the Chinese legal system, and sometimes also includes financial regtech as well.

2.2 Fintech developments as part of recent developments in the financial services industry in China

For China specifically, technology has already blurred customer perceptions on who delivers financial services. Internet technology is more widely used by financial services companies, given its advantages. When it first came on the scene, retail e-commerce developed and the proportion of online shopping as part of total sales increased. The e-commerce business model produced a greater demand for third-party online payment, leading to its rapid development. When Jack Ma decided to create Alipay in 2001, no bank agreed to collaborate with him to create the new payment system (since Alipay may not qualify for a financial licence), resulting in the necessity for him to create his own online payment system. Severe Acute Respiratory Syndrome in 2003 pushed people to stay at home and shop via the Internet, and Ma's business flourished. Afterwards, notable highlights are as follows:

1. Approximately 32 billion digital red packets ("*hong bao*")[4] were sent through Tencent's WeChat over the six-day Spring Festival holiday in 2016—more than six times the number of mobile and desktop transactions through PayPal (approximately 4.9 billion) for the entire year of 2015.
2. The practice that deposit accounts were available only at banks was digitally disrupted. From 2015, payments could be made using deposits held in an Ant Financial (the financial services branch of Alibaba) Yu'E Bao account,[5] which caused commercial banks a hard time and Ant Financial became one of the largest online funds, managing USD 96 billion for more than 295 million clients by mid-2016.[6]

[2] For definitions of China's Basic Laws and administrative pronouncements, see the Constitution of the People's Republic of China and the Legislation Law of the People's Republic of China.

[3] People's Bank of China (2019), p. 2.

[4] When Chinese people celebrate the New Year, the elders are accustomed to distributing the pre-prepared lucky money in red packets to the younger generation. It is said that the lucky money can hold back evil spirits. The term "red packets" here refers to the digital red packets created by WeChat Pay.

[5] A money market fund set up by a Chinese tech company as a repository for leftover cash from online spending has emerged as the world's biggest, with USD 165.6 billion under management.

[6] DBS, EY (2016), p. 9.

3. Ant Financial raised USD 4.5 billion in its B-round fundraising in 2016, which was globally the largest single private placement for a fintech firm. Ant Financial, valued at USD 60 billion, is not shy of China's fifth-largest bank, the Bank of Communications.
4. On Singles' Day 2017, approximately USD 25.3 billion in purchases were finalized on Alibaba platforms, and 90% of the purchases were made via mobile phone. Correspondingly, Alipay, Alibaba's mobile wallet app, processed on average 256,000 payment transactions per second.

On the other hand, in March 2018, the P2P lending transaction volume in China was EUR 25.2 billion, which was 13.35% higher than that of the previous month. At the end of March 2018, the cumulative turnover of the P2P lending sector reached EUR 0.89 trillion.[7] With the major platforms returning to normal bidding after the Spring Festival holiday, online loan transactions recorded a significant rebound in volume, but it is apparent that the transaction volume in March was still less than the average level in the previous year (per WDZJ[8] 2018). As of 2019, over 5,400 platforms had either collapsed or were found problematic. Zhou Hao, chief marketing officer at Fenghuang Finance,[9] then predicted that only around 100 P2P lending platforms would survive in the Chinese market.[10]

Since 2018, Chinese Internet finance firms have been transforming their business models, known as fintech's zooming-in big data from traditional e-commerce, instant messaging, search engines, social media, and other Internet-based services to personalize the customer experience, provide new services, and leverage operational efficiency. The emphasis is on grabbing customers and their data to support other online revenue streams, such as lending, insurance, investment, and wealth management. To avoid making their businesses vulnerable, progressive Chinese financial services players are responding with their own digital and fintech transformations—launching modern e-commerce platforms, e-payment tools, and online financing and wealth management services. Domestically, the push and pull factors are clearly in place to catalyze the establishment of a leading digital finance sector. On the push side, capital investment is pouring in and the market is being bolstered by substantial government support for innovation.[11] On the pull side, demand is being driven by the underserved small medium enterprises (SMEs) and the tech-savvy but often unbanked consumers keen to access financial services via their mobile phones.[12]

In August 2019, the PBC issued its three-year "Fintech Development Program (2019–2021)," appearing to be an official announcement of China's entrance onto the international fintech arena. One of the six key tasks of this programme is to strengthen financial prudential supervision that involves establishing and improving the innovation management mechanism.[13] To some extent, it could be admitted as China's regulatory sandbox.

[7] Jiang (2018), p. 7.

[8] WDZJ is a third-party online loan information platform, launched in October 2011, which is committed to promoting the development of the P2P network lending industry and created the most influential information portal in the network lending industry.

[9] Fenghuang Finance is an online financial services and wealth management platform set up by its major synonymous TV station parent.

[10] Jao (2019).

[11] Since the 18th National Congress of the Communist Party of China, Xi Jinping has repeatedly emphasized the important role of "innovation" in China's comprehensive deepening of reform and development. He said: "Reform and innovation is the fundamental driving force for the advancement of human society. Those who rejects change, rejects innovation also, they will fall behind the times, and they will be eliminated by history." He deeply reflects on how to innovate and rely on innovation. "Innovative wisdom" leads China's development and stability. See Xinhua Net (2018).

[12] DBS, EY, *supra* note 6, p. 8.

[13] People's Bank of China, *supra* note 3, p. 32.

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

Further steps were also taken in the COVID-19 period, such as big state-owned banks offering updated online-bank and mobile-app services with 24-hour access, over 20 securities companies providing online stock trading services that occupied more than 95% of the total services, etc.[14] Hence, there is an obvious tendency that the online financial services try to gradually and substantially replace the offline financial services, and China looks set to continue to dominate the global fintech industry with a very strong domestic market in the coming years.

2.2.1 Categories of Internet finance in China

In China, Internet finance is a spectrum concept. It almost covers all forms of financial transactions and organizations, which range from traditional financial intermediaries and markets, such as commercial banks, securities firms, insurance companies, and stock exchanges, to a state of Walrasian equilibrium (where neither financial intermediaries nor markets exist) caused by the impacts of Internet technologies,[15] while the typical and important Internet finance businesses are explicitly highlighted by the regulatory rules (see Table 1).

2.2.2 Characteristics of Internet finance in China

Generally speaking, Internet finance and traditional finance are complementary. The categories in Table 1 cover nearly all the main Internet finance types in China. Internet finance, due to its reliance on the Internet, has a very low information replication cost, with its marginal cost being much lower than that of traditional financial products. Fintech credit is growing rapidly, but it is still small as a proportion of overall credit in most jurisdictions. To the extent that technology permits a further unbundling of profitable services traditionally offered by banks and other institutions, the profitability of such institutions may be negatively affected in the future.[16]

Due to the inclusiveness of the Internet, the Internet finance industry has high product compatibility and strong service openness. Internet finance, however, still has the characteristics of the financial industry. As the new type of products in the "Internet Plus" era, Internet finance products, with its core function to provide financial services and products, inevitably have the characteristics of payment settlement, risk dispersion, and resource redistribution in the financial industry.[17] Structural differences certainly exist between Internet finance and traditional finance as they use different methods to lessen risks, which might present a model that works for the former without many risks specifically associated with the latter.[18] Internet finance has some risks that are not imaginable in traditional finance, where the key goal of traditional finance is to control funding risks. The key issues for Internet finance are not just the risks associated with money flows, but also the risks of platform cybersecurity, data protection, etc. Given the loss of simplicity and transparency, some forms of Internet finance, such as P2P lending platforms, are doomed to fail.[19]

14 Sohu.com (2020b).

15 Xie, Zou, & Liu (2016), p. 241.

16 Financial Stability Board (2019), p. 1.

17 Jiang, *supra* note 7, p. 22.

18 Verstein (2011), p. 466.

19 By the end of 2016, the number of problematic platforms has reached 2,474; "running," "fraud," "withdrawal difficult," "closed" and other problematic platforms appear frequently, which have brought great losses to investors and affected the healthy development of the industry and disrupted social order. See Lu & Zhang (2018), p. 1345.

Table 1. Internet finance business models in China

Business model		Began as	Subsector	Typical examples
Financial infrastructure	Third-party payment	PayEase (1999)	Internet payment	UnionPay Online; Alipay; Ecpayglobal
			Mobile payment	Alipay; WeChat Pay; Baidu Pocket
	Internet credit[a]	Microfinance Credit Information Sharing Platform (2003)	Private credit institutions	Microfinance Credit Information Sharing Platform; Tencent Credit Services; Zhima Credit Services
			Third-party institutions	Network Finance Credit System of Shanghai Credit Information Services Co. Ltd.
			Credit management system for Internet financial Association	Baihang Credit
Internet wealth management[b]		Licai (2007)	Online wealth management products sales; information platform for financial products	Licai; Yu'ebao; Mini Fund
Internet insurance[c]		ZhongAn Online (2013)	Internet-Only insurance company (no physical branch)	ZhongAn Online Property Insurance Company
Financing	Peer-to-peer lending[d]	PPDai (2007)	Traditional P2P lending model	RenRenDai; PPDai
			Project wholesale model	Lufax
			Credit assignment model	CreditEase
			"Platform to institutions" model	Yooli
	Crowdfunding[e]	Demohour (2011)	"Group purchase+purchase in advance" reward model	Taobao Crowd Funding; JD Crowd Funding
			Equity crowdfunding model	Angleclub
	Consumer finance[f]	/	Short-term financial consumption	JD Baitiao; Tmall Stages; Ant Check Later
Information Platform[g]	Financial Information	Shenzhou Digital (2004)	"Searching+reservation" model	EastMoney; Straight Flush; WDZJ; Hexun

[a]A mobile payments ecosystem is facilitated by e-commerce and social media players, of which Alipay (of Ant Financial) and Tenpay (a Tencent company) dominate the market. Other notable players include UnionPay, ICBC e-wallet, JD Pay/Wallet (of JD.com), and 99bill (of Dalian Wanda Group). The Internet financial credit system is part of China's social credit system. Its essence is information integration and resources sharing: the industry agencies share, integrate, and process their customers' credit data and information, in order to achieve the comprehensive customer credit evaluation. See Zhu & Liu (2018), p. 82.
[b]Related platforms have developed mobile-centric finance solutions providing access to mutual funds through stock trading apps. These platforms offer offline-to-online activity, with online brokers accounting for major new clients. Key players include Ant Financial (Alibaba), Li Cai Tong (Tencent), Baifa (Baidu), Wacai, Tongbanjie, Zhiwanglicai (CreditEase), and JD Finance (JD.com).
[c]E-insurance sold through e-commerce and online wealth management platforms. Notable brands are platforms by the People's Insurance Company of China (PICC), Ping An, and Zhong An (in partnership with Ping An).
[d]P2P platforms create a market-place for peers to lend to individuals and SMEs underserved by the traditional lending sector. Market leaders are Lufax (Ping An Insurance), Yirendai (CreditEase), RenRendai, Zhai Cai Bao (Alibaba), and Dianrong (the co-founder of LendingClub).
[e]European Commission (2016), p. 31.
[f]E-commerce players lend to underbanked or unbanked individuals and SMEs by leveraging users' merchant data on the platform. Key participants include Ant Financial and MyBank (Alibaba), WeBank with WeChat (Tencent), JD Finance (JD.com), and Gome Electronic Appliance, which recently ventured into providing financial services for individual customers and suppliers.
[g]Information on the Internet can then be used for accurate assessment of the creditworthiness and earning prospects of individuals or enterprises, which forms the information foundation of financial activities. An increasing percentage of information will be digitized and analyzed, and the information platform could provide information for financial industries.
Source: Compiled based on public information.

