

Research Article

Peer-To-Peer Lending in US and China: A Guide for Emerging Market Countries

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Abstract: In mid 2000s, a new Fintech era has commenced which is known as “Crowd lending” or “FinTech Credit” whereby credit activities are realized online through internet platforms that match borrowers with lenders (investors). Those kinds of lending activities are named Peer to Peer Lending (P2P). The purpose of this study to elaborate the functioning and regulatory framework of P2P lending in US and China. Those two countries can be considered as two conspicuous example of the application of P2P lending especially in terms of regulation. China transformed its P2P market in 2015 after a long loose regulation period and US from the very beginning applied a strict regulation on the market. By that way, a set of terms of regulation is aimed to be proposed especially for the emerging market countries. It is thought that P2P lending can contribute to the economic development of the emerging market countries if it is applied properly. The contribution of this study to newly developing literature is to provide a comparison and also a set of terms of regulation to be applied in the emerging market countries.

Keywords: Fintech, Peer to peer lending, P2P

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1. Introduction

Financial technology, in short and mostly used saying Fintech, basically means the use of technology for providing financial service. This interlinkage between finance and technology goes beyond this definition. Today, it is not required to have even a banking account, having a mobile telephone is adequate to get many types of financial services. The achievements in the fields of digitalization and technological innovation figured out a financial environment by improving simplicity and interoperability. Since 2008, the advantages of Fintech spread all around the world, in developed as well as in developing countries, creating challenges especially for the regulators and the market players in order to balance pros and cons of new approaches.

The evolution through Fintech 2.0 as Traditional Digital Financial Services was begun in 1967 by the launching of ATMs, the financial services became digital rather than analogue and those developments pave the way for the financial globalization. The emergence of the Internet and its spread to all over the world since the beginning of 1995 created the second corner stone of Fintech. By late 1990s, all the transactions between financial institutions, financial market participants and customers around the world have been nearly fully digitalized. Beginning from year 2000, the regulatory frameworks have begun to be developed in order to deal with the risks of cross-border financial interconnections achieved by the use of information technology. During Fintech 2.0 period which endured till 2008, Fintech was characterized by traditional regulated financial service provided by the use of information technology and internet capabilities. After 2008, a new era commenced which is represented as Fintech 3.0 whereby start-ups and established technology

companies have begun to deliver financial products and services directly to businesses and the general public [1].

In mid 2000s, another Fintech era has commenced which is known as “Crowd lending” or “FinTech Credit” whereby credit activities are realized online through platforms that match borrowers with lenders (investors). Those kinds of lending activities are named Peer to Peer Lending (P2P). Under the framework of Fintech 3.0, the first start-ups Zopa was established in the UK in 2005, and Prosper was established in United States in 2006. They intermediate between lenders and borrowers via their websites, bypassing the financial institutions, especially banks while benefiting from fees on successful transactions [2].

The operational costs of the banks, that are main lending financial intermediary institutions in many countries, consist of personnel costs, other operating expenses and overheads known as ‘OPEX’ (leases, advertising, water, electricity and gas supplies, IT, among other costs) and depreciation provisions (associated with the impairment or depreciation of physical assets and the amortization of CAPEX). The cost to income ratio (C/I ratio) is an indicator of operating expenses of a bank and it is assumed that the lower the C/I ratio, the more profitable the bank operates. As of the end of 2020, cost to income ratio for European banks is on average 65.1% and it lies in the range of 44%-77% by different countries in the region. As of 2017, it is 57.4% in US ¹. As P2P lending operations are realized via internet, it requires neither infrastructure such as buildings, branches nor workforce unlike banks which keep the operational costs at minimum. In this framework, on the borrower side, P2P platforms do not charge for those costs, so the lending terms are relatively cheaper. On the investor side, the lack of operational costs enables the platforms to transfer the higher proportion of interest applied to the borrowers directly to the lenders without offsetting for the operational expenses. Consequently, the cost to borrowers are relatively lower and the return to investors is relatively higher than the traditional bank saving account deposit.

Those supportive features of P2P lending for both the borrowers and the investors have contributed to the rapid development of the market. Amid the COVID-19 crisis, the global market for P2P lending estimated at US\$120 billion as of the end of 2020 is projected to reach US\$ 1 trillion by 2025². The largest market for P2P lending is China and followed by US and UK. According to Cambridge Centre for Alternative Finance, the volume of new credit of P2P lending to business in 2016 was reached to 61.5% in China, 1.8% in US and 1.5% in US [3].

