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Editorial

FinTech in China: from the shadows?

 

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Abstract
In July 2015, China's peer-to-peer (P2P) lending platforms counted 2,136, with settlements of about RMB82.5 billion transactions in that single month, making it the country with the most P2P platforms in the world. As the sector went from one platform in 2007 to more than an estimated 2,000 platforms currently, the P2P sector went from too-small-to-care to too-big-to-fail, attracting a new level of regulatory scrutiny. Ultimately, this systemic shift offers China a regulatory and market reform opportunity with profound consequences for the country and the developing world. Indeed, the Internet Finance Guidelines released in July 2015 indicate that the country is creating both a financial market infrastructure and a regulatory framework that is built with financial technology (FinTech) in mind.

1. Introduction

In 1979, China began the transformation of its economy and modernization of its financial sector. However, ever since, its credit markets have suffered from allocation inefficiencies that particularly affect small and medium-sized enterprises (SMEs). In a time of slowing economic growth, this misallocation of capital has important implications, since SMEs represent 80% of the economic output of the country while they only receive 20% of the credit originated by banks. This mismatch has spurred the growth of the shadow banking industry in China, an informal sector performing credit allocation between lenders, trying to move liquidity from savings accounts with yields limited by restrictive rate ceilings[2] and non-state firms looking for the much needed capital to finance their growth. Since 2009, the authors argue that China's shadow banking industry has transited its activities toward P2P lending channels. In just a few years, new FinTech has allowed a trillion-dollar and decade-old industry to emerge at the beginning of the second decade of the 21st century.

In July 2015, China's P2P lending platforms counted 2,136, with settlements of about RMB82.5 billion (approximately U.S.$13.4 billion) transactions in that single month.[3] More worryingly, 130 closed between January and March 2015 and more than 1,250 are regarded at risk by local credit rating agencies.[4] The speed at which this sector emerged has prevented regulators from drafting adequate legislation to ensure consumer and prudential safeguards, while at the same time, underpinning development of the market. However, in March 2015, the Chinese Banking Regulatory Commission (CBRC) announced the enactment of new capital requirements for P2P platforms. The sector went from light-touch regulation with low barriers to entry to one where actors may need to set aside more than RMB30 million in regulatory capital.[5]

This change of approach by regulators reflects that the P2P sector in China has reached systemic size. From 2007 to 2015, the sector went from too-small-to-care to too-big-to-fail.[6] Yet, P2P lending performs an important allocation role, especially for SMEs that have constrained credit access. As a result, and going forward, a balancing act needs to be performed by the legislators and regulators.

Ultimately, this systemic shift caused by the P2P sector offers China a regulatory and market reform opportunity with profound consequences for the country and the developing world. Indeed, the Internet Finance Guidelines, released in July 2015, indicate that the country is creating both a financial market infrastructure and a regulatory framework that is built with FinTech in mind. China would effectively transform its last-mover advantage in the field of financial reform into a first-mover advantage,[7] by setting global standards for financial market and regulatory developments that can be looked upon by developing markets in South-East Asia and Africa.

2. Banking in China

A discussion of the Chinese financial system necessarily starts by highlighting the role of the state. This is warranted by the function of the Chinese Communist Party (CCP) in the Chinese economy – it is at the same time "the regulator, the financier, the banker, the business man, the guarantor and the employer."[8]

However, not all banks are state-owned. Indeed, Chinese banks have faced successive waves of reform. The start of this gradual process began in 1978 with the end of the mono-bank model,[9] whereby the People's Bank of China (PBOC) comprised the entire banking system. Today, the banking landscape is composed of wholly-owned state banks,[10] equitized commercial banks, local banks and joint stock commercial banks.[11] In 2007, four foreign

2 In practice, rates are often negative, since the interest payable is lower than the inflation rate.
3 Data is collected from www.wangdaizhijia.com, a Chinese website providing all sorts of information on P2P lending in China. For the P2P data, see http://shuju.wangdaizhijia.com/industry-type-0-7-2015.html.
4 Chen, J., 2015, "Internet loan alarms Dagong with 1,250 red flags," Bloomberg, 13 March, available at http://www.bloomberg.com/news/articles/2015-03-12/internet-loan-alarms-dagong-with-1-250-red-flags-china-credits
5 Ren, D., 2015, "China mulls tighter rules on booming P2P lending business," South China Morning Post, 17 April, available at <http://www.scmp.com/business/china-business/article/1744711/china-mulls-tighter-rules-booming-p2p-lending-business>
6 See Arner, D. W., and J. Barberis, 2015, "Regulation FinTech innovation: a balancing act," 1 April, available at http://www.law.hku.hk/aiifl/regulating-fintech-innovation-a-balancing-act-1-april-1230-130-pm/
7 This idea is explored in more detail in ibid.
8 Cousin, V., 2011, Banking in China, Palgrave Macmillan Studies in Banking and Financial Institutions, 2nd edition
9 Ibid. 4.
10 The Agricultural Development Bank of China (ADBC), The China Development Bank (CDB) and the China Exim Bank (CEB).
11 Martin, M. F., 2012, "China's banking system: issues for Congress," Congressional Research Service

banks[12] were the first to receive full licenses to freely operate within China,[13] while most recently, following the introduction of a new deposit insurance scheme in 2015, we have witnessed the emergence of five new online banks owned by private capital (e.g., WeBank or MyBank from Tencent and Alibaba, respectively).[14]

Against this background toward a more heterogeneous and liberalized banking sector, state impact in many respects remains constant. The fact that 80% of bank CEOs and 54% of senior executives [Cousin (2011), p. 54] are CCP members and appointed by the CCP [Martin (2010), p. 26], provides some notion of the pervasiveness of state involvement in the banking system. Another statistic to help visualize the situation is biased credit allocation, benefiting mainly state-owned enterprises (SOEs). The latter account for only 35% of GDP and are responsible for 20% to 30% of overall economic growth, yet they capture more than 80% of all loans made [Cousin (2011), p. 84]. In this context, the rise of P2P platforms is enhancing the speed at which two main stakeholders are being disintermediated, namely the primacy of the formal banking system in originating loans, and therefore, by extension, the state itself and its capacity to use banks as policy tools.