2.3 The sword of Damocles hanging above Internet finance in China

The Internet expands the sets of feasible transactions and makes previously impossible transactions possible.[20] At the same time, the platforms present the risk that lenders may fall victim to fraud by dishonest strangers. In Internet finance, comprehensive financial operations are ubiquitous and endogenous. For example, in the online sales of different financial products, such as banks' wealth management products, mutual funds, insurance products, and trust products, they are completely marketable through the same online platform without any financial administrative licences,[21] but "Internet finance is essentially still finance, it does not change the characteristics of financial risk including invisibility, contagious, universality, and abruptness."[22] The main risk manifestations in Internet finance are as follows:

1. Default risk and systematic risk: large-scale default of platforms. There used to be more than 5,000 P2P platforms in China, with most of them issuing loans, whereas in the US, 98% of P2P loans occur through Prosper and LendingClub, which only facilitates loans, rather than issuing them.[23] Internet finance in the form of P2P lending potentially creates certain disadvantages in comparison to traditional lending institutions, including:
   (a) greater risk of borrower fraud;
   (b) limited recourse for investors;
   (c) investor dependence on the creditworthiness of the platform; and
   (d) institutional investors using the platform to circumvent regulation.[24]

   Some P2P platforms have, in fact, taken excessive risks. The consequence is that large-scale defaulting of platforms cannot be avoided. Afterwards, the ordinary default risks further tend to form systematic risks in the circumstance aforesaid.

2. Regulatory risk and compliance risk: false-loan fraud. Even in the US, there could be greater risk of borrower fraud in P2P lending because much of the information provided by the borrower might be unverified.[25] The risk of borrower fraud then creates a greater risk of borrowers defaulting. If a borrower misrepresents his or her ability to repay the loan, the investor's risk may be greater than he or she has realized. Unlike a personal loan at a traditional financial institution, where the lender should verify the borrower's employment and financial situation, P2P investors may be providing money to borrowers who are not accurately describing their employment, income, or the purpose of the loan.[26] The relatively low default rates at Prosper and LendingClub, as the empirical proof, may indicate that incidents of borrower fraud in P2P lending are basically under control. In China, however, the interest rate and default rates are both high, with the consequence that China has its own unique borrower risk forms:
   (a) illegal lending: some P2P network financing platforms are designed to sell wealth management products to lenders, or to collect funds and then find borrowers, so that lenders' funds can flow to the core account of the

[20] Xie & Zou (2012), pp. 11–22.
[21] Xie, Zou, & Liu, *supra* note 15, p. 246.
[22] See the Instructive Opinions Regarding Promotion of the Healthy Development of Internet finance (YF (2015) No.221) issued by ten ministries and commissions including the Central Bank on 18 July 2015.
[23] Mason (2016), p. 222.
[24] *Ibid.*, p. 231.
[25] Segal (2015), pp. 9–11.
[26] *Ibid.*, pp. 3–7.

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

platform and generate asset pools. This conduct is suspected of committing the crime of illegal public deposit taking. In July 2020, the listed company WeiDai, whose major business is P2P lending, was registered as an illegal public deposits taker by the police in Hangzhou, where Alibaba's headquarter is also located;

(b) self-guarantee: the platform's self-guarantee model means that the platform itself provides security for the lender's or crowd-funder's funds. If the loan fails to recover the principal and interest, the creditor's right could be transferred to the platform. On 17 August 2016, the China Banking Regulatory Commission (CBRC) and other ministries and commissions jointly issued the Interim Measures for the Management of Business Activities of Internet Lending Information Intermediaries, clarifying the nature of P2P lending institutions as information intermediaries rather than credit intermediaries, further requiring that they should not lend directly or in a disguised form through self-guarantee. This means that the platform no longer has the privileges to guarantee to the borrower, which forces the online lending platform into a dilemma. If they do not provide the guarantee, investors will no longer believe in the platform; if co-operating with the third-party guarantee company, they are at risk of bankruptcy or being banned by regulators due to the illegal activities of third-party guarantee companies;

(c) Ponzi scheme: in reality, some P2P platforms take excessive risks and operate like Ponzi schemes. That is, they collect, without licence, new funds to repay outstanding payments. In terms of investment, they often bet on highly risky projects and expect to make swift gains or losses. If they win, they become rich. If they fail, they lose others' money.[27]

Considering the aforesaid, those P2P platforms might be confronted with more regulatory risks in Chinese regulators' campaign-style round besides the continuous compliance risks.[28]

3. Contract risk and operational risk: false advertisement. Different types of Internet finance use distinct forms of false advertisement. Examples include: where an Internet payment platform exaggerates the nature of the payment service intermediary and their functions; or where online lending institutions illegally provide credit enhancement services and promote them in offline scenarios; or where the Internet fund-selling platforms attract customers by way of income illegally promised; or when those selling insurance via the Internet make false statements, one-sided or exaggerated claims about past achievements, or make misleading promises or descriptions of relevant information.

   China Internet finance reporters have counted Internet finance companies that were punished for advertising content violations in May 2018 and summarized P2P companies who were caught and degraded. According to incomplete statistics, there are five typical cases of Internet finance "violation of publicity and punishment" that were announced in the first half of 2018:[29]

[27] Xu (2017), p. 82.
[28] Xu, Tang, & Guttman, *supra* note 1, pp. 3–14.
[29] China Economic Net (2018).

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

(a) the "Voucher Mom" website promised to promote "return rate of 14% or more" and was fined RMB 300,000;
(b) a P2P company fictitiously claimed to be "a group of professional Superstar experts" in its publicity content and was ordered by the Industrial and Commercial Bureau to stop illegal behaviours and fined RMB 200,000;
(c) due to the promise of future earnings and lack of adequate risk warning, etc., PPDAI was fined RMB 800,000;
(d) Light Orange Technology was fined RMB 800,000 for vulgar advertising content;
(e) a branch of the Yixin company's publicity included a fictitious credit centre and was fined RMB 30,000;

Accordingly, Internet finance experts remind investors: "The state has explicitly prohibited financial institutions from rigid redemption activities, and any investment must be carefully selected based on real investment information." In such cases, those contract and operational risks caused by moral hazard have been intensified in the context of the Internet as a market-place.

4. Data-driven risk: monopoly. In April 2021, China's antitrust regulator imposed a fine equivalent to USD 2.8 billion against Alibaba Group Holding Ltd for abusing its dominant position over rivals and merchants on its e-commerce platforms. The penalty is the biggest move to date in China's tighten supervision of its Internet giants. Before that, the State Council's Anti-monopoly Committee Guidelines for the Platform Economy Sector were issued on 7 February 2021. These guidelines have shown that the policy-makers could no longer tolerate the industry being concentrated in the hands of a few giants, aiming to curb monopolistic practices across its Internet landscape, targeting behaviours such as:
   (a) exclusive dealing;
   (b) big-data discrimination;
   (c) use of subsidies to crowd out competition; and
   (d) hub and spoke agreements.[30]

   Although *People's Daily*, the official Communist Party newspaper, called the regulation of Alibaba "a kind of love and care," there is no doubt that Chinese regulators have sent a message to the country's high-flying Internet industry: we've got our eyes on you. Against this background, the data-oriented risk embedded in technologies to serve the generalized virtual or online economy seems to be certain kind of financial risk as well.

These factors mean that the correct identification of Internet finance risk factors, in order to correct the above-listed legal issues, to reduce the loss of investors and to promote the healthy development of China's Internet finance industry have given rise to an important topic for investors and regulators.

3. Developments in fintech regulatory strategies in China and their effects

In the past 20 years, the emerging sectors in Chinese Internet finance have experienced a series of development processes including the rapid growth, the mingling of good and bad,

[30] See Art. 5 of the State Council's Anti-monopoly Committee Guidelines for the Platform Economy Sector.

Table 2. Time of commencement and classic representatives of China's main Internet finance models

Model	First example	Type representative
Third-party payment	"PayEase" in 1999	Chinapay, Alipay, Caikuaitong
P2P online lending	"PPdai.com" in 2007	Renrendai, PPDAI, CreditEase
Internet financial products	"Licai.com" in 2007	Licai.com, Yu'E Bao, Online Lending House
Crowdfunding	"Demohour" in 2011	Taobao Crowd Funding, JD Crowd Funding, Angel Investor
Financial consultation	"Shenzhou Digital" in 2004	Eastmoney, Tonghuashun, Online Lending House, Shanghai Evening Post

Source: Compiled based on public information.

and the elimination of the false and retaining of the true; the characteristics of Internet financial risks have become fully evident. These processes have led China's financial regulatory authorities to adopt a series of response measures, which generally fall into three stages: "wait-and-see," "regulating in transition," and "whack-a-mole."

3.1 1999–2013: the "wait-and-see" stage

China's Internet finance sector originated from the turn of the century and Table 2 captures the commencing times of the different business models and their classic representatives.

After the new models of Internet finance were developed, by relieving information asymmetry, enhancing transaction efficiency, optimizing resource allocation, enriching means of investment and financing, etc., they quickly exhibited outstanding performance compared with traditional finance models. They effectively overcame information asymmetry and financing discrimination in finance, changed the preferential treatment by the traditional financial industry towards medium and high-end markets, broke the finance industry's sector-wide monopoly, successfully aggregated the fragmented demand from the masses, and rejuvenated the entire financial market. The inherent features of Internet finance boasts of inclusiveness, equality, convenience, etc., along with the advantages of being fast, efficient, and low-cost in obtaining funds, drew attention from financial practitioners and legal scholars. At this stage, government regulatory authorities adopted "wait-and-see" regulation of these financial innovations. This was the regulatory method of tolerating financial innovation and encouraging the healthy development of Internet finance.

The "wait-and-see" regulation adopted by the government at the beginning of Internet finance's development in China was mainly reflected in relaxed market access and other regulatory policies. In 2013, the State Council deployed a set of key research topics in the financial sector, of which "the development and regulation of Internet finance"[31] was led by the People's Bank, where its views had a profound impact on the development of China's Internet finance.

In August 2013, Internet finance was officially written into two important documents issued by the State Council. The State Council put forward to "make full use of new technologies and new tools such as the Internet to innovate the network financial service model" in the Opinions on the Implementation of Financial Support for Small and Medium-sized Enterprises. It also aimed to "Promote the Internet financial innovation, regulate the Internet financial services" in the Opinions on Promoting Information Consumption to Expand Domestic Demand. The PBC gave the Internet finance a positive evaluation and rarely mentioned risk prevention in this stage.

[31] People's Bank of China (2014), pp. 39–42.

Based on whether there is a relaxed or strict market (including domestic market and international market) access standards, the financial regulatory systems in various countries can be generally classified into two categories[32]—financial repression and financial freedom. China's financial regulatory system has significant characteristics of financial repression where its market access to the financial industry is known for being very strict. The financial industry has long implemented national monopoly operations; even the joint-stock financial institutions that came later into the market were mostly national exclusive operations or at least with all shares held by state-owned capital, the access limit of private capital (other than exceptional cases) has been extremely strict.