The purpose of this study to elaborate the functioning and regulatory framework of P2P lending in US and China. Those two countries can be considered as two conspicuous example of the application of P2P lending especially in terms of regulation. China transformed its P2P market in 2015 after a long loose regulation period and US from the very beginning applied a strict regulation on the market. By that way, a set of terms of regulation is aimed to be proposed especially for the emerging market countries. It is thought that P2P lending can contribute to the economic development of the emerging market countries if it is applied properly. The contribution of this study to newly developing literature is to provide a comparison and also a set of terms of regulation to be applied in the emerging market countries.

¹ <https://www.statista.com/statistics/728483/cost-to-income-ratios-for-banks-in-europe-by-country/>

² <https://www.statista.com/statistics/325902/global-p2p-lending/>

One of the major achievements of Fintech 3.0 is P2P lending that first initiated in 2005. Since its inception, the new system has been operating through private internet platforms created for the purpose of intermediating between investors and borrowers. This structure is very similar to other specific purpose internet platforms that operate to match the buyers and sellers of homogenous or heterogeneous goods and services. Any lender can make an investment, even the minimum investment amounts are very low, enabling everyone to be a lender. Depending on the peculiarities of each platform, the lenders may have the opportunity to select amongst the borrower alternatives. Generally, there does not exist a pool of funds approach as it is in the banking business. On the borrower side, there exist mainly two types of borrowers; the individuals who are in need of funding for personal use and businesses, generally Small and Medium sized enterprises (SME) that have trouble to access to bank lending opportunities. In relation with the management of funds, there exist two different approaches of operations; as it is applied in US the platform gives a security to the investor in the amount and with a maturity as demanded by the investor, the proceedings are used to provide funds to the borrowers. Second approach is originated in China, under current regulation, the brokerage type contract is issued by the platform and the parties and the funds provided by the investor are kept in bank accounts that serve as custody.

In application, both the investors and the borrowers subscribe to the P2P platform. The platform verifies the information submitted by the investors and borrowers. The platform, referring to the information given by the borrower, assign a credit rating to each borrower candidate. In fact, this credit assessment process is the core of the business in order that the platform will be sustainable. Afterwards, the terms of the specific loan requests are displayed on the platform. Either the investors select the loan that they are interested or the platform can match the terms and conditions determined by the borrower and the loan request. The interest rate can be either provided by the platform, or decided by investors themselves. The investors deposit the money to a bank account, this is the second risk point as the bank account is generally on the name of the platform, not the borrower. The platform transfers the amounts to the borrower till all the borrower's request is totally funded [4]).

2. Business Models of P2P Lending

Each platform gives heterogeneous financial lending services under specific business models determined in accordance with the financial requirements of its target market. In order to address the attributes of the existing platforms, there exist different approaches of categorization. Omarini [4] categorizes the platforms depending on their matching approaches of the investors and borrowers. Under Diffused Model, the platform plays an active role to match both side, it collects money from the investors and by taking into account the preferences in terms of amount, expected return, maturity and risk positioning, it allocates the money to different loans. In this approach the platform makes its best in order to gain from diversification to minimize the risks. Under Direct Model, the investor determines the specific loan(s) and amount to be invested for each borrower referring to the data given by the platform. Although the decision making is on the investor side, the application of this method may not end up with a well-diversified portfolio.

Another categorization is made by Milne and Parboteeah [5] on the basis of the interest applied; Reverse Auction and Automatic Matching Methods. Under the Reverse Auction model, the platform matches the minimum interest rate required by the lender and the maximum interest rate accepted by the investor. If the investor determines a high interest rate, then her money may not be invested if there does not any borrower accepting such a rate. In the Automatic Matching model, the platform determines the interest rates and the investors provide funds in accordance with the risk return specifications of the borrower(s).

The platforms can also be categorized according to the structure to process the funding. Under Notary Model, which is already applied in US, the platform matches borrowers and lenders and transfers the loan amount to a partner bank. This bank provides a loan to the borrower, sells a note to the platform, and the platform sells this note to the lender. The repayments are collected by the platform and transferred to the investor when they become due [6, 7,8].