2.1 Political intervention and the allocation of money

While the inclination of the state to control banks is by no means new and can be seen in other jurisdictions such as Japan, France and Germany,[15] state interference causes a range of problems, ranging from inefficient credit allocation within the economy, accountability issues[16] and even in some cases, financial crises. Indeed, part of the blame for the 1997 Asian Financial Crisis was attributed to "crony capitalism," whereby loans were made on political considerations, as opposed to commercial sense.[17]

As it stands, Chinese banks today are in a hybrid position between making loans based solely on commercial logic on the one hand (and thus benefiting the non-state sector) and following directions that may only be based on political or personal motives, on the other [Martin (2010), p. 1].

This conflict in policy of loan allocation is echoed at the regulatory level. The PBOC — which was made responsible for the stability of the financial sector following the 1995 Central Bank Law[18] — has a clear line in requesting that banks increase the availability of loans to SMEs [Cousin (2011), p. 124]. However, the CBRC, created in 2003, is more focused on the safety and soundness of individual institutions. As a result, it tends to focus on the avoidance of non-performing loans (NPLs).

The latest example of the impact of government intervention on shadow banking occurred in the wake of the 2008 global financial crisis (GFC) in the context of a massive Chinese economic stimulus. Indeed, the shadow banking sector was stimulated by a CNY4 trillion package (approximately U.S.$570 billion) injected by the Chinese Government in an objective to prevent recession and maintain high levels of domestic growth.[19] As government interventionism slowed down and the size of the stimulus package decreased, the public's demand for credit could not be satisfied by the regular banking system alone. This in turn increased the demand for banking alternatives and greatly boosted shadow banking activities.

In this respect, it is perhaps important to note that the development of the P2P sector in China, similarly to that in the U.S., witnessed an increase from 2008.[20] However, the difference is that while the U.S. was faced with an important credit supply shortfall, forcing people to seek alternative lending channels, China's P2P sector can attribute its growth to the fact that people were looking to maintain the situation of credit abundance that followed the stimulus program of the Government.[21]

12 They are: HSBC, Standard Chartered, Bank of East Asia and Citi.
13 Cheng, J., 2012, China: a new stage of development for an emerging superpower, City of University Hong Kong Press, 336
14 Xinhua, 2015, "Can private banks survive and thrive?" China Daily, 20 May, available at <http://www.chinadaily.com.cn/china/2015-05/28/content_20848289.htm>
15 Cox, S., 2012, "Pedalling Prosperity' The Economist Special Report (May 2012) available at: <http://www.economist.com/node/21555762> accessed 24 Aug 2013.
16 See 1.2)
17 Arner, D. W., 2007, Financial stability, economic growth, and the role of law, Cambridge University Press, 225
18 Bell, S., and H. Feng, 2013, The rise of the People's Bank of China. The politics of institutional change, Harvard University Press
19 Guo, L., and D. Xia, 2014, "In search of a place in the sun: the shadow banking system with Chinese characteristics," European Business Organization Law Review 15:3, p. 398
20 Please refer to the graph capturing how 2008 marks a tipping point. Source: Renton, P., 2012, "Peer to Peer lending crosses U.S.$1 billion in loans issued," Tech Crunch, 29 May, available at < http://techcrunch.com/2012/05/29/peer-to-peer-lending-crosses-1-billion-in-loans-issued/
21 Arner, D. W., J. Barberis and R. Buckley, 2015, "The evolution of FinTech: A new post-crisis Paradigm?" October

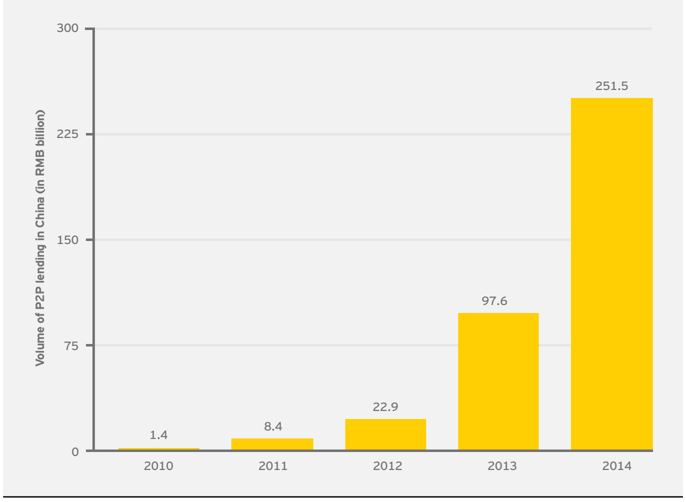

Figure 1: Volumes of P2P lending in China (in RMB billion)
Source: iResearch (showed during HKIFA conference)

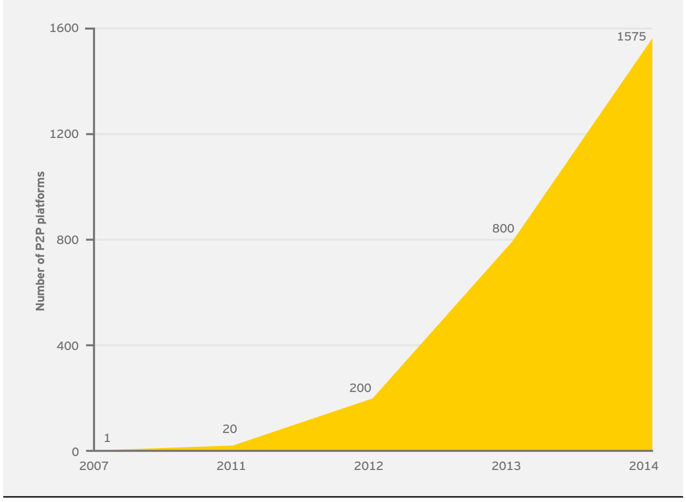

Figure 2: Number of P2P platforms
Source: wangdaizhijia.com, end of 2014

2.2 Preparing for the necessary liberalization of finance

For many years, China was, therefore, in a situation where it had to strike a balance. On the one hand, it needs to maintain economic growth, which requires financial reform to better allocate savings into the financial system. On the other hand, the liberalization process must prevent the creation of various asset bubbles that would affect the real economy if they were to burst.[22] This dilemma is reflected in the form of former Premier Wen Jiabao's demands for reform and PBOC Governor Zhou Xiaochuan's concerns regarding financial stability [Martin (2010), p. 44]. So far, the decision has been to compromise. Cousin (2011, p. 58) refers to an analysis conducted by McKinsey Global Institute in 2006, which estimated that the foregone GDP growth resulting from an inefficient financial sector was 13%.