At the turn of the century, however, there were almost no threshold requirements for Internet financial businesses to enter into China's financial market and there was no need to apply to the relevant departments for licences; for some business models, the only requirement was filing (registration was not even required). Besides, there was to some extent a relaxing of regulatory policies. A good example is that the regulatory authorities did not express an opinion on the "Makev" incident, presenting an attitude of indirect and tacit consent.

The facts of the "Makev" incident that happened in 2013 are as follows. A former senior manager of IQiyi left the company and created "Makev," which sold membership cards on the "Makev Membership Card Online Direct Sales Store" at Taobao. Netizens who bought membership cards also bought the original issued stocks of the company. The unit voucher was RMB 1.2 and the minimum subscribing units was 100, which quickly attracted over 1,000 people to participate in the subscription. That activity was finally stopped by the China Securities Regulatory Commission (CSRC) for illegal public offering of shares, leading to the failure of China's first equity crowdfunding project.

When the incident happened, the CSRC did not strictly punish the initiator of the crowdfunding, but "Moderately" proposed three requirements: "Firstly, don't do it again; second, protect the rights and interests of existing shareholders; thirdly, regularly report the operation situation." Such an attitude of neither encouragement nor repression reflected that the regulatory Committee realized that equity crowdfunding functioned as financial innovation at that time, so the CSRC tacitly consented to the pilot programme on a small scale.

It should be mentioned that while China's Internet finance development was at its preliminary stage, the "wait-and-see" regulation adopted by regulatory authorities played an active role in the growth of new Internet finance business models. Due to the relatively low market access threshold and no explicit or strict regulation, the major Internet finance models have all quickly entered into the stage of rapid development. Take P2P online lending platforms as an example: since the first online lending platform enterprise in China was established in 2007, in terms of the number of enterprises, number of participants, and transaction volume, the sector developed at an unimaginable speed. According statistics reported in the 2013 Blue Paper of China's Online Lending Industry issued mainly by WDZJ, as of the end of 2013, China had approximately 800 P2P lending platforms with a loan balance of about RMB 26.8 billion and a cumulative transaction volume of RMB 105.8 billion. As of the end of 2014, the number of online lending platform enterprises reached 1,575 and the transaction amount completed through P2P online lending reached RMB 382.9 billion; in 2014 alone, the cumulative transaction amount reached RMB 252.8 billion, which was 2.39 times that in 2013.

3.2 2013–15: the "regulation in transition" stage

Internet finance contains the dual effects of the agglomeration and spreading of financial risks. While the new financial businesses are having "Unprecedented Prosperity," the legal,

[32] Bohoslavsky (2016), pp. 763–80; Dorn (2008), pp. 535–54.

Table 3. List of Internet finance policies during 2013–15

Issuing date	Issuing authority	Policy content
2013/03	The CSRC	The *Interim Administrative Regulation on Securities and Investment Fund Sales Institutions Developing Businesses through Third-party Ecommerce Platforms*
2013/12	Jointly issued by the PBC, the Ministry of Industry and Information Technology, the CBRC, the CSRC, and the China Insurance Regulatory Commission (CIRC)	The *Notice Regarding Prevention of Bit Coin Risks*
2015/07	Jointly issued by ten ministries and commissions including the PBC, the CBRC, the CSRC, and the CIRC	The *Instructive Opinion Regarding Promoting the Healthy Development of Internet Finance*
2015/07	The CIRC	The *Interim Method on Regulation of Internet Insurance Businesses*
2015/08	The Supreme People's Court	The *Regulation Regarding Several Issues on Applicable Laws in Trial of Private Loan Cases*
2015/09	The CIRC	The *Implementing Rules on Administration of Information Disclosure of Internet Insurance Businesses*
2015/12	The PBC	The *Administrative Methods on Online Payment Businesses of Non-banking Payment Institutions*
2015/12	The PBC	The *Interim Administrative Method on Business Activities of Online Lending Information Intermediaries*

operational, liquidity, credit, and market risks in this new sector are accumulatively overlapping. Since the end of 2013, the risks in Internet finance were gradually exposed: events of default were frequent and large-scale bankruptcy, management runaways, cash-flow difficulty, and fraud problems have also emerged. Taking P2P online lending as an example again, in 2013 and 2014, there were respectively 92 and 275 problematic platforms. According to the Report of Chinese P2P Online Lending Industry in September 2014 issued by WDZJ, as of 30 September 2014, among 1,438 P2P platforms in China, there were 193 problematic platforms. WDZJ's data indicated that in October 2014, 35 platforms across China had problems such as "Run" ("*pao lu*"),[33] difficulty in withdrawal, fraud, losing contact, etc. The analysis cited by Economic Information Daily, which is affiliated to Xinhua Net,[34] found that, up to the end of 2015, there had been 1,263 P2P platforms involved in cases of fraud or going out of business. In some cases, P2P platforms, such as Hengjin Lending, "Ran" away within one day after the platform went live online.

Faced with the severe consequences caused by continuous accumulation of Internet financial risks, the regulatory authorities realized that it was necessary to adopt targeted measures, to strengthen and improve regulation to support the healthy and sustainable development of Internet finance, and to protect the interests Internet finance consumers. Regulators, therefore, from 2013 gradually issued some principled and instructive policy documents targeting Internet finance. Please refer to Table 3 for a list of these policy documents.

[33] "Run" in this article refers to platform operators running away from the business or running away from the market and regulators.

[34] Yicai.com (2016).

Against the above policy documents, it is evident that the development of Internet finance has not taken an appropriate shape at its preliminary stage and regulatory authorities decided to keep watch over the development direction and innovative models of Internet finance. They maintained a certain tolerance and flexibility on some issues and adopted a principle-based rather than a rule-based regulatory approach.

For example, in the Instructive Opinion Regarding Promoting the Healthy Development of Internet Finance (hereafter, the "Instructive Opinion") issued by the PBC, the CBRC, the CSRC, and the CIRC (these four regulators collectively referred to as the "One Bank and Three Commissions" ("*yi hang san hui*")), the regulators on the one hand pointed out that "Internet finance is still finance in essence, the financial risk characteristics including invisibility, contagiousness, universality and abruptness prevailed, and strengthening the regulation on Internet finance is the inherent requirement for promoting the healthy development of Internet finance." On the other hand, the regulators also indicated that as "Internet finance is a new thing and an emerging business model, and we need to form moderately relaxed regulatory policies." Facing the two mutually contradictive policy objectives, the regulators adopted a principle-based regulatory approach and proposed that the regulation on Internet finance should comply with the principles of "Formal Regulation, Proper Supervision, Classified Regulation, Coordinated Regulation and Innovative Regulation," so as to support financial innovation and promotion of the stable development of Internet finance under the precondition of guaranteeing that the systematic risks of the financial system would be safe and controllable.

As a framework-type guiding document for Internet finance, the Instructive Opinion did not have many specific and definite regulatory rules, the majority of which were regulatory principles and terms with strong declaratory but not implementation effects, such as: "Trust companies and consumer finance companies conduct financial transaction through the Internet. For businesses, we must strictly abide by regulatory requirements, strengthen risk management, ensure legal compliance of transactions, and keep customer information safe." Another example is: "Insurers should conduct Internet-based insurance businesses and follow the principles of security, confidentiality and stability, strengthen risk management, improve internal control systems, and ensure transaction security, information security and financial security." Thereby, although the Instructive Opinion set the tone for how to regulate Internet finance, there remained many regulatory uncertainties. These uncertainties not only created opportunities for Internet finance enterprises to seek and obtain institutional rent by playing ball in a grey area, but also enabled some illegal businesses to have scope for operation that avoided regulations.

3.3 2016–20: the "whack-a-mole regulation" stage

The Instructive Opinion and other regulatory documents made according to the principle-based regulatory approach did not curb the chaos in China's Internet finance sector. Since 2015, the problems of large-scale platforms running away, having false loans, frauds, financing, "insuring" themselves against regulations, etc., kept occurring. Typical cases such as fraudulent fundraising, illegal absorption of deposits from the public, happened one after another. For example, E-Zubao under Yucheng Group illegally absorbed over RMB 50 billion in public funds through using high interest rate as bait, forging financing projects, borrowing new loans to repay old loans, self-guarantee, etc. Similar typical cases involved huge amounts, affected many citizens, severely influenced the normal financial order and social stability, and damaged the lawful rights and interests of a wide group of investors. This situation drew close attention from Chinese regulators.

On 14 April 2016, the State Council organized for 14 ministries and commissions to hold a video and telephone conference, and decided to launch a special nationwide remediation action regarding Internet finance across China for one year. On 13 October of the same year, the State Council formally released the *Implementing Scheme of the Special Remediation of Internet finance* (the *Implementing Scheme*). Later the ministries and commissions such as the "One Bank and Three Commissions," the State Administration of Industry and Commerce, issued the implementing schemes of special remediation work in their respective administrations and launched a wave of "Remediation Storm" across China's Internet finance sector. The scope of this special remediation action covered key fields such as P2P online lending, equity crowdfunding, Internet insurance, third-party payment, asset management through Internet and engaging in financial businesses cross fields, Internet financial advertisements, etc., which basically covered all risk points in Internet finance businesses. "Campaign-type Regulation" was thus launched.

This round of special action called the "Strictest Regulation in History"[35] in Internet finance was developed over one year.[36] The government energetically cracked down illegal and violating operations in the Internet finance sector, cleaned up a large number of Internet finance platforms that were unqualified and may have even be involved in illegal or criminal operations, and guided the Internet finance industry towards a more appropriate approach of standard innovation.

According to the data released by WDZJ, since the launch of the special remediation action in October 2016, the number of P2P online lending platforms sharply decreased by over 310 within two months; by the end of 2016, the police departments had investigated and dealt with over 1,400 cases of Internet finance, penalized over 4,800 persons, and the amount involved in those cases was totalled over RMB 500 billion.[37]

It could be said that this special remediation action was good for the cleaning-up and correction of irregular platforms in the short term and solving the risks in Internet finance industry that had accumulated previously. It also had significant positive promotional effects for guiding the healthy and sustainable development of Internet finance, protecting national financial security, and protecting the rights and interests of financial consumers. Since the special rectification, under the heightened supervision of various departments and local governments, a large number of organizations have withdrawn from Internet financial activities and the scale of illegal behaviours including illegal businesses of the existing organizations has dropped significantly. By the end of May 2018, there were 2,902 organizations operating in various locations and a total of 5,074 organizations have withdrawn since the special rectification; the scale of non-compliant businesses dropped by RMB 426.5 billion.

In the fight against Internet financial crimes, public security organs have filed 1,390 cases, successfully cracking a number of serious cases, and effectively shocked illegal financial activities.[38] On 9 July 2018, Pan Gongsheng, leader of the leading group on Internet finance rectification work and deputy governor of the PBC, stated that in accordance with the overall arrangement of preventing and resolving major risks and tackling the battle, it would take another one to two years to complete the special rectification of Internet financial risks and stock risks, eliminate potential risks, and initially establish a regulatory

[35] In July 2017, the Office of the Leading Group for the Special Remediation of Internet Financial Risks issued the Notice on the Cleanup and Rectification of the Cooperation between Internet Platforms and Various Trading Sites in Violation of Laws and Rules (the Remediation Office Letter [2017] No. 64). In December of the same year, the Notice on the Investigation of the Cooperation between the Internet Platform of the Jurisdiction and Various Local Trading Places was issued.