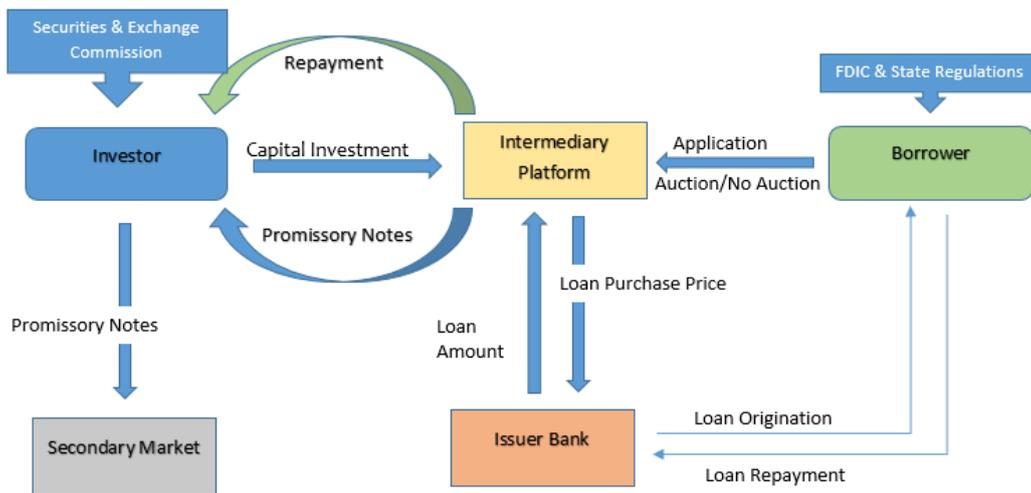


Figure 1. The Notary Model Operations – P2P Lending

Under the Client Segregated Account Model, the loan contract is directly between the investor and the borrower without any involvement of a bank. Figure 2 displays the operations under this model. The decision making power of the platform is limited. However, in some cases the platform extends loans to borrowers and provides guaranteed returns to the lenders. some form of guarantee [9].

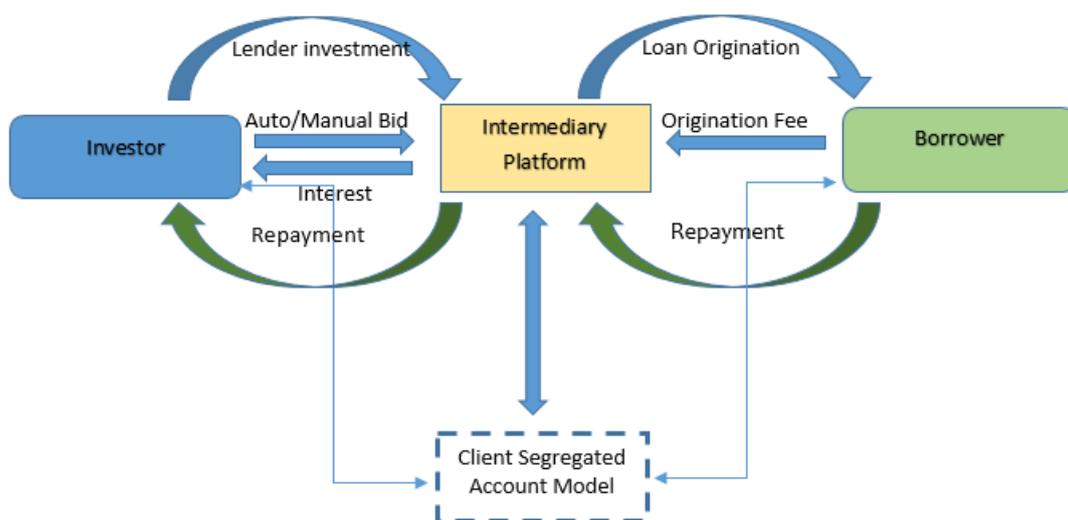


Figure 2. The Client Segregated Account Model Operations – P2P Lending

P2P lending may become a substitute for the bank lending business, so the nature of operations and the regulation requirements are compared with those of the banks.

3. Risks Involved In Peer-to-Peer Lending

In the framework of risk management, the core business is credit assessment realized by the platform by using the soft information voluntarily disclosed by borrowers. This information is basically used in order to determine the terms and conditions of the loan. The literature proposes two sets of information for a credit assessment in order to reduce the information asymmetry [10]. The first set involves personal characteristics of borrowers, including gender and race, educational background, culture and region, photo and attractiveness. The second set addresses the ability of repayment of the borrower and includes the reasons for borrowing, the willingness and ability to repay and the usage of money, etc [11].