It transpires that this "suboptimal" growth level is the result of a conscious choice. The factions that are prone to liberalization and the ones that prefer stability have "settled for a compromise: a slightly lower rate of growth, but more stability which do not put the financial resources unnecessarily at risk" [Cousin (2011, p. 58)]. However, as the economy slows down, the capacity of showing a suboptimal efficiency path for China's financial market is not sustainable. Indeed, it was pointed out that failing to adequately reform China's financial system could jeopardize future economic growth.[23]

In other words, the combination of slower economic growth as well as the rise of P2P lending platforms in China is challenging the extent to which this balancing act can be maintained. The gatekeepers of financial liberalization, namely the state power to grant banking charters or various licenses, are losing their effectiveness. Since 2007, the barriers to entry into China's financial system have been bypassed by private individuals and internet finance companies [Arner et al. (2015)] delivering directly to the public and SMEs more than RMB251 billion of credit in 2014.

One may argue that this is nothing new, indeed the raison d'etre of shadow banking is precisely that of providing financial products and services to the public outside of a traditional and supervised regulatory framework. As discussed in the

22 When credit becomes cheaper, the investment decision threshold of individuals and corporates also changes. As the cost of capital reduces, they are willing to take on more risky and low yielding projects that they may not have if the cost of borrowing was high. This in turn facilitates the appearances of a credit bubble, as it was seen in the U.S. subprime market.

23 This idea is explored in more details in Zhou, W., D. W. Arner and R. P. Buckley, 2015, "Regulation of digital financial services in China: from last mover to first mover?" available at <ssrn.com/abstract=2660050>

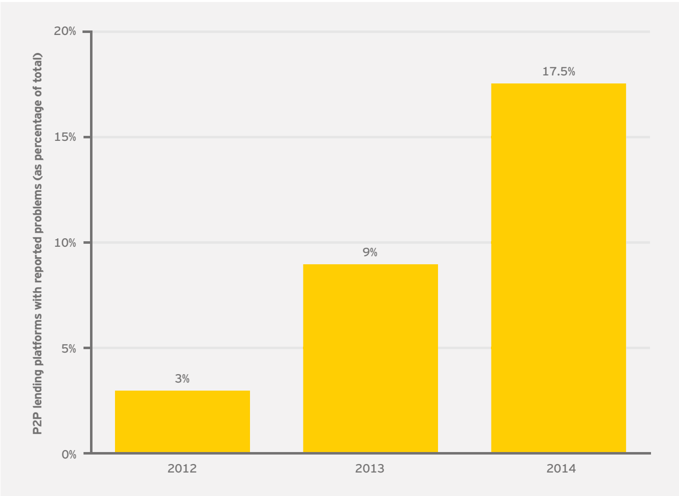

Figure 3: P2P lending platforms with reported problems (as percentage of total)
Source: wangdaizhijia.com (from HKIFA conference)

introduction, this industry has been operating in China for decades. However, this misses the point. The noteworthy aspect is to understand why this traditional and informal parallel banking system, that Tsai calls "back-alley banking," has recently been able to come to the light.[24] In less than seven years, China has witnessed the emergence of more than 2,000 P2P lending platforms with a total loan origination capacity of RMB251 billion (Figure 1). To put this in perspective, in 2007, China only had one P2P platform (Figure 2). This exponential growth rate of the P2P industry in China has directly challenged the Government's capacity to gradually implement liberalization policies within the banking sector. While the regulators, Government and SOEs were "crossing the river by touching the stones," the private sector, led by internet finance companies, has been literally leapfrogging their traditional regulatory and banking counterparts.

One may argue that, irrespective of its origin, financial liberalization is positive since it is expected to both support growth and increase job prospects.[25] It needs to be remembered that the latest crisis has shown the negative effect of inadequate regulation, which destroyed more jobs than those saved and created in the 1980s.[26]

There is, therefore, value in government intervention that is highly targeted and precise. Even more so, because change within the financial sector will affect a fragile economic, social and political equilibrium. Indeed, even the P2P sector itself is currently experiencing an increased amount of defaults and closures, as can be seen in Figure 3.

While the initial spur of financial liberalization was driven by the crowd itself, as the industry increasingly creates a systemic risk within the financial system, this needs to be effectively addressed by the regulators. It is neither desirable nor possible for the P2P sector to continue its development in isolation from government policies and regulatory considerations. This is because the current positive economic impact brought about by efficient credit allocation can be lost as the industry creates systemic risk. Therefore, one can expect that this sector, which was thus far unregulated in China, will now be fitted within the broader context of financing within financial markets.[27] This forms the subject of the following section.

3. A window of opportunity

The misallocation of credit within the Chinese economy has been endemic for decades, and this has led individuals and corporate parties to create a parallel and nonofficial network performing the credit intermediation that they were otherwise lacking. While these off-line networks were called "non-bank finance" prior to 2008, following the GFC, regulators have been increasingly focused on the potential risks of these sorts of activities as "shadow banking." In the context of China, nonbank finance and shadow banking thus capture both the essential elements that we now see in P2P – the need for alternative forms of financing to support non-state growth, particularly among SMEs, while at the same time, addressing potential risks to consumers and the financial system.[28]

24 Tsai, K. S., 2004, Back-alley banking: private entrepreneurs in China, Cornell University Press
25 Avgouleas, E., 2012, Governance of global financial markets: the law, the economics, the politics, Cambridge University Press, 106

26 Ibid. 60.
27 This relates to the creation of a tiered regulatory regime, topic covered by Zhou, W., D. W. Arner and R. P. Buckley, 2015, "Regulation of digital financial services in China: from last mover to first mover?" available at <ssrn.com/abstract=2660050>
28 In other words, China is witnessing the rise of Shadow Banking 2.0. For more of the historical analysis on the use of technology within the financial services sector. please refer to Arner et al. (2015).