[36] The Remediation Office Letter [2017] No. 64 required the nationwide Internet platforms to stop co-operating with various trading sites before 15 July 2017 and to carry out the increase in illegal activities and illegal business suspected of breaking through the bottom line of policy. At the same time, the Internet platform must actively co-operate with various trading sites to properly mitigate the illegal business.

[37] Lu (2017).

[38] National Internet Finance Association of China (2018).

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

system adapting to the characteristics of Internet finance.[39] With the large number of withdrawn organizations, more and more malicious borrowers were discovered to have escaped and revoked debts.

Since 2018, the Internet Finance Associations in Beijing, Shanghai, Shenzhen, etc., have respectively disclosed the lists of malicious borrowers to support the mechanism that punishes those who broke the faith devised by Chinese financial regulators and other administrative entities. Taking the Internet Finance Association in Beijing as an example, evidence showed that it had totally disclosed over 120,000 malicious borrowers by May 2019. The special rectification work was extended again; it should also be clearly recognized that the action of Internet finance was after all a financial regulatory action campaign that was dominated by national force, short-term in nature and staged. The "Campaign-style Regulation" naturally has the characteristics of being short-term, mobilizing, and mandatory. Characteristically it is hurried, passive, resulting in the bouncing-back of the remediation result,[40] and will possibly damage the rule-of-law and fairness principles. These and other weaknesses have greatly compromised its regulatory performance.

In November 2021, Liu Fushou, the chief legal counsel of the China Banking and Insurance Regulatory Commission (CBIRC), disclosed that the P2P lending platforms had completely vanished from China's financial space[41] compared with the peak of about 5,970 P2P lending platforms in 2017.[42] The case of P2P actually provides a reference for the development direction of financial regulation (finreg): the regulatory authorities are set to bring all financial activities under regulatory coverage, requiring licences for all financial businesses following the policy of "zero-tolerance" in the future for all types of illegal or irregular behaviours.[43] The case also confirms that Internet finance without core technologies, which tends to thrive in a more open environment like all other technologies, has come to an end.

It must be explained that the three stages of China's regulation on Internet finance were mainly developed under the so-called regulatory framework of "One Bank and Three Commissions." At the second stage, the *Instructive Opinion* jointly issued by the ten ministries and commissions granted, in the form of a list, the legal status to the six main types of Internet finance businesses, including Internet payment, online lending, equity crowdfunding, Internet fund sales, Internet insurance, Internet trust, and Internet consumer finance; and determined the regulation of businesses by separated regulators.[44] The special remediation action at the third stage was also implemented under the general deployment by the State Council and based on the implementing schemes of special remediation work

[39] Pan (2018).

[40] The so-called bouncing back of the remediation result means that after the end of remediation action, the phenomenon cracked down on by the special remediation would appear again and the rebound may even be worse than before, so as to cause a vicious circle of "curing the symptom, not the disease." Taking the production of inferior milk powder in China as an example, after the occurrence of milk powder incident in Fuyang of Anhui, the special remediation action in 2007 put the baby-formula products as the key regulatory object and obtained certain effect, but the special action did not truly close the loopholes in the separated regulation of food safety, which also to a certain extent explains why the even more severe Sanlu milk powder incident happened in 2008 after the nationwide remediation action in 2007. See Liu (2015), p. 121.

[41] Sohu.com (2020c).

[42] Sohu.com (2020a).

[43] People's Bank of China (2020a).

[44] According to the Instructive Opinion, the Ministry of Industry and Information Technology was responsible for regulating the telecommunication businesses of Internet finance firms; the PBC was responsible for the regulation of Internet payment businesses; the CBRC was responsible for online lending businesses, Internet trust businesses, and Internet consumer finance business; the CSRC was responsible for regulating equity crowdfunding businesses and Internet fund sales businesses; the CIRC was responsible for Internet insurance businesses. This was actually still an extension of the separated regulatory framework.

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

issued by the "One Bank and Three Commissions" and other ministries and commissions in their respective governing fields. These practices indicate that China's regulation of Internet finance is still in the exploratory stage and far from realizing a win-win situation, with these objectives to be reached swinging between financial stability and innovation. It clearly demonstrates that placing the regulation of Internet finance with risks of social characteristics into the framework of separated regulation does not work. A great transformation of finreg is necessary.

4. Reasons behind the partial failure of the "whack-a-mole" scheme

It should be acknowledged that the special action on Internet finance up to this point has shown a positive effect on guiding and standardizing healthy and sustainable development of Internet finance, safeguarding national financial security, and protecting the rights and interests of financial consumers. The effect of the special crackdown was significant, helping to clean up irregular platforms in the short term and addressing the previously accumulated risks in the Internet finance sector. It is, however, necessary to emphasize that the Internet finance special rectification action is, after all, a short-term, phased financial-governance campaign led by national coercive power. After the end of the special rectification action, the question of whether the previously suppressed Internet financial mess will resurface is also in the minds of the public.

Some voices still suspect that the campaign would partially fail or be doomed to fail.

First, this is shown in the extension of the campaign-style regulation, as a few years was not enough because of the complexity. According to the original deployment, the special regulation on Internet finance should have been completed by the end of March 2017 but, in practice, local implementation was not carried out in accordance with the original planned schedule. At the end of 2017, the regulator issued the Notice on the Special Rectification and Acceptance of P2P Network Lending Risks, requiring that the filing work of the network lending platform under its jurisdiction should be completed by the end of June 2018. By the deadline, however, very few platforms have been officially notified to have really passed the filing requirements. In July 2018, the PBC reiterated that it would take one to two years to complete a special crackdown on Internet financial risks, to defuse existing risks and eliminate risks, and to initialize the establishment of a regulatory system adapted to the characteristics of Internet finance.

It is worth noting that not only did the "small tomatoes" suffer intensified supervision by a surge, but also the campaign-style regulation was applied to "big giants." By November 2020, fintech giant Ant Group's initial public offering on the STAR Market was suspended. The Shanghai Stock Exchange (SSE) explained that Ant Group had reported major matters, such as the change in the supervision environment concerning fintech, due to which Ant Group might not be able to meet listing requirements at the SSE or meet related information disclosure requirements. Based on the SSE's regulations and sponsors' opinions, Ant Group's Initial Public Offering (IPO) on the STAR Market was postponed. Ant Group, which also filed for a dual listing on the Hong Kong Stock Exchange (HKSE), announced that it would suspend the listing on the HKSE simultaneously.[45] After that, the IPO of JD Digits (now rebranded as JD Technology) on the STAR Market was withdrawn by the company on 30 March 2021,[46] even though it had tried to be in a low profile and received less attention compared to Ant Group. The move is seen as a way to dilute the share of the financial business in the company in order to bypass tougher rules, as some senior market players argue.

[45] Sohu.com (2021).

[46] Wangyi Finance (2021).

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

Second, when one whacks a bad mole down, other moles pop up immediately, so whacking a mole is not a sustainable solution. Since the beginning of the rectification of Internet finance in 2016, campus loans have mushroomed and college students' suicides have occurred from time to time due to their inability to repay their loans. "Naked picture" loans, campus loans, and so on have given rise to continued social concern. After the government cracked down on campus loans, the issuance and trading of Bitcoin became chaotic. On 4 September 2017, the PBC and seven other ministries and commissions issued the Proclamation on Guarding Against the Risk of Financing the Issue of Tokens, which prohibited the issuance of Bitcoin, but did not prohibit the holding of Bitcoin and the free sale of Bitcoin in the market. This special overhaul of the Internet financial industry into a "compliance" state was launched in April 2016.

Third, the regulators push responsibilities onto each other. In the case of P2P, the local financial offices deter the filing and registration of fintech companies as regulators or at least do not plan to attract platforms to register in their own region. Territorial supervision is the basic framework of China's financial supervision and institutional supervision also implements the principle of territorial supervision.

For Internet small loans, the regulatory arbitrage space applies: where banks and licensed consumer finance companies are subject to strict and clear supervision by the CBRC in terms of loan interest rates, intermediary channels, and collection management. In view of the large differences in the supervision of financial bureaus in various provinces and municipalities, it is difficult to achieve uniform standards for the supervision of Internet small loan companies in remote areas. In fact, although a company chooses to be registered in a remote province or city in the Midwest, its business could be spread across the country.

The division of regions and jurisdictions has led to unclear boundaries between the powers and responsibilities of the regulatory authorities and the increase in co-ordination costs between different territories and different departments, which ultimately leads to the absence of substantial supervision. For example, some local financial regulatory authorities said that the current P2P local compliance inspection has not yet ended and, according to the inspection requirements, there are almost no P2P platforms that fully meet the compliance requirements. Moreover, the result of this round of rectification was to provide a virtuous exit for P2P platforms and actually drove them away to other sectors since very few qualified platforms could pass the examination. In the meantime, the supervision of online small loans and cash loans is still underway. The financing channels of the cash loan platforms have become increasingly blocked. The supervision responsibility of the local financial supervision department over other forms of financial businesses has been made clear, but the general direction has just been decided, with the specific responsibilities not yet known, and no mention has been made of law enforcement powers and related questions. The mismatch between the powers and responsibilities might lead the local financial bureaus to put the riskier Internet financial enterprises on record in other regions, which could be detrimental to the healthy and sustainable development of the Internet financial sector as a whole.

Fourth, regulators still use conservative and stubborn regulatory methods. Shown in the events and cases mentioned above, the Chinese financial regulators are keen on post-operational oversight. It means other stakeholders such as investors and platforms are not able to foresee or get an accurate and a priori conclusion, and their incentives to innovate are further depressed. As a result, the essence of such post-operational oversight shows the "stability over innovation" attitude, which does not make sense. Actually, the key issue is not to make a single choice between safety and innovation; it is how Chinese regulators match their modern inspection tools and advanced computation technologies with modern regulatory-sandbox methodology. It means that the Chinese regulators might design a better financial-governance pattern if they correctly revise the regulatory rules to suit the regulatory infrastructure. Empirical evidence, however, has proved that the Chinese regulators lack regulatory-sandbox experience in financial services (unlike that in Reforming and Opening up Policy) and still have to update their regulatory concepts and then amend regulatory rules without delay.

Fundamentally, the underlying problem is the inherent contradictions and tensions between private lending needs and strict financial suppression in China. In other words, China's market economy is imperfect and the banking system still has strict access restrictions, business scope approval, interest rate control, and government industrial policy intervention.