3.1. Financial Risks

There exist inherent financial risks involved in the P2P lending such as credit risk, counterparty risk and the possible fraud of the platform itself. The unsecured consumer loans extended by the P2P platform are the main type of business in terms of volume. Apart from the external risks, the P2P platforms have the following risk exposures which are similar to banks:

- Credit risk: The risk arising from the inability or unwillingness of the borrower to meet its obligations in the required amount and in the required time in whole or in part,
- Portfolio risk: The risk associated with the improper structure of the loan portfolio by the platform that creates excessive concentration on different dimensions such as specific sectors, borrowers, maturities.
- Interest rate risk: The risk of reduced profitability resulting from the mismatch between the interest promised to the lenders and interest applied to the borrowers by the platform under prevailing market conditions,
- Liquidity risk: The risk associated with the inability to pay to the lenders because of the potential losses,
- Currency risk: In case the platform has the lending alternatives in different currencies, any placement of those amounts to the borrowers in other currency type creates currency risk.

3.2. Specific Risks

Apart from, the financial risks stemming from the intermediation to the lenders and borrowers, there exist specific systemic risks for P2P activities stemming from the nature of lending and the operations of the platforms. It is natural that the lenders are more exposed to specific risks than the borrowers as typical regulatory mechanisms for borrower protections such as usury laws and regulations against unfair collection practices, misleading advertising, and discriminatory practices apply to P2P lending platforms as well. These risks are summarized above and they should be addressed by the regulators:

The inefficiencies in the risk-scoring models of P2P lending platforms may lead to wrong lending decisions that can end up with default. The credit assessment performed by the platforms are generally in the form of verification especially through tax records, however even the largest platforms have failed to verify all records in an accurate manner. In fact, verification at the application is not adequate, the monitoring of the creditworthiness of the borrower through the term of the loan is required especially for risky borrowers.

There exist potential for fraud is profound due to the anonymity associated with internet lending. The lenders are small and less sophisticated investors. Those type of investors can be easily misleded formally or informally. The small investors are connected to the borrowers through their shared identity, which may be wholly or partly misleading. The platform itself impose risk of intentional or unintentional fraud on the investors. The

unintentional fraud stems from the willingness of the platform to lend in order to receive the fees.

The limited diversification of funding sources for P2P lending platforms may create concentration to some segments of the population, such as small investors and institutional investors due to the required credit assessment competencies. Any collective movement of those segments due to the financial contagion effects may cause deterioration in the funding base of the platform.

The dependency of P2P lending platforms on low interest rates provided to borrowers in order to stimulate high transaction volumes, together with the high interest promises to lenders may lock the operations. The fact that P2P lending platforms are not obliged to make any payments to investors if borrowers do not make payments on the underlying loans can complicate the possible future problems. As P2P lending platforms do not carry any portion of the underlying loans, they intermediate on their balance sheet in contrast to traditional lending, the risk of defaults is entirely on the lenders. Investors only receive payments from P2P lending platforms, if borrowers make payments on the underlying loans. In case of default, any monies recovered from the borrower and paid to the investor are subject to an additional servicing fee by the collection agency to which the P2P lending platform assigns the underlying loan [12].

The main risk for P2P lending activities sourced by special risks in relation with consumer privacy concerns. Sometimes, the P2P investors and borrowers may contact directly as many details of the borrowers are available to lenders.

4. Literature Review

Some of the literature focused on the risk management controls applicable in order to deal with risks involved in P2P business which is specified as two-sided e-commerce phenomenon. The risk controls are focused on accurately assessing and screening the borrowers in terms of credit risk [13]. Different methods are proposed in order to deal with the credit risk involved in P2P lending such as using data mining [14], extraction of textual features from the borrower's description [15] and Big Data based on neural networks [16]. [17] also proposed a two-step method that uses deep learning neural networks which extracts keywords from investor comments and then using a two-way short-term memory-based model (BiLSTM) to predict platform default risk. Apart from those complicated techniques, several other business controls are addressed for credit risk controls such as the borrower registration process, the credit risk assessment process, the disbursement process, the collection process, the refund or payment process, and the investment process by lenders [18]. In his research [2019] used a probit regression model using Prosper data, he reported that the size of the loan is the predictor of default.

[20, 21] evaluated Chinese P2P platforms and proposed the platforms to establish a risk control management department, formulate an effective risk emergency plan, strengthen communication and collaboration among various departments in order to reduce the risk of P2P network lending platforms.

[2] evaluated Chinese P2P system and proposed four basic approaches for risk management:

- Information asymmetry is the root cause of credit risk for P2P platforms and this risk can be managed by building a changeable information dynamic linkage mechanism. The information links between P2P network lending platforms should be strengthened as well as P2P network lending platforms and users, users and related institutions
- In relation with operational risks, the P2P platforms should strengthen their governance structure, improve its ability to prevent operational risks, and reduce possible operational risks.
- In relation with liquidity risk, the platforms should establish risk reserve fund system and manage it effectively.