For the Chinese Government, the emergence of P2P lending offers a unique opportunity that solves a decade-old tension, which thus far prevented the formalization of the shadow banking industry.[29] As will be detailed below, the various routes toward market reforms had the potential to generate negative externalities that would outweigh the initial objectives. In essence, because both the shadow and the formal banking sector provide a vital lifeline of credit to SMEs and SOEs respectively, any financial market reform had the potential of disrupting a fragile equilibrium. More specifically, with respect to shadow banking, the fact that it was informal and "off-line" generated a level of information asymmetry that made it difficult to evaluate the potential consequences of bringing the sector to the light. Inadequate policy risked forcing the sector deeper into the shadows or simply impeding its much-needed function from an economic growth perspective.

Interestingly, as was seen in section 2, since 2008, the shadow banking sector has indeed been increasingly brought to light but not as a result of policy or regulatory actions. Instead, this is attributable to the increased academic, policy and market research attention as well as the result of technology. This is the critical element providing the basis for the authors' submission. Namely, that shadow banks have been attracted to the light by the market share and efficiency gains brought by technology, as they move their operations from off-line to online models, which in turn gives a regulatory window of opportunity to reform this sector in a way that was not possible until now.

The positive impact of that transition is that not only has it removed the pre-existing information asymmetry that limited the possibility of government reform, but it has also constrained the capacity of the sector to move further back into the shadows. Indeed, SMEs and individuals who were former users of shadow banks and now borrowers or lenders of P2P platforms are unlikely to settle for the necessarily less competitive and transparent terms offered by the "off-line" shadow banks.

3.1 A regulatory approach

The risks caused by shadow banking are not novel and, in 2013, a survey reported that 63% of respondents expected that "shadow banking [will] cause a crisis in China."[30] As a result, the idea that shadow banking should be left free of government intervention is not viable. This is because there is an inherent risk of social unrest attached to a failing informal banking sector.[31] This has led the Government to experiment, with limited success,[32] over an extended period of time with various approaches of bringing the shadows to the light by regulating a sector that is by definition informal.

If it is true that some regions are more relaxed about letting informal banks operate within their jurisdictions with little or no control, this is because local officials view shadow banking operations as "a popular (minjian) form of grassroots credit." This lenience can be regarded as "active non-action." In other words, as long as the activities of the local informal operators do not disturb the economic, social and political climate, they are left untouched. In that respect, a regulatory official interviewed by Zhang confirmed this by characterizing the sector as "a tolerable nuisance."[33]

However, if this was about to change, we would witness an immediate crackdown on the sector. This happened in October 2012 when a default of informal banks in Wenzhou threatened to transform into a regional crisis [Martin (2012, p. 7]. The event would perhaps have remained unnoticed if it were not for the fact that the potentially affected province, Zhejian, is home to 55 million people, and also considered to be the historical capital of entrepreneurship in China. One should bear in mind the fact that three leading officials (then Premier Wen Jiabao, PBOC Governor Zhou Ziachuan and then Finance Minister Xie Xuren) went there to personally witness the problem caused by informal finance, and subsequently called for the closure of those institutions.

29 This is illustrated in section 2.1

30 Caixin survey, available at: <http://service.caixin.com/pollcode/resulten/batch/576>, accessed 27 July 2013.

31 Hsu, S., and J. Li, 2009, Informal finance in China: American and Chinese perspectives, Oxford University Press, 144

32 Yet, the difficulty of introducing comprehensive financial reform in the shadow banking sector is not exclusively confined to China. U.S. regulators have also struggled to provide for complete coverage of this sector, as seen by the sparse treatment of shadow banking in the otherwise extensive Dodd-Frank Act.

33 Zhang, J., 2013, Inside China's shadow banking: the next subprime crisis?, Enrich Professional Publishing, 91

The above illustrates that government inaction is only acceptable up to a point.[34] Furthermore, because of the lack of regulation and transparency, this sector runs a high likelihood that operators will default on their obligations. An example of this is when Hehui[35] turned into a Ponzi scheme [Hsu and Li (2009, pp. 21 and 144)]. As such, it is expected that the inaction of the state could only be a temporary relief and not a long-term policy of the central or local authorities. Hence, reforming or banning informal banking appears a more likely course of action. Indeed, both solutions have been attempted in recent years.

The other corner solution — to simply shut down companies operating outside the law — had varied success, but a long history. Since 2002, more than 500 underground banks have been closed, out of which more than 100 had assets exceeding RMB200 billion [Martin (2012, p. 2]. As for the individuals running those operations or benefiting from them, the most recent high-profile case concerns Zeng Cheng Jie, who was executed after being found guilty of "fraud in raising funds."[36] Similarly, between 2011 and 2012, the CBRC forced more than 5,000 guarantee companies to shut down, while increasing regulation of the remaining enterprises [Zhang (2013, p. 84)].

However, there are a number of limitations in the ability of the Government to shut down the shadow banking sector. Because of the fact that shadow banking supplies credit to the SMEs that generated 80% of the country's economic output, any regulatory overkill may be destabilizing from a social, economic and financial perspective. While the financing mechanism used by SMEs is illegal, the positive externalities it creates in terms of employment and economic growth also need to be considered.

On the other side of the spectrum, one needs to consider that instead of fixing the symptoms of shadow banking, the Government may have more success in resolving the inefficiencies within the formal banking sector, especially given the far reach of government control within banks. In practice, this revolves around liberalizing the formal financial sector. Yet, this move toward a more market-orientated financial system has its own limitations, three of which are highlighted.

First, the liberalization of market rates will have political repercussions in the sense that the state would lose its control over the financial sector, which it is reluctant to do, although it is now likely that this process will largely be complete by the end of 2015 [Cousin (2011, p. 10)]. Second, economically-speaking, if SOEs were to pay market rates, The Economist estimated that between 2001 and 2008, they would have suffered large losses, or even gone bust.[37] In other words, liberalizing interest rates would expose the misallocation of resources that has been occurring for decades now.[38] With the focus of the Xi-Li administration on restructuring of the economy, this is, however, now seen as a desired and necessary result, albeit one that must be managed carefully. Third, removing the limit on the deposit rate would erode banks' profit margins. This, in turn, has consequences on the ability of formal institutions to actually be able to themselves handle NPLs — as opposed to relying on state intervention as hypothesized earlier — because this profit margin enables banks to be easily recapitalized.[39] Nonetheless, as banks have become increasingly commercialized and combined with previous successful experiences in resolving NPL issues through asset management companies and deferred financing, this is now seen as less of an issue than previously. Most importantly, even if the liberalization of the traditional sector could be achieved without any of the above negative externalities, this would not necessarily imply the disappearance of shadow banking, which has now taken on a life of its own beyond its initial nascence in regulatory arbitrage.