The arguments in Western banking theories could not fully explain China's financial reality. Article 31 of the Commercial Banking Law still stipulates: "Commercial banks shall determine and publish their deposit interest rates in accordance with the upper and lower limits stipulated for deposit interest rates by the People's Bank of China." Hence, to some extent, the deposit interest rate of commercial banks in China is still subject to state control. After a commercial bank's loan interest rate has been marketized, the bank has a dual interest rate system. The rate is determined by the PBC, the loan interest rate is an endogenous variable, and the deposit interest rate becomes an exogenous variable. Due to the low interest rate on deposits, residents reduced their deposits and turned to bank wealth management products to balance security, risk, and profit. After the P2P business attracts depositors' investment with higher interest rates, investors often mix their investment with wealth management products issued by banks, expecting to receive rigid redemption support. For regulators facing a new industry, the challenge is how to develop a regulatory approach in a short period of time that allows the quality platforms to survive, eliminates inferior platforms, and constantly updates their understanding of the industry.

5. The Financial Services Regulatory Triangle in the digital era

In October 2017, the 19th National Congress of the Communist Party of China (CPC) accurately defined the nature of China's finreg and made it clear that the core of financial work in the future is not only innovation and development, but also stability and the need to improve the financial supervision system, to guard the bottom line to avoid the systemic financial risk. In December 2017, the Central Economic Work Conference stressed that, in the course of future economic development, it would be necessary to make a good effort to prevent and defuse major risks by focusing on preventing and controlling financial risks and resolutely cracking down on illegal financial activities.

Internet finance, as a form of financial innovation, is the main sector of finance that has the opportunity to adapt to the needs of financial development and enhance the profitability of the financial industry by combining or deriving new financial elements from the original financial elements. As a new financial product, financial market, financial organization, and transaction type, rapid financial innovation through Internet finance has also changed the basic conditions of financial supervision. The rising of supervision cost caused by financial innovation is also an important reason for the weakness of financial supervision. The process of financial innovation is also the process of increasing the variety of financial products and expanding the scope and field of financial products.

5.1 Principles for the regulatory triangle

There are some principles to balance the regulatory triangles of promoting innovation and competition, stabilizing the financial market, and increasing the benefit to consumers. Innovative financial businesses, especially through fintech support policies, play an important role in improving competition.[47] The regulator who supervises the financial market provides direct and customized support to businesses. As the above three stages of regulation have shown, third-party payments and P2P loans have been exposed to various risks since their inception, but they have not been eliminated directly by the regulatory layer. It shows that increasing tolerance to financial risk is crucial to the development of financial innovation.

Increasing tolerance to financial risk includes two levels of meaning: first, risks in financial innovation could be allowed and the rational development of the Internet financial innovation industry cannot be stopped completely because of risks; second, tolerance is necessary for operating problems and even bankruptcy of individual financial platforms or financial innovation products due to these risks, and the rational development of financial innovation should not be curtailed because of the failure of individual institutions and products.

Moreover, there are a variety of risks in the financial industry itself. All kinds of financial products and financial transactions intersect each other involving a wide range of industries and fields. The risks involved in fintech also include but not limited to legal risk, operational risk, contagion risk, reputation risk, liquidity risk, credit risk, and market risk. This undoubtedly increased the cost of regulation, resulting in the weakening of financial regulatory capacity. However, the complexity of regtech should not exceed the current stage of fintech development to avoid causing financial suppression problems or out-of-reach problems. Due to the gradual systematic improvement in the field of fintech, co-ordination and co-operation still need to be followed up in the context of principle-based regulation, and the ability of regulators and self-regulatory institutions to carry out their duties needs to be strengthened urgently. If the regtech designed is overly complex, it may not match the regulatory capabilities at this stage. For example, while certain cyber-lending companies claim to have a higher level of technical analysis than that of the whole industry, their technical capabilities do not fully cover the compliance requirements of existing regulations and their technical personnel are also unable to perform the duties required by the current regulatory approach. If those regulations or the regulatory approach was full of complications, then even the regulators would be out of reach. Therefore, while improving the quality and ability of institutions and other subjects, the design of regulatory science and technology also needs to be as friendly and synchronous as possible, which could increase the benefits to consumers and market stability. Informative communications among stakeholders such as government, companies, investors, developers, and platforms provide a good soil for establishing a strong and effective fintech ecosystem.

5.2 Approaches to the regulatory triangle

Internationally, the UK government, the EU legislature, and the UK legislature have supported the growth of fintech firms by enacting laws and implementing policies that enhance their ability to compete with banks. For example, the UK government has led the way with progressive policy, introducing the Financial Conduct Authority (FCA)'s Project Innovate and "regulatory sandbox" and the Bank of England's fintech accelerator. In the same vein, the UK government implemented the Open Banking Group programme to encourage players in the financial services industry to develop avenues for the exchange of data.[48] Regulators and policy-makers in the UK believed that this would be an effective approach to spur growth in the fintech subsector.[49]

[47] Adams, Einav, & Levin (2009), p. 49.
[48] Finfextra Research Ltd. (2016), pp. 3–4.
[49] Wu (2017b), p. 207.

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

Australia's regulatory-sandbox framework comprises three broad options for testing a new product or service without a licence. Australian Securities and Investments Commission (ASIC) has released a world-first class waiver to allow eligible fintech businesses to test certain specified services for up to 12 months without an Australian financial services or credit licence.[50] These policies obviously give precedence to innovation.

At the same time, an increasing number of jurisdictions have developed regulatory and supervisory frameworks to address specific forms of fintech innovation. In particular, the General Data Protection Regulation (EU) 2016/679 (GDPR), which became applicable in May 2018, is also of critical importance for the proper use of innovative data-driven financial services. UK and EU banks and financial institutions are now under the new guidelines provided by the GDPR. Institutions in the EU and worldwide are affected by this broad mandate on how user data will be treated by financial institutions and third-party providers. Firms that fail to evolve with new compliance will face harsh fines as much as 20 million euros or 4% of annual revenues. Besides, in December 2017, European legislators agreed to extend the scope of the Anti-Money Laundering Directive to virtual currency exchanges and wallet providers. The European Supervisory Authorities issued warnings about the speculative market environment for virtual currencies and other risks associated with crypto-assets.[51] It appears that the EU is attempting to balance the protection of consumers' rights with stability and innovation.

It is difficult to tell which value is better than others when there are several values that exist simultaneously and straddle the government, private, and civil society sectors in a search for optimal approaches to regulation that encourage innovation while protecting consumers.[52] From the history of Chinese fintech and finreg developments, the objectives and approaches of the Internet finance policies are summarized in Table 4.

In China, during the first stage of tolerant regulation, inevitably, any regulatory intervention would heighten barriers to entry into the Internet finance industry. The barriers would likely to have the immediate effect of limiting competition and innovation, particularly by smaller and medium start-ups. So the government tended to think more about how to incentivize innovation, which was seen as the most important. Hence, at this stage, the order is as per Item 3 in Table 4. In the principle-based stage, the main objective becomes to "regulate the uncertain products," thus protecting the consumer comes first as per Item 2 in Table 4. In the specific Internet finance sector, the first step in assessing the adequacy of regulatory protections for developing the financial innovation is to determine the extent of new transactions. Due to the long tail effect, consumers in Internet finance are more vulnerable and consumer protection is more important.[53] Two forms of consumer protection are relevant here: information privacy and protection from losses related to fraud or error.[54] During the "Campaign-style" implementation stage, both Items 1 and 4 are evident with stability becoming the first key element. Even where regulation proves necessary, the ideal regulator should still consider the costs of intervention,

[50] Australia's regulatory-sandbox framework comprises three broad options for testing a new product or service without a licence. Those options are: relying on existing statutory exemptions or flexibility in the law—such as by acting on behalf of an existing licensee; relying on ASIC's "fintech licensing exemption" for the testing of certain specified products and services; and for other services, relying on individual relief from ASIC. See Australian Securities & Investments Commission (2021).

[51] European Commission (2018), pp. 3–4.

[52] Brescia (2016), p. 91.

[53] The use of the Internet by Internet finance has greatly expanded the possible boundaries of transactions, covering a large number of long-tailed people who have been neglected by traditional finance. Due to their relative lack of financial knowledge, limited risk identification, and affordability, they are vulnerable to unfair treatment such as misleading and deceptive conduct and fraud.

[54] Mann (2004), p. 690.

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

Table 4. Internet finance policy objectives, approaches, and responses in China

No.	Objectives	Approaches/responses
1	Prohibit undesirable actions	Stability, consumer, innovation
2	Regulate uncertain products/actions/events	Consumer, stability, innovation
3	Incentivize desirable actions	Innovation, consumer, stability
4	Promote the sharing and flow of information	Stability, consumer, innovation

calibrating the regulation to mitigate risks without creating new problems for platforms or consumers.

6. Fintech regulatory suggestions

The core tasks of finreg are to impede risks, reduce the transmission effects of risks, prevent the spreading of risk externalities, and enable risks to be restrained, so as to protect the stability and effectiveness of the financial market and financial system.[55] Different financial business forms have derived different financial risks, which requires different regulatory methods. To a large extent, the characteristics of Internet finance risks determine the regulatory-organization system, the regulatory system, and the means of regulation.

6.1 Restructuring of the regulatory-organization system: the end of the "One Bank and Three Commissions" separate regulatory framework

The "One Bank and Three Commissions" pattern in which the PBC is responsible for monetary policy while the CBRC, the CSRC, and the CIRC implement separate regulation was formally formed in 2003. The main characteristic of separate regulation was that the setting of the regulatory subject was based on the financial industry classification and thus multiple financial regulators regulate the respective regulatory objects within the authorized scope according to corresponding rules and legal procedures. Given the few cross-holding businesses of financial institutions, the advantage of separate regulation was that it could stop financial risks from passing between different financial institutions.

From the comparable perspective, the most essential difference between Internet finance and traditional finance lies in the ubiquity of connecting points. The emergence of Internet technology enables fintech to have the mixed-industry operation characteristics that cross time and space, cross industries, and cross fields as well as have the property of penetrating through multiple levels of market system. Furthermore, its products and services are often reflected as asset overlapping and technology overlapping of multiple purposes, multiple levels, and multiple links, while the separate regulatory model determines the regulatory subjects (regulators) based on regulatory objects (innovative market players), regulatory actions are developed by the regulatory subject surrounding the regulatory duties, and the regulatory subject lacks the basis and motivation for paying attention to the matters beyond its duties. Such regulation of "Everyone taking care of his own children" results in the coexistence of regulatory vacuum and regulatory loopholes, and inevitable regulatory conflict and regulatory misplacement; therefore, the first step of the great transformation of China's finreg is to break the organizational structure of the separated regulation of "One Bank and Three Commissions."

[55] Wu (2017a), pp. 33–48.

Currently, China's institutional reform by the State Council is being intensively implemented. As part of this implementation, the scheme of financial regulatory institutional reform involves restructuring of the primary financial regulatory-organization system. On 14–15 July 2017, the National Financial Work Meeting was held in Beijing, which determined the establishment of the Financial Stability and Development Commission of the State Council (FSDCSC). In November of the same year, the FSDCSC was established and held its first meeting. The "Inter-ministry Level Coordination" of the financial regulatory co-ordination inter-ministry joint meeting operated since October 2013 was upgraded to "Superior-subordinate Vertical Coordination." On 13 March 2018, the State Council Institutional Reform Scheme was proposed to the 1st Session of the 13th National People's Congress for review. This scheme planned to integrate the duties of the CBRC and the CIRC, and established the CBIRC as a public institution directly governed by the State Council. The duties of the original CBRC and CIRC for forming the drafts of important laws and regulations of finreg and basic systems of prudential regulation were transferred to the PBC. The PBC will shoulder the dual-pillar regulatory mission of implementing monetary policies and performing prudential administrative duties, while the CBIRC and the CSRC shall become the regulatory institutions that implement micro prudential regulation and protect the rights and interests of consumers under the instructions of the FSDCSC and the PBC. The separate regulatory system of "One Bank and Three Commissions" that had been operating in China for 15 years was thus terminated. Hence China's finreg organization system began to have directional adjustments based on the requirements of "Meeting the characteristics of modern finance, generally coordinating regulation, being energetic and effective" as proposed in the "Thirteenth Five Year Plan" ("*shi san wu gui hua*").