- In relation with legal risk, formation of incentive laws to improve the law-abiding awareness of P2P network lending platforms can reduce risks.

5. Regulatory Framework of Peer-to-Peer Activities in US

Prosper was the first US P2P platform which is established in 2006. Two main internet platforms, Prosper and Lending Club lead the market. The unsecured consumer loans extended by the P2P platform are the main type of business in terms of volume. The individuals may request a loan in the maximum amount of 25,000US\$ and each investor can contribute a loan at minimum 25US\$. This means that each borrower may have hundreds of lenders and each lender may have a portfolio of loans well diversified amongst borrowers. Generally, the loans have a term 3 years of maximum but can be as short as one year.

The platforms perform the credit assessment, Lending Club accepts fewer than 10% of the loan applications. Prosper applies a different policy, it accepts the loan applications and leave the decision to lend to the borrowers. Prosper charges borrowers a 0.5-4.95% fee in case the loan is disbursed, Lending Club charges a fee of 1-5%, both applying to principal. In case the borrower defaults on any interest or principal payment, platforms may attempt to collect payments directly from borrowers or may assign unpaid obligations to collection agencies. The platforms are criticized that they understate risk and overstate the returns and position themselves as a direct substitute to the deposits in the banking system. Until 2010, the default rates of the loans extended through the P2P platforms were high. As the platforms have acknowledged the detrimental effect of this negative marketing, they revised the credit assessment processes. They even promised to reimburse the investors, in case of default due to identity theft.

5.1. Registration Requirement

It is a fact that the dual type of regulation structure consisting federal and state level rulings imposes challenges about especially competition in banking, investment and lending activities in the US. The rulings of the Securities Exchange Commission (SEC), imposing substantial reporting requirements, to protect the investors contribute to the complexity of the regulation applied to platforms. There exists no specific regulatory framework applying to P2P lending activities, instead there exist several specific laws. Since 2008 P2P lending activities were performed under prevailing banking and lending regulation.

The regulatory corner stone of P2P lending in US is the ruling of SEC in relation with the registration of the securities issued by banks to the platform in order to cover the claims on principal and interest payments of loans provided to the investors (Please refer to the notary business model in order to understand the structure) in 2008. The notes should be sold through a prospectus with an effective registration treatment. SEC ruled that the notes issued were not exempt from securities law so they had to be registered with SEC in the same manner as other securities. The letter of SEC expressing the reasoning referred to the activities of Prosper and indicated that:

“...the Prosper notes are securities under Reves because: (i) Prosper lenders are motivated by an expected return on their funds; (ii) the Prosper loans are offered to the general public; (iii) a reasonable investor would likely expect that the Prosper loans are investments; and (iv) there is no alternate regulatory scheme that reduces the risks to investors presented by the platform.”

SEC also classified the notes offered to the investors as investments providing a return generally higher than that available from depository accounts at financial institutions. SEC referred to the statements in the Prosper's website that the Prosper notes provide returns superior to those offered by alternative investments such as equity stocks, CDs and money markets.

It is also acknowledged that Prosper has the sole right to act as loan servicer of the notes and will collect repayments of loans and interest to the investors and reports loan payments and delinquencies to credit reporting agencies. Prosper also exclusively manages the process of referring delinquent loans to collection agencies for payment, and selling defaulted loans to debt purchasers. SEC verifies that under US P2P business model, the investor does not know the borrower's identity and has no control to pursue rights as a noteholder in the event of default. As the registration procedure takes time, nearly all P2P platforms suspended operations. Firstly, Prosper agreed to register under the Securities Act, Lending Club and other platforms followed.

However, it is argued that this ruling was resulting from fundamental misunderstanding of SEC regarding P2P lending. This move was considered as overreaction and threatens the industry and resulted with both risk for P2P lenders and cost for P2P borrowers. Several consequences of the SEC registration requirement reshaped the market. Before SEC registration, P2P notes issued by the bank were assigned to the investors. After the enactment, the investors have no ownership or security interest on the notes. Consequently, the lenders now are unsecured creditors of the platform and in a worse position. As the cost and timing of the registration of securities is considerable. This lead the platforms to bundle the notes and use shelf registration in which notes are registered before they are sold. The platform became sole issuer and have pledging and selling rights which may create addition risks to the investors [22].