Different factors play a role here, including the fact that the size of the loan requested by individuals or SMEs is too small to be profitable for larger entities. As such, banks are unlikely to offer small loans,[40] but assuming that they were to provide credit in the

34 With a similar point being made about P2P lending and the current increase in market risk it creates. Conceptually this goes back to identifying where the threshold is that justifies governments to dedicate resources to regulate activity within a given market.
35 A private money-lending association, and thus, part of informal finance.
36 China Daily, 2013, "Entrepreneurs face dilemma over funds," 22 July, available at: <http://usa.chinadaily.com.cn/opinion/2013-07/22/content_16811976.htm>, accessed 24 August 2013.
37 Cox, S., 2012, "Pedalling prosperity," The Economist Special Report, May, available at: <http://www.economist.com/node/21555762> 7, accessed 24 August 2013.
38 However, the benefit of liberalizing interest rates of loans is that SOEs will not borrow as much and thus free up the much-needed capital for SME's [Zhang (2013, P. 104)].
39 Pettis, M., 2013, The great rebalancing: trade, conflict, and the perilous road ahead for the world economy, Princeton University Press, 95
40 Alexander, L. T., 2013, "Cyberfinancing for economic justice," William & Mary Business Law Review, 4, 309, available at: <http://scholarship.law.wm.edu/wmblr/vol4/iss2/2>, 319

first place, it would not be at a competitive, or even affordable, rate, as their due diligence costs would be very high. Moreover, pricing of loans is not the only factor, the fact that it takes on average four to six times longer to get approval for a loan via a formal institution, as opposed to the informal sector, gives the latter a strong competitive edge [Hsu and Li (2009, p. 21 and 133)].

3.2 The technological route

Importantly, the exponential growth of the P2P industry in China cannot be understood in a vacuum. Instead, it is hypothesized that the P2P boom in China is not only attributable to two factors. On the consumer side (whether lender or borrowers), individuals are benefiting from the same arbitrage opportunities (i.e., negative interest rate payable on current accounts moving excess savings toward P2P platforms yielding higher return). On the intermediary side, shadow banks have moved their operations online, being attracted by the lower overheads and broader market share they can reach by using online matchmaking platforms.

This is not to say that the P2P industry is only composed of old actors; undeniably there have been new players in the market that have no previous history as shadow banks. Indeed this is illustrated with two new players. Firstly, the most publicized example being AliFinance, part of the Alibaba Group, which has already originated 409,444 loans with an outstanding portfolio of RMB105 billion (approximately, U.S.$17.2 billion). Secondly, and perhaps the most (in)famous illustration of a market overheating is Panda Firework Group Co., a listed fireworks manufacturer that totally changed its core business to become a P2P lending provider.[41]

Thus, until a detailed study examines the origins and sources of funds of all P2P platforms in China, it is difficult to determine whether it is a brand new industry or a new twist on the old shadow banking model.[42] However, it is fair to assume that the P2P lending sector is primarily a source of funds that originates from, or would have otherwise gone to, shadow banks. Little distinguishes shadow banks and P2P lenders in China.

In both cases, they operate without a formal regulatory framework and perform an intermediation function between lenders and borrowers, the most noticeable difference being in the origination channel, which is predominantly online. Unlike the formal banking system, shadow banking, whether in its traditional or online form, relies on a different financial market infrastructure to fund and originate its loans. Guo and Xia (2014, P.395) point out the similarities in the financing mechanism of P2P platforms and shadow banks: "In the regular banking system, the whole process of credit intermediation takes place within one bank. However, in the shadow banking system, institutions coordinate to complete the intermediation chain. In this system, commercial banks and financial companies also originate loans, as in the regular banking system, but they do not hold the loans or bear the credit risks. […]The shadow banking system does not rely on bank deposits to support its lending business. 'Shadow bank deposits' come from money market mutual funds (MMMFs)."

In addition, Guo and Xia (p. 402) pointed out that the borrowers who resort to the services of shadow banking or P2P lending providers are often individuals or entities who have had difficulty obtaining credit through the "normal" financial system.

Once one accepts the fact that shadow banking and P2P lending are the same industry but conducted via new channels, this opens an important regulatory window of opportunity to reform shadow banking in a way that was not possible before. In practice, the difficulty in reforming the shadow banking industry came from two elements: (1) high asymmetry of information limiting the capacity to evaluate the positive and negative externalities of any reforms and (2) irrespective of its unregulated nature and the risk it holds, the shadow banking sector performs an important credit supply role for SMEs.

For policymakers and regulators, this means that the capacity of reform is extremely narrow, with a high probability of the negative externalities outweighing the benefits of formalizing the sector. Yet, with hindsight, it might appear that this inaction has played in their favor and will ultimately allow them to better regulate the shadow banking sector.

41 http://www.bloomberg.com/news/articles/2015-04-12/seeing-bang-for-buck-even-china-fireworks-makers-now-do-finance

42 It is expected that Tsinghua University will conduct quantitative and qualitative research on the topic in 2016.

The authors' submission, and contribution to this topic, is that the (active?)[43] absence of regulation of the P2P lending sector had the effect of removing any barriers to entry. This has allowed platform operators, lenders and borrowers to quickly enter and make use of a market to a point that it now has reached more than 2,225 platforms and includes more than one million lenders.

As a result, between 2007 and 2014, P2P lending platforms have gained traction and market acceptance emanating from SMEs seeking credit and lenders looking for higher yields than those offered within the traditional banking sector. Importantly, the technological component of P2P platforms creates a competitive advantage vis-à-vis physical shadow banks that translates into better interest rates paid or charged to users of P2P platforms. Not only this, but the lack of physical location, beyond pure cost benefits, removes friction and increases ease of use for consumers. Consequently, while one may see shadow banks and P2P platforms as substitutes, the latter are clearly superior.