The integration of the CBRC and the CIRC, zooming in on a more overall inspection, is not a simple restructure of their organizations or duties. Besides Ant Group, the CBIRC has invited all other Internet platform companies to study the regulations and adjust accordingly, as regulatory institutions have inspection plans lined up. A good example is that the Trial Measures for the Supervision and Administration of Financial Holding Companies entered into force on 1 November 2020 and require qualifying non-financial companies that control two or more different types of financial institutions to create a financial holding company.[56] The measures place non-financial companies that previously enjoyed a free ride outside the scope of the supervision of finregs under the same roof as commercial banks.

In addition, in order to supervise Internet finance better, the local financial regulatory authorities changed their names to local financial supervision bureaus and their supervisory functions will continue to be strengthened[57] with a line of three bureaus (the Banking Regulatory Bureau, Insurance Bureau, Securities and Exchange Bureau besides the local branches of PBC) as a form of supervisory supplement, which means they still have different functions.

Fortunately, the current Chinese government shows quite strong determination and has a very active attitude to conduct domestic governance reform including reforms in the field of financial services. It actually brings hope to the first step (regulatory-organization restructure); nevertheless, the effectiveness of the aforesaid reforms is still to be further observed. The first suggestion given by this article on restructuring the regulatory-organization system is based on the precondition of "Substance over Form" ("*shi zhi zhong yu xing shi*").

[56] See Art. 5 of the Trial Measures for the Supervision and Administration of Financial Holding Companies.

[57] In July 2017, with regard to local financial supervision, according to the requirements of the National Financial Work Conference, local governments had to strengthen the responsibility for terrestrial risk disposal in accordance with the central unified rules. See Wangyi Finance (2017).

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

6.2 Optimization of the regulatory system: the transition from singular micro prudential regulation to the integration between macro prudential management and micro prudential regulation

Before the explosion of the financial crisis in 2008, micro prudential regulation was the main regulatory method for financial stability. Micro prudential regulation is devised to ensure the stable operation of individual financial institutions and guarantee that the whole financial system does not have systematic risks. However, the global financial storm caused by the subprime crisis in the US has indicated that micro prudential regulation had difficulty in independently assuming the task of maintaining financial stability. The root cause is that the modern financial system is a complex system; its general operating status cannot be simply summarized as the total of the operating status of its subsystems. Thus, requiring individual financial institutions to maintain "Good" operation status in the traditional sense is insufficient to guarantee the stability of the whole financial system, and might even generate a contrary effect due to the "Fallacy of Composition" (rational behaviour of individual financial institutions might cause collective irrational behaviours). The characteristics of Internet risks have also told us that in a type of inclusive finance (there are usually many participants of the financial products of Internet finance), the massive number of participants would have complex connections and interactions with each other as various nodes, and every node could become the spreading channel of risks. Hence, the conductivity and contagion of risks are therefore increased, and the systematic risk becomes even more prominent.

The prevention and solving of Internet financial risks need regulators to have systematic recognition and general control of the system at various stages and various nodes; and they need to strengthen the systemization and continuity of regulation. Therefore, in order to escape the constraint of traditional regulation surrounding individual finregs, finregs must start from the general level of the financial system, comprehensively evaluate the influence of various factors on the financial stability conditions, as well as implementing selection and application of the regulatory indicators and tools on a general level.

After the global financial crisis, international organizations, Central Banks, regulatory authorities, and academic circles engaged in profound reflection on this crisis. The failure of finreg, especially the lack of macro systematic arrangements for systematic risks, was considered the main cause of the financial crisis. The US, UK, and most EU countries began to reform their finreg systems, which were mainly to establish and improve the macro prudential systems framework.

At the beginning of 2009, the Bank for International Settlements defined "Macro Prudence" and proposed the use of macro prudential polices to solve the problems in the crisis such as "too big to fail," pro-cyclicality, flexible regulation, and low standards. The meeting documents and appendices finally formed at the G20 Pittsburgh Summit in September 2009 began to formally quote the proposals of "macro prudential management" and "macro prudential policy."

In November 2010, the G20 Seoul Summit further formed the basic framework of "macro prudential policy" and this framework reflected on the counter-cyclical policy system, mainly including (1) the capital requirements, liquidity requirements, leverage rate requirements, and appropriation rules on banks; and (2) the special requirements, accounting standards, and collective clearing of derivative product transactions on the important institutions for the system, etc. The framework was approved by the G20 Summit and the various member nations were required to implement it.

As a G20 member nation, China emphasizes the prevention of systematic financial risks and maintenance of financial stability. The Communique of the 5th Plenary Session of the 17th Central Committee of the CPC passed on 18 October 2010 proposed to "Establish the counter-cyclical financial macro prudential administrative framework." The "Thirteenth

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

Five Year Plan" passed at the 5th Plenary Session of the 18th Central Committee of the CPC also stated that in the coming five years, China would strengthen the construction of the financial macro prudential management system. The PBC began to research for policies and measures to strengthen macro prudential administration from mid-2009. In 2011, the PBC formally introduced the differentiated reserve dynamic adjustment mechanism, which linked the deposit reserve fund of financial institutions with their capital adequacy rate and asset quality conditions or other related indicators, so as to curb the financial institutions with insufficient capital adequacy rate and poor asset quality from expanding, and to produce the effect of strengthening liquidity management and guiding the rational release of credit loans through the integration of total volume adjustment and individual risk differences.

With the development and changes in economic trends and the financial industry, the PBC continues to improve the policy framework. From 2016, it upgraded the differentiated reserve fund dynamic adjustment mechanism to the macro prudential appraisal (MPA) system, which implements multidimension guidance on the behaviours of financial institutions in seven major aspects, including capital and leverage, assets and liabilities, liquidity, pricing behaviour, asset quality, cross-border financing risk, and implementing the situation of credit policy. Along with the improvement in the MPA system, the PBC has been expanding the coverage of the MPA. From 3 May 2016, the PBC has expanded the pilots for the macro prudential administration of local -currency and foreign-currency integrated full-calibre cross-border financing to all financial institutions and enterprises across China. In the first quarter of 2017 when the evaluation was made, off-balance-sheet finance began to be formally included into the scope of broad-sense credit. It was planned, since the evaluation in the first quarter of 2018, for negotiable certificates of deposit within a year issued by banks with an asset scale of over RMB 500 billion to be included into the MPA interbank liability ratio indicator for assessment.

Nowadays, a complete macro prudential policy framework has become the basic direction and core content of global financial system reform. For China, which is facing the adjustment of its mode of economic growth and slowing economic growth, using macro prudential management to prevent systematic financial risk and maintain financial market stability becomes especially important. Currently, although China has made some progress in the establishment of a macro prudential policy framework, there is still much to be done in the aspects of policy tools, coverage scope, regulatory co-ordination, implementation efficiency, etc., mainly including the following.

The first need is to reasonably set a transition period and gradually improve the macro prudential evaluation system. The PBC should diligently summarize experiences, improve and complete the indicator composition, weight, related parameters, etc. based on the MPA implementing situation and macroeconomic regulatory needs; continue to fully implement the macro prudential evaluation work, and gradually and steadily promote it; include more financial activities in macro prudential management when the conditions are appropriate, so as to achieve the purposes of guiding the reasonable growth of monetary credit and social financing scale; strengthen the prevention of systematic financial risks; and enhance the level of financial service in serving the real economy.

The second need is to establish the timely and effective financial information sharing mechanism and risk notification mechanism. Under the collective co-ordination and instruction by the FSDCSC, China should gradually establish a data collection system that covers all financial institutions (including financial holding companies), financial infrastructures, various investment and financing activities, Internet finance, cross-border financial transactions, and even private finance, etc., and promote the information and resource sharing level between departments. China should steadily establish a risk identification and market turmoil notification mechanism, form a mechanism of co-ordinating various regulatory departments for times of turmoil, and enhance the ability of identifying and treating the cross-spreading of risks between different markets.

The third need is to develop appropriate co-ordination between macro prudential policy and monetary policy. China has made a preliminary implementation of the dual-pillar financial regulatory framework of "monetary policy+macro prudential policy" introduced by the PBC. Monetary policies mainly target macroeconomic and total demand management, and emphasize on economic growth and stability of price levels; while macro prudential policies directly and intensively affect the financial system itself, curb the excessive expansion of leverage and pro-cyclical behaviours and emphasize the maintenance of financial stability. The two fully co-ordinate with each other, and will mutually supplement and strengthen each other. This is desirable in developing effective finreg, preventing systematic risks, and creating a suitable financial environment.

The fourth need is to strengthen the co-ordination between macro prudential management and micro prudential regulation. Macro prudential management has regard to the entire financial system and has the objective of curbing systematic risks and macroeconomic cost generated from financial turmoil. This is the most essential difference between it and micro prudential regulation. The key to macro prudential management lies in curtailing the transmission of market risks, minimizing the expansion of systematic risks and relieving the deterioration of systematic risks, and preventing the explosion of systematic financial risks, as well as aiding the important financial institutions in the system under some circumstances, etc. After the regulation of the financial institutions important to the system have entered within the scope of macro prudential management by the PBC, the CBIRC and the CSRC will implement micro prudential regulation, which shall emphasize access regulation, behavioural regulation, and market risk regulation, and will establish counter-cyclical regulatory mechanisms and indicators so as to block, minimize, and prevent the spillover of risks. The micro prudential regulatory indicator system and indicator system of macro prudential policy will have connection and convertibility in functions. The new "One Bank and Two Commissions" and local financial regulatory commissions will, on the basis of a clear division of duties, enhance regulatory co-ordination efficiency, form a joint force in prevention of systematic risks, and protect financial stability.

6.3 Regulatory model innovation: the transition from a traditional model to a smart model, and from traditional regulation to regulatory technology

Finance itself is a high-risk field; Internet finance with the characteristics of multiple nodes and networked contacts further accelerates the accumulation and mutual transformation of various risks, expands the contagious surface of financial risks, and greatly increases the hazard of amplifying risks into systematic risk. For the identification, tracking, prevention, and solving of Internet financial risks, the traditional regulatory model proved to be inadequate because traditional regulation, which has the characteristics of indicator management, window instruction, policy intervention, etc., is basically static objective management. To implement effective regulation on Internet finance that is reflected in the form of "too many connections to fail"[58] and "too fast to fail,"[59] China must complete the transformation from traditional static regulation to smart and dynamic regulation.