Since mid-2014, there has been an increase in consultation activity on the part of Chinese regulators to gradually consider the imposition of rules for P2P platforms.[44] Namely, these are meant to cover regulatory capital, licensing obligations as well as better loan origination and credit scoring mechanisms so as to avoid excessive credit creation. These upcoming obligations will necessarily increase the operating cost of P2P platforms, reducing the cost-competitive benefit that they hold against physical shadow banks.

Yet, it is very unlikely that the future onus on P2P platforms would be so high that it turns into a regulatory overkill and makes this online business less economically viable than physical origination. Moreover, while certain actors may have been solely operating on the precondition that this sector remains unregulated, one may at most witness a concentration of players within the P2P space.

Even a reduction in the number of platforms is not expected to equate to a fall in the number of users. For example, between them, My089.com and LuFax have more than RMB30 billion in outstanding loans, or more than 10% of a market valued at RMB241 billion for 2014.[45] Furthermore, while internet finance players, such as AliFinance, tended to avoid their regulatory obligations on the basis that at their core they were not financial institutions, it is clear that in the last few months they have taken steps toward compliance and acquiring the necessary licenses to operate.

The outcome of the above analysis is that, if understood correctly, regulators in China may have willingly allowed for the unregulated development of the P2P lending sector. This then led to a mass market adoption that is hard to reverse due to the cost benefits for all the stakeholders, even after factoring for compliance costs. Furthermore, the scalability opportunity provided by the online business model of these "shadow banks of the 21st century" means that it becomes much more cost effective for regulators to supervise one institution with a critical mass of users (e.g., AliFinance has more than 400,000 borrowers) as opposed to a fragmented industry.

In other words, regulating the P2P industry appears to have been not only the most efficient way of handling the problem caused by shadow banking, but the only way to do so successfully. Whether or not this is the result of careful planning from policymakers or sheer coincidence, this is positive for China as a whole as it creates a framework around the P2P sector that plays a critical role in the country's financial market reform and economic growth.

43 Active or not, this point can be the one of discussion. Indeed, if active, it would have meant that both policymakers and regulators were the mastermind to let a sector remain unregulated in views of formalizing it in the future. This is perhaps giving too much credit to these bodies; however, in itself, this may not be surprising. China has already used its accession to the WTO as a way to bring back-door liberalization into SOEs. Direct reform, without having recourse to the WTO obligations, would have made the task much harder for political reasons. Second, again using a WTO analogy, China has revealed its capacity of playing a forward-looking chess game in the context of the card networks. In practice, this meant that China has allowed the UnionPay card network to grow by shielding it from the competition of its U.S. counterparts (e.g., Visa and MasterCard) and against WTO rules. China was aware of that but kept the infringing behavior up until the point of the WTO court judgment, confirming that this was the case. Importantly, China knew that it had a losing case but also knew that any damages to be paid are from the date of the judgment and don't back-date to the start of the infringing behavior. As a result, China has rightly "masterminded" the plan to grow the UnionPay card network and give a de facto dominant market share and its cost for doing so would be negligible (e.g., legal fees) as they won't include WTO fines. This analysis of the UnionPay case was made by Jane K. Wing in a 2012 seminar entitled: "The US-PRC UnionPay WTO dispute: bringing the back office front & center" available at http://www.law.hku.hk/aiifl/wp-content/uploads/2012/05/ppt-ProfWinn-5Oct2012.pdf

44 Mak, L., 2015, "Consolidation imminent as new rules hit China's P2P Sector," South China Morning Post, 12 August, available at <http://www.scmp.com/business/banking-finance/article/1848743/consolidation-imminent-new-rules-hit-chinas-p2p-sector>

45 Zhang, Z., 2015, "Overcoming challenges of internet finance innovation in Hong Kong," HKIFA, 28 May

4. RegTech: maximizing the benefits of FinTech

While sections 2 and 3 illustrated the regulatory and policy benefits of bringing the shadow banking into the spotlight, albeit indirectly, through P2P lending, the article now turns to the broader topic of regulatory added value in the context of FinTech.

This section, therefore, starts by introducing the concept behind Regulation Technology (RegTech) before focusing on the extent to which this is applicable to the Chinese P2P sector. The relevance of discussing RegTech echoes the fact that with the increased use of technology within the financial services industry, regulatory bodies have the opportunity to access a level of granularity in risk assessments that did not previously exist. Indeed, Andy Haldane, the ex-head of stability at the Bank of England, when discussing the future of regulation, shared his vision: "What more might be feasible? I have a dream. It is futuristic, but realistic. It involves a Star Trek chair and a bank of monitors. It would involve tracking the global flow of funds in close to real time (from a Star Trek chair using a bank of monitors), in much the same way as happens with global weather systems and global internet traffic. Its centerpiece would be a global map of financial flows, charting spillovers and correlations."[46]

This vision of a data-led regulatory system is not new. In 2009, the SEC created the division for Economic and Risk Analysis, looking at driving data insight for better regulation. However, it seems clear that since 2007, there has been an increase in activity emanating from regulators, industry and academia alike on this topic. For example, in 2014 in Australia, the Center for International Finance and Regulation initiated a research project entitled Regulatory Analytics and Data Architecture (RADAR).[47] In addition, post–2007, Scott Peppet published a paper on "smart mortgages" whereby the use of data could limit default risks.[48] However, one needs to balance the opportunity opened by technology with some practical barriers to actual and successful implementation.

46 Haldane, A. G., 2014, "Managing global finance as a system," Keynote address, 29 October, Bank of England, available at http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech772.pdf

47 Centre for International Finance and regulation, "Regulatory data architecture and analytics" (2014-2015) available at http://www.cifr.edu.au/project/T019.aspx

48 Peppet, S. R., 2009, "Smart mortgages, privacy and the regulatory possibility of infomediation," University of Colorado Law Legal Studies Research Paper No. 09-13. Available at SSRN: http://ssrn.com/abstract=1458064 orhttp://dx.doi.org/10.2139/ssrn.1458064

4.1 Compliance: an extensive case for automation

The financial sector has been the largest spender on IT systems for decades [Arner et al. (2015)] and this trend is unlikely to stop, especially in respect to regulatory and compliance spending. In the wake of the 2008 GFC, the regulatory onus and the level of scrutiny requested by regulators has dramatically increased. Indeed, regulators have moved toward a risk-based approach, where access to data is key to performing appropriate prudential supervision of the firm. This appears to be a natural move, so as to avoid the risks of regulatory capture that did occur in the run up to 2008.

This trend toward a data-driven regulatory approach is clear. For example, Gutierez (2014) illustrated how data is playing an increasing role in ensuring that financial institutions are not only held accountable for their actions, but that their responsibility is quickly established.[49] For financial institutions, the above has translated itself into an immediate cost increase, be it from a capital (e.g., Basel III), operational (e.g., human resources) or penalty perspective. On the last point alone, since 2008, banks in the West have been fined more than U.S.$242 billion[50] out of which U.S.$2.3 is attributable to the Libor scandal.[51]

Arguably, both the industry and regulators have a common interest in fraud levels. For example, the investigation to uncover the chain of responsibility for Libor took months. In a similar fashion, it took years to fully appreciate the exposure of various counterparties during the GFC.

It is understandable that there has been an interest from various stakeholders to increase transparency and create firm monitoring processes. In June 2015, the Bank of England issued its Fair and Effective Market Review, looking at the role that technology may play,[52] noting that: "Firms have started to make progress in response to the limitations of existing surveillance solutions,

49 Gutierrz, D., 2014, "Big data for finance – security and regulatory compliance considerations," 20 October, available at <http://insidebigdata.com/2014/10/20/big-data-finance-security-regulatory-compliance-considerations/>

50 Mainelli, M., 2015, "RegTech - worthy of Investment," 24 June, available at http://igtb.com/article/regtech-%E2%80%93-worthy-investment

51 Touryalai, H., 2013, "Big banks fined $2.3B over illegal Libor cartels, more fines on the way," Forbes, 4 December, available at http://www.forbes.com/sites/halahtouryalai/2013/12/04/big-banks-fined-2-3b-over-illegal-libor-cartels-more-fines-on-the-way/

52 Roxburgh, C., M. Shafik and M. Wheatley, 2015, "Fair and effective market review: final report," June, available at http://www.bankofengland.co.uk/markets/Documents/femrjun15.pdf

including the use of new technology and analytics which go beyond the key-word surveillance and simple statistical checks previously used by firms to detect improper trading activity as discussed earlier in this section." [Roxburgh et al. (2015, p. 90)]

In particular, the Bank of England highlighted the following regulatory add values of specific technologies [Roxburgh et al. (2015, p. 91)]:

- **"Pattern analysis,"** which can be used to identify unusual patterns of activity, such as "spoofing" (placing an order and then cancelling it seconds later to encourage others to drive up the price of a particular asset), front-running and wash trades, using predefined patterns of trading behavior.
- **"Big data" techniques,** which typically use a far larger number of inputs than standard surveillance techniques, helping to straddle information silos. The algorithms used have the potential to detect a wider range of suspicious activity than pattern analysis, and can also be used to identify networks of trading and communications activity that may themselves identify vulnerabilities.
- **"Predictive coding,"** which looks to identify patterns of activity, such as unusual use of communication, non-routine patterns of leaving the office, non-completion of training, or missing mandatory leave, which may flag potential conduct concerns.
- **Digitalization of voice communications,** which some firms claim has the potential to be more effective than analyzing written communications.

As a result, the argument for cost reduction within the compliance sector has never been as strong, and RegTech never looked so beneficial for firms. Yet, one also needs to be balanced as to what is currently feasible when it comes to fully automating regulatory systems. In 2009, Cyras and Riedl[53] addressed certain technicalities of building IT systems that can automatically comply with rules and regulations.

Before looking at the (re)transcription of compliance obligations into IT processes, the first question is much more fundamental – how should financial technology itself be regulated?

53 Cyras, V., and R. Riedl, 2009, "Formulating the enterprise architecture compliance problem," available at http://ceur-ws.org/Vol-924/paper14.pdf.

To date, the debate, especially in Asia, seems to be more on understanding what is the best framework so as to provide the right balance between market innovation (e.g., which is seen as beneficial in the case of P2P lending in China) and market confidence (e.g., again the P2P sector has shown how it can destabilize markets, as shown with China's recent stock market volatility).[54]

Furthermore, while in the West, the topic of RegTech has been developed much more by regulators (with the U.K. Government dedicating a chapter of the Blackett Review[55] to the topic and Europe pushing toward increased data transparency with PSD2). In practice, there are still uncertainties, as reported by Brummer and Gorfine,[56] as to whether or not principle-based approaches are better suited than rule-based ones.

Consequently, it seems that while the rational and potential benefits of a fully data-driven regulatory system are clear,[57] the application in practice of such a system remains distant. Thus, and in the context of China, it is fair to say that while FinTech provides an efficient method to engage with the market reform process, neither the regulators nor the industry is ready to fully move compliance into the digital ages. However, and as it will be discussed in the following part, this is not to say that China may not export its FinTech innovation.

54 Bloomberg, 2015, "Some Chinese take 22% margin loans to finance sock purchases," 1 July, available at http://www.bloomberg.com/news/articles/2015-06-30/hidden-china-stock-debt-revealed-in-online-loans-at-22-interest

55 Government Office for Science, 2015, "FinTech: Blackett Review," 18 March, available at https://www.gov.uk/government/publications/fintech-blackett-review

56 Brummer, C., and D. Gorfine, 2014, "FinTech: building a 21st century regulator's toolkit, October, page 8, available at <http://assets1b.milkeninstitute.org/assets/Publication/Viewpoint/PDF/3.14-FinTech-Reg-Toolkit-NEW.pdf>

57 Given the fact that the authors expect that wide adoption of RegTech in China is unlikely in the next five years, potential applicability in the context of P2P lending will not be discussed in length. However, on an introductory note and expanding on the theme of how shadow banks transited to P2P platforms, technology could be used to maintain certain benefits of physical networks and originations. Indeed, part of the low delinquency rates of loans made by informal networks can be explained by the social peer pressure emanating from the fact that the borrowers and lenders are from the same community. Furthermore, specific lending groups share not only capital but also expertise. Consequently, geographical proximity acts both as a deterrent for borrowers to default but also participate in the skill transfers necessary to improve the success of the enterprises financed by the loan. The platforms can consider using geo-location as provided by IP addresses of borrowers and lenders so as to geographically match these. Obviously, the limitation of this use of technology is that you arbitrarily limit the scalability benefit of the internet, since you select only local participants. From a regulatory perspective, doing the above would also increase concentration risks and perhaps consumer protection risks if the physical proximity favors the recourse of force for debt recollection. The benefit may, therefore, be in creating a balanced ratio between local and regional P2P lenders for a given borrower.