[58] Too-interconnected-to-fail financial institutions are perceived to pose a substantial risk to financial stability. Regulators are particularly concerned that the failure of a very interconnected institution (maybe a fintech platform) would result in a large cascade of failures, making these banks "too interconnected to fail." See Gofman (2017), pp. 113–4.

[59] In traditional financial system risk prevention, the "too big to fail" is widely known but in Internet finance, transactions occur on the digital and virtually free space, and the intertwined relationship structure and big-data processing enable the transmission and computation of information and resources to be extremely fast and convenient, and extremely widespread. See Xu (2018), pp. 20–39.

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

The foundation of smart regulation is a cloud-based data platform that covers the entire markets of the financial system as well as a scientific, comprehensive, structured risk index system. The construction of such a smart information system and cloud-based data platform is the key for China's financial regulatory-model reform and enhancement of regulatory functions, and is an important technical guarantee of whether the new financial regulatory model and structure could effectively monitor, prevent, minimize (or reduce at least), and intervene in financial risks, so the computerization capability and cloud-based data platform of finance with reliable firewalls must be constructed as the most important financial infrastructure. In accord with Articles 31 and 37 of China Cybersecurity Law, the financial infrastructure, belonging to the critical information infrastructure as well, shall also meet the needs of network security evaluation and classified protection.

The affinity between Internet finance and fintech determines another direction of its regulatory-model innovation from traditional regulation to regtech. Just as its name implies, fintech means the integrated development between finance and technology.

As for what is "financial technology"? There is not any unified definition so far in the world. In March 2016, a core institution of global financial governance, the Financial Stability Board, issued a Report of Overview Description and Analytical Framework of Financial Technology, which made a preliminary definition of "fintech" at the international organization level for the first time:

> The term Fintech, which is the short form of the phrase Financial Technology, denotes companies or representatives of companies that combine financial services with modern, innovative technologies. As a rule, new participants in the market offer Internet-based and application-oriented products. Fintech generally aims to attract customers with products and services that are more user-friendly, efficient, transparent, and automated.[60]

There are connections and differences between fintech and Internet finance. The two are both established on the basis of in-depth integration between technology and finance, and in both, the summarization of modes of operations using various new technical means to provide, optimize, and innovate financial services. The difference is that fintech emphasizes on the supportive effect of technology on finance, while Internet finance places more emphasis on financial innovation against the background of "Internet Plus." In the broad sense, Internet finance has the characteristics of being high-tech, revolutionary, democratic, co-operative, and win-win.[61] These are extremely close to the essential characteristics of fintech. The scope of fintech is even wider; it could include big-data analytics, mobile finance, third-party payments, technical risk control, social media, crowdfunding, online lending platforms, Bitcoin, and other virtual currencies, even blockchain and other infrastructure application technologies, etc. In this sense, Internet finance is only a part of fintech, or a development stage of fintech.

The advancement of fintech has injected new vitality into financial development, but also brings new challenges to the financial regulatory level. When Internet finance and fintech provide financial services across different markets, institutions, and regions, the mutual correlation, penetration, and risk contagion between different businesses are intensified. With affected areas being wider, the information stream formed by them breaks the spatial and time limitation of risk conductivity and enables the risk-spreading speed to be faster. As finance with the wings of technology has a stronger, broader, and faster destructive force, the consequences of its impact on the financial system are even more difficult to predict. Looking into the operations of the China's main fintech

60 Dorfleitner et al. (2017), p. 5.

61 Xu (2016).

companies, as well as their parent tech companies, it is easy to prove that their business models are even more data-driven than those of their global competitors. This almost leads to a self-reinforcing cycle: using customer insights gained through their extensive range of services to better sell their products and services, collecting further data that ramp up the accuracy of their analysis, and providing even more targeted products and services.[62] They penetrate into their customers' life, which covers almost all aspects, gathering real-time data. It has to be noted that in the area of data protection, Chinese policy-makers and regulators are also issuing new regulations to safeguard customer data against misusage. Some of the most recent developments on this front include the promulgation of Personal Information Protection Law and Data Security Law.

Besides, financial regulatory departments would have to use modern technologies such as big data, cloud computing, artificial intelligence, etc. to be able to sense adequately the trend of financial risks and enhance the real-time realization of the collection, integration, and sharing of regulatory data in a timely manner to find potential problems such as irregular operation, high-risk transaction, etc. and enhance the accuracy of risk identification and effectiveness of risk prevention. In this sense, it is because of the combined force of Internet finance and fintech that regtech can enter into the front stage.

The concept of regtech was first proposed by the FCA,[63] which states that regtech means "[a]pplying new technology to current regulatory process, so as to promote the realization of more effective risk identification, risk measurement, regulatory requirements, data analysis, and other activities." Regtech will take the form of any tool, application, or platform that makes regulatory compliance more efficient through automated processes and reduction in costs.[64] Generally speaking, regtech represents the evolving trend of finreg in the future and should provide a solid foundation for supporting the development of the entire financial industry. Although regtech is currently still at its preliminary stage, it has begun to spread globally.[65]

The PBC publicly announced the establishment of the Financial Technology Committee (FTC) in May 2017 to strengthen the research planning and collective co-ordination of fintech work. Meanwhile, the PBC also stressed an intention to strengthen the application and practice of regtech through the FTC. This shows that the authority has fully recognized that while developing a strong fintech platform, the technical-driven regtech is also important. In May 2020, the first meeting of the FTC of the PBC for the year was held in Beijing. The meeting studied the theoretical research, planning guidance, and application practice of fintech, pointing out that it is necessary to implement the Fintech Development Program (2019–21), study the index system for the development of fintech, carefully do dynamic monitoring and comprehensive assessment, guide financial institutions to accelerate digital transformation, and continuously enhance technology.[66]

According to the Plan, the industry should adhere to the "two-handed grasp" of development and regulation and continue to promote fintech to move forward steadily in 2020. In order to realize the full application of technical means in regulatory activities, China's regulatory institutions themselves must adhere to the scientific attitude of keeping self-study: the first is to study technology. "Test-and-learn" is the attitude that modern financial regulators need to adopt. The technologies involved in regtech are unfamiliar for most

[62] Institut Montaigne (2021), p. 37.

[63] The FCA was created by the Financial Services Act, which enumerated the powers of the FCA and its counterpart, the Prudential Regulation Authority, which is in some ways like a hybrid of the Consumer Financial Protection Bureau and Securities and Exchange Commission, as its mandate includes consumer credit protection, broker-dealer oversight, insider trading, and market-abuse prosecutions. See Financial Services Act, 2012, cl. 21(UK).

[64] Madir (2019), p. 255.

[65] Wass (2017).

[66] People's Bank of China (2020b).

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

regulators in China, regardless of whether the regulators have been learning digitalization, forecasting to code regulatory materials, doing model analysis, and researching machine intelligence and big-data analytics: "The challenge here is twofold, not only encompassing empirically observed limitations to the effectiveness of legal rules, but also increasing of the potential for alternative techniques of policy implementations."[67] Regulators therefore need to advance despite difficulties and have persistence in learning technologies.

In January 2021, the FTC of the PBC convened a meeting to review its work done in 2020 in the area of fintech and to outline the work plans for 2021. According to the work plans, the following core tasks were outlined for 2021[68]:

1. Draw up a plan for fintech development in the new stage, accelerate financial digitalization, and leverage both technology and data to build a modern financial system adaptive to the development of digital economy.
2. Improve fundamental rules and standards for fintech regulation, develop the system governing fintech ethics, and enhance the prudential regulation of fintech innovation.
3. Release guidelines on data capacity-building of the financial sector, launch pilot programmes for comprehensive application of financial data, and aim for proper data governance, application, and protection.
4. Launch demonstrative projects to encourage fintech to empower rural revitalization, speed up the construction of a barrier-free financial service system, and bridge the digital gap between different regions and groups.
5. Deepen the application of regtech, build a national fintech risk monitoring centre, and develop a joint risk management mechanism.

Second, the regulators and the regulated should learn from each other, and then communication and co-operation among stakeholders such as government, regulatory authorities, traditional financial institutions, the fintech sector, credit institutions, and other related entities is further required. Following the same line, Pan Gongsheng, deputy governor of the PBC, wrote in an article for the *Financial Times* that "we are refocusing non-bank payment institutions on payments by separating out the clearing function into a newly established financial infrastructure" and also "striving to provide a level playing field for all companies, foreign-owned and private alike, by opening up the sector."[69] Besides, anti-monopoly is worth noting as well. China is getting serious about its crackdown on monopolies (including but not limited to the financial sectors) and has elevated the position of its market regulator's antitrust investigative unit. On 18 November 2021, Wang Yong, the State Councillor and Director of the Anti-Monopoly Committee of the State Council, attended the listing ceremony of the State anti-Monopoly Bureau, emphasizing at the event how necessary he believes it is to strengthen fairness of competition.[70] In the same week, state-owned Citic and Chinese search engine giant Baidu were each fined RMB 500,000 for not notifying anti-monopoly regulators before establishing the joint venture, as one of the 43 antitrust violations announced by the State Administration for Market Regulation.[71] It could be foreseen that the financial compliance based on communication and co-operation might focus on anti-monopoly as well.

The third need is dynamic learning. Internet finance and fintech have brought continuous changes to financial activities, organizations, and business models; their internal risk

[67] Morgan & Yeung (2007), p. 4.
[68] Moody's Analytics (2021).
[69] Pan (2021).
[70] Dezan Shira & Associates (2021).
[71] Caixin Global (2021).

https://doi.org/10.1017/als.2022.7 Published online by Cambridge University Press

distribution is also in an unstable state. Continuous attention, therefore, must be paid to these new activities; and the existing regulatory mechanisms and models should be kept improving, especially when technologies such as artificial intelligence or blockchain themselves are in constant change, with their financial applications also being diversified. This means regulators need to keep learning in a dynamic and developing environment. To summarize, in the process of dynamic and interactive learning, the regulatory schemes and development steps of fintech enterprises will be mapped, and the win-win situation between security and efficiency, financial stability, and the promotion of innovation will be realized through the constant simultaneous operation between the twins of regtech and fintech.

7. Conclusion

Internet finance, or fintech, as an important representative of the "third wave," is an element of the virtual economy. It supports the developments of the offline economy and connects the online and offline sectors. Fintech's intrinsic attributes mean that it is part of the financial industry. Practices in the West and East have proved that modern finance continues to require oversight and fintech in its current form is not yet a sanctuary for financial innovative activities.

In the context of Chinese Internet finance or fintech development and regulation, the three stages of regulatory developments are a reflection of how Chinese regulators assiduously seek the balance for the Financial Services Regulatory Triangle for their overall supervision functions. This article argues that the partial but astonishing failure of the Chinese regulators in Internet finance regulation is proof that the Regulatory Triangle does not have to be in its current form to appropriately perform their regulatory functions. Due to the gradual enrichment of fintech forms and growing of related regulatory technologies, it can be expected that the Regulatory Triangle will turn into a dynamic-balance equilateral triangle with appropriate oversight. Given the Chinese institutionalized regulation framework, three suggestions were made in this article, hoping that the regulators could lead market participants with "a pillar of cloud by day and a pillar of fire by night"[72] to give innovative market players light on the path they are to take. It is also argued that the effective approach to regulation could help regulatory agencies to digitize reporting and supervisory processes, resulting in more efficient and proactive monitoring of risk and compliance at financial institutions, when regulators can steer the integration between macro prudential management and micro prudential regulation by proper regulatory-sandbox experiments and establish a harmonious triangle of fintech, finreg, and regtech by using innovative technology to support financial innovation.