5. Conclusion

In closing, this section places the discussion of China's P2P sector within the broader context of the role FinTech plays in China's financial market development. This discussion matters because P2P advances the need to be understood as integral to China's objective of devising a framework that supports and supervises the development of digital financial services.

For China, the benefit of doing so is clear. As we saw in section 2, P2P lending opened a window of opportunity to regulate the shadow banking industry. Likewise, FinTech also opens the path for a gradual liberalization of the country's financial system. This is done by indirectly introducing competition (via the new private banks) and efficiency (via the use of technology) within a state-owned banking system hampered by legacy IT systems and behavioral biases that end up benefiting SOEs.

While still a work in progress, there have been noticeable developments. Since 2014, we can find a clear trend where the Government is actively promoting complementary, if not alternative, financial products and services aimed at SMEs and individuals. Indeed Zhou et al. (2015) reported that the introduction of the new deposit insurance system has allowed for the establishment of "five new private banks and approved the establishment of 13 privately controlled financial leasing companies and financial companies affiliated to corporate groups and 162 village and township banks with private sector taking a dominant share.[58]" More recently, the largest landmark is, without doubt, the issuance of the Guidelines on the Promotion of the Healthy Development of Internet Finance[59] on 18 July 2015.

On the regulatory side, we also tend to see an important allocation of power. While traditionally the focus of the PBOC has predominantly been on systemic and liquidity risks, the CBRC instead is concerned with prudential and misconduct aspects [Guo and Xia (2014, p. 418)]. In the context of FinTech, it appears that it is for the PBOC to lead the regulatory activities encompassing digital financial services, which includes P2P lending [for a classification of the sectors within FinTech, please refer to Arner et al. (2015)].

Looking ahead, it is important for China to reach the balance between supporting the efficiency brought by the financial technology sector, while framing this within a regulatory framework that maintains healthy competition and market resilience. To date, this appeared to have been the case. Even though P2P market growth has been explosive, the reform process engaged in by the recent consultation will favor market concentration as opposed to rupture. Not only this, but China has been able to both regulate the industry itself and settle it within a specific complementary role to banks.

Going forward, China is developing a tiered regulatory regime whereby individual FinTech companies can operate within their respective niche up to a certain threshold to be defined by total value of assets or payments processed. Beyond this threshold, a formal partnership with a bank needs to be considered. By doing so, the competitive and liberalization pressure brought by the FinTech sector is manageable, both for regulators and the incumbent financial institutions. This decision to move toward a tiered regime has consequences beyond China's borders. Indeed, worldwide, the FinTech industry is challenging traditional financial market infrastructure and preexisting regulatory frameworks, and P2P lending is spearheading this charge.

In the West, it is the market itself that is adapting to this shift. The P2P sector is essentially turning toward an "institutional-to-peer" system and allowing traditional banks to originate loans or deploy excess liquidity in a more effective way.[60] As an illustration, SoftBank Group Corp. recently led a U.S.$1 billion investment in SoFi, an alternative finance provider that operates much like a traditional investment bank, as it securitizes every loan it makes.

However, China is formalizing this harmonious relationship between banks and FinTech players by creating a tiered regulatory regime. The U.K., which is often regarded as the most advanced jurisdiction in terms of FinTech regulation, has to its credit moved from a rule- to a principle-based approach, granting

58 Zhou, W., D. W. Arner, and R. P. Buckley, 2015, "Regulation of digital financial services in China: last mover or first mover?" September, available at < ssrn.com/abstract=2660050>

59 Guan Yu Cu Jin Hu Lian Wang Jin Rong Jian Kang Fa Zhan De Zhi Dao Yi Jian (Guideline on the Promotion of the Health Development of Internet Finance), promulgated on 18 July 2015. The Chinese official version of the Guideline is here: http://www.mof.gov.cn/zhengwuxinxi/zhengcefabu/201507/t20150720_1332370.html

60 Thomas, Z., 2015, "Institutional investors eye P2P lending Platforms," 19 June, IFLR, available at http://www.iflr.com/Article/3463890/Institutional-investors-eye-P2P-lending-platforms.html

slightly more flexibility to new entrants. However, it has failed to define a framework of collaboration.[61] China is increasingly at the forefront of regulatory developments within FinTech, signaling a dramatic change in the origin of where regulatory standards may emerge from.

However, as the country goes from duplication to innovation in terms of financial regulation, this creates a new set of risks (inter)nationally. The limited capacity of Chinese regulators to draw from international best practices increases their probability of developing inadequate regulatory frameworks, which may compromise financial market resilience.[62] To the rest of the world and as Fareed Zakaria captured it, this means that "almost all problems spill over borders."[63]

In that context, the capacity of China to handle the growth and prevent the bursting of the P2P sector will serve as a strong indicator as to the country's capacity to devise a forward-looking financial markets regulatory framework in the 21st century.

61 To some extend, this is not fully accurate. The FCA has recently engaged into a consultation for the feasibility of opening bank APIs to third parties. However, the actual outcome and date at which this will be implemented is likely to be much further down the line than what China will devise.

62 Lee, A., 2015, "Chinese deposit insurance to prompt FinTech innovation," 2 April, IFLR, available at http://www.iflr.com/Article/3441991/Chinese-deposit-insurance-to-prompt-fintech-innovation.html

63 Zakaria, F., 2011, The post-American world: release 2.0, W. W. Norton & Co.; 2nd Revised edition, 34

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