Acknowledgments. We would like to thank Dr Eva Huang from the University of Sydney Business School and peer reviewers for reading drafts and helpful feedback.

References

Adams, William, Liran Einav, & Jonathan Levin (2009) "Liquidity Constraints and Imperfect Information in Subprime Lending." 99 *American Economic Review* 49–84.

Australian Securities & Investments Commission (2021) "Fintech Regulatory Sandbox," https://asic.gov.au/for-business/your-business/innovation-hub/regulatory-sandbox/ (accessed 10 August 2021).

Bohoslavsky, Juan Pablo (2016) "UN Report: Financial Complicity: Lending to States Engages in Gross Human Rights Violations." 50 *Texas International Law Journal* 763–80.

Brescia, Raymond H. (2016) "Regulating the Sharing Economy: New and Old Insights into an Oversight Regime for the Peer-to-Peer Economy." 95 *Nebraska Law Review* 87–145.

[72] See Bible Exodus 13:17–22.

Caixin Global (2021) "Baidu and State-Owned Citic Bank Fined Combined 1 Million Yuan for Antitrust Violations," https://www.caixinglobal.com/2021-11-23/baidu-and-state-owned-citic-bank-fined-combined-1-million-yuan-for-antitrust-violations-101809078.html (accessed 25 November 2021).
China Economic Net (2018) "A Typical Case of False Gold False Advertising in May 2018, PPDAI, Yixin Is on the List," http://finance.ce.cn/rolling/201806/08/t20180608_29381967.shtml (accessed 10 August 2021).
DBS, EY (2016) "The Rise of Fintech in China: Redefining Financial Services," https://www.finextra.com/finextra-downloads/newsdocs/china-fintech-lowres.pdf (accessed 20 November 2021).
Dezan Shira & Associates (2021) "China Sets Up New Anti-Monopoly Bureau," https://www.china-briefing.com/news/china-sets-up-new-anti-monopoly-bureau-strengthens-antitrust-investigation-capacity/ (accessed 25 November 2021).
Dorfleitner, Gregor, Lars Hornuf, Matthias Schmitt, & Martina Weber (2017) *Fintech in Germany*, Cham: Springer International Publishing AG.
Dorn, James A. (2008) "Creating Financial Harmony: Lessons for China." 28 *Cato Journal* 535–54.
European Commission (2016) "Crowdfunding in the EU Capital Markets Union," https://ec.europa.eu/info/sites/default/files/crowdfunding-report-03052016_en.pdf (accessed 20 November 2021).
European Commission (2018) "Fintech Action Plan: For a More Competitive and Innovative European Financial Sector," https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0109 (accessed 20 November 2021).
Financial Stability Board (2019) "Fintech and Market Structure in Financial Services: Market Developments and Potential Stability Implications," https://www.fsb.org/wp-content/uploads/P140219.pdf (accessed 20 November 2021).
Finfextra Research Ltd. (2016) "A Roadmap for Fintech Standards: Executive Report," https://www.bsigroup.com/LocalFiles/en-GB/PAS/Homepage/FIN_BSI_short_final.pdf (accessed 10 August 2021).
Gofman, Michael (2017) "Efficiency and Stability of a Financial Architecture with Too-Interconnected-To-Fail Institutions." 124 *Journal of Financial Economics* 113–46.
Institut Montaigne (2021) "China's Fintech: The End of the Wild West," https://www.institutmontaigne.org/ressources/pdfs/publications/china-fintech-end-of-wild-west-note.pdf (accessed 10 August 2021).
Jao, Nicole (2019) "China's Online P2P Lending Industry Is Undergoing a Massive Shake Out," https://technode.com/2019/02/21/chinas-online-p2p-lending-industry-is-undergoing-of-a-massive-shake-out/ (accessed 10 August 2021).
Jiang, Siqi (2018) "Internet Finance for Commercial Bank Development and Countermeasures of Industrial and Commercial Bank of China," https://www.theseus.fi/bitstream/handle/10024/147410/Siqi%20Jiang%20thesis–pdf.pdf?sequence=1&isAllowed=y (accessed 20 November 2021).
Liu, Peng (2015) "Campaign-Type Regulation and Regulatory-Type Nation Construction: Based on Case Research of Special Remediation Actions of Food Safety." 12 *China Administrative Management* 118–24.
Lu, Caimei, & Lu Zhang (2018) "Research on Risk Factors Identification of P2P Lending Platforms." 8 *American Journal of Industrial and Business Management* 1344–57.
Lu, Jianbo (2017) "Appearance of Effect of Special Remediation of Internet Finance," *Financial Investment News*, 5 January.
Madir, Jelena (2019) *Fintech: Law and Regulation*, Northampton: Edward Elgar Publishing.
Mann, Ronald J. (2004) "Regulating Internet Payment Intermediaries." 82 *Texas Law Review* 681–716.
Mason, Zachary Adams (2016) "Online Loans Across State Lines: Protecting Peer-to-Peer Lending through the Exportation Doctrine." 105 *Georgetown Law Journal* 217–53.
Moody's Analytics (2021) "Fintech Committee of PBC Outlines Work Plans for 2021," https://www.moodysanalytics.com/regulatory-news/Feb-02-21-Fintech-Committee-of-PBC-Outlines-Work-Plans-for-2021 (accessed 28 February 2022).
Morgan, Bronwen, & Karen Yeung (2007) *An Introduction to Law and Regulation: Text and Materials*, Cambridge: Cambridge University Press.
National Internet Finance Association of China (2018) "Special Rectification of Internet Financial Risks Continues to Advance," http://www.nifa.org.cn/nifa/2961652/2961656/2973311/index.html (accessed 10 August 2021).
Pan, Gongsheng (2018) "Re-Use The Internet Financial Risk Special Rectification in One to Two Years," http://www.xinhuanet.com/finance/2018–07/10/c_1123102980.htm (accessed 10 August 2021).
Pan, Gongsheng (2021) "How China Is Tackling Fintech Risk and Regulation," https://www.ft.com/content/5209685c-aa8e-4f33-92d0-81f9c7a29b3c (accessed 10 August 2021).
People's Bank of China (2014) "Annual Report 2013," http://www.pbc.gov.cn/eportal/fileDir/image_public/UserFiles/chubanwu/upload/File/%E7%9B%AE%E5%BD%95%E5%8F%8A%E6%AD%A3%E6%96%87.pdf (accessed 10 August 2021).
People's Bank of China (2019) "The Development Program of Fintech (2019–2021)," http://www.pbc.gov.cn/zhengwugongkai/4081330/4081344/4081395/4081686/4085169/2019090617242730910.pdf (accessed 20 November 2021).

People's Bank of China (2020a) "PBC Deputy Governor Pan Gongsheng Answers Press Questions on Regulatory Talks with Ant Group," http://www.pbc.gov.cn/en/3688110/3688172/4048269/4156979/index.html (accessed 10 August 2021).
People's Bank of China (2020b) "The People's Bank of China's Fintech Committee Holds Its First Meeting of 2020," https://www.financialnews.com.cn/jg/dt/202005/t20200513_190712.html (accessed 10 August 2021).
Segal, Miriam (2015) "Peer-to-Peer Lending: A Financing Alternative for Small Businesses," https://www.sba.gov/sites/default/files/advocacy/Issue-Brief-10-P2P-Lending.pdf (accessed 28 February 2022).
Sohu.com (2020a) "How about the P2P Loans as 5,970 P2P Lending Platforms has Completely Vanished?," https://www.sohu.com/a/435466900_175648?sec=wd (accessed 10 August 2021).
Sohu.com (2020b) "How Does Fintech Play Its Role in Covid-19 Period," https://www.sohu.com/a/371964767_757185 (accessed 10 August 2021).
Sohu.com (2020c) "Say Goodbye to P2P: The P2P Lending Platforms Has Completely Vanished," https://www.sohu.com/a/435010689_100010466 (accessed 10 August 2021).
Sohu.com (2021) "Ant Group's A+H Share IPO Is Postponed: What Message Does Ant Group Send Through Its Apology?," https://www.sohu.com/a/429505961_120249746 (accessed 10 August 2021).
Verstein, Andrew (2011) "The Misregulation of Person-to-Person Lending." 45 *UC Davis Law Review* 447–530.
Wangyi Finance (2017) "Local Financial Supervision Offices Upgraded to Bureaus to Strengthen the Quasi-finance Regulation," https://www.163.com/money/article/D0MMDQIH002580S6.html (accessed 28 February 2022).
Wangyi Finance (2021) "The IPO of JD Digits on STAR Market Was Withdrawn by the Company," https://www.163.com/money/article/G6JOF4V200259FVR.html (accessed 20 November 2021).
Wass, Sanne (2017) "Regtech: The Revolution Has Begun," https://www.gtreview.com/magazine/volume-15issue-5/regtech-revolution-begun/ (accessed 28 February 2022).
Wu, Xiaoqiu (2017a) "China's Financial Situation Reform: Logic and Options." 38 *Finance, Trade & Economics* 33–48.
Wu, Yen-Te (2017b) "Fintech Innovation and Anti-Money Laundering Compliance." 12 *National Taiwan University Law Review* 201–58.
Xie, Ping, & Chuanwei Zou (2012) "Research on Internet Finance." 12 *Journal of Financial Research* 11–22.
Xie, Ping, Chuanwei Zou, & Haier Liu (2016) "The Fundamentals of Internet Finance and Its Policy Implications in China." 9 *China Economic Journal* 240–52.
Xinhua Net (2018) "Xi Jinping Triggers Reform with Innovation," http://www.xinhuanet.com/politics/2018–08/13/c_1123260544.htm (accessed 10 August 2021).
Xu, Duoqi (2016) "Humble Opinion on the Definition of 'Internet Finance'," *Wen Hui Bao*, 1 April.
Xu, Duoqi (2018) "Social Characteristics of Internet Financial Risks and Regulatory Innovation." 40 *Chinese Journal of Law* 20–39.
Xu, Duoqi, Shiya Tang, & Dan Guttman (2019) "China's Campaign-Style Internet Finance Governance: Causes, Effects, and Lessons Learned for New Information-Based Approaches to Governance." 35 *Computer Law & Security Review* 3–14.
Xu, Jianguo (2017) "China's Internet Finance: A Critical Review." 25 *China & World Economy* 78–92.
Yicai.com (2016) "P2P Regulatory Storm Is Approaching, and Shenzhen Stop P2P Lending Platforms Start-Ups and Regulate Existing Platforms," *Economic Information Daily*, 12 January.
Zhu, Maoran, & Xin Liu (2018) "Study on Internet Finance Credit Information Sharing Based on BlockChain Technology." 14 *Asian Social Science* 81–7.

Cite this article: Xu, Duoqi, John Taylor, C., and Ren, Yuanda (2023). Wait-and-See or Whack-a-Mole: What Is the Best Way to Regulate Fintech in China? *Asian Journal of Law and Society* **10**, 433–462. https://doi.org/10.1017/als.2022.7