The mandatory disclosures under SEC registration require all material borrower data in public filings. This makes an idle and redundant information overload which is far away from the disclosures of Fortune 500 companies. Additionally, it is proposed that securities enforcement will not help the injured investors in case of suits, as the lending amounts are low as compared to the costs of bringing a suit. Also, assembling of all the injured investors is not an easy task to deal with the suits [22].

5.2. Consumer Protection

Aftermath of 2008-2009 financial crisis, US Congress had made several regulatory attempts in order to legislate a post-bubble repair and prevention strategy, one of which is Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) in order to protect the customers in the financial markets in 2010. This act addresses the regulatory gap for the operations of P2P lending. Additionally, Dodd-Frank Act enacts the establishment of the Consumer Financial Protection Bureau (CFPB) operating through the Federal Trade Commission (FTC) apart from state level protection legislation. Since then, both the FTC and the CFPB monitors the operations of the P2P lending platforms. Since 2016, CFPB accepts complaints on consumer loans from the individuals. In 2018, FTC brought a case against for LendingClub Corporation for promising that it would not apply 'hidden fees' to consumers [23].

In order to protect the financial customers, there exist many key federal statutes to which banks and non-bank credit providers alike may be subject such as:

- Truth in Lending Act – Defines uniform methods for determining the cost of credit, disclosing credit terms, and resolving errors on credits
- Equal Credit Opportunity Act – Prohibits creditors from discriminating against credit applicants, establishes guidelines for gathering and evaluating credit information, and requires written notification when credit is denied;
- Fair Credit Reporting Act – Requires a permissible purpose to obtain a credit report, requires “furnishers” to report information to credit reporting agencies;
- Gramm-Leach-Bliley Act – Restricts disclosure to nonaffiliated third parties of nonpublic personal information about a consumer, and requires financial institutions to notify their consumers about their information-sharing practices and inform consumers;

- Electronic Fund Transfer Act — Establishes the rights, liabilities, and responsibilities of parties in electronic funds transfers (EFTs), and protects consumers when they use EFT systems;
- Bank Secrecy Act — Requires financial institutions to implement anti-money laundering procedures, implement a customer identification program, and screen names against certain government watch lists; and
- Fair Debt Collection Practices Act — Restricts third-party debt collectors' conduct in connection with the collection of consumer debts.

Congress directed the Comptroller General of the United States and the Government Accountability Office (GAO) to report on the ideal regulatory structure for this new market under the Dodd-Frank Act. GAO released its proposal on July 7, 2011, indicating two rival regulatory approaches: a modified version of the status quo, or a transition to a new regulatory regime parallel to the recommendations. The second alternative were selected and this new regime is thought to be a model for other countries in order to rule their P2P lending market. The CFPB enacted several legislations at the federal level in order to prevent unfair, deceptive and abusive acts and practices, including the Fair Credit Reporting Act, Truth in Lending Act, Equal Opportunity Act for credit reports, the Fair Debt Collection Practices Act. Also, the Electronic Funds Transfer Act and Telephone Consumer Protection Act impacts P2P lending business.

On October 30, 2015, the SEC adopted final rules to implement the crowdfunding exemption that enacts the followings in order for consumer protection:

- In consistency with the statutory limitations, Rule 100(a) provides that an issuer may sell up to \$1.07 million in any 12- month period to investors in an offering.
- An investor will be limited to investing: (1) The greater of: \$2,200 or 5% of the lesser of the investor's annual income or net worth if either annual income or net worth is less than \$107,000;38 or (2) 10% of the lesser of the investor's annual income or net worth, not to exceed an amount sold of \$107,000 if both annual income and net worth are \$107,000 or more.
- The offerings must be conducted online only through the intermediary's platform so that the "crowd" has access to information, and there is a forum for an exchange of information among potential offering participants.

A "platform" is defined as a program or application accessible via the Internet or other similar electronic communication medium through which a registered broker or a registered funding portal acts as an intermediary in a transaction involving the offer or sale of securities in reliance on Section 4(a)(6) of the Securities Act ("Section 4(a)(6)").

The types of issuers are determined on the following basis issuers:

- should be organized under the laws of a state or territory of the United States or the District of Columbia;
- should not be already subject to the Exchange Act reporting requirements;
- should not be investment companies as defined in the Investment Company Act
- should not be disqualified from relying on Section 4(a)(6), or "bad actors"
- should not be amongst the issuers that have sold securities in reliance on Section 4(a)(6) and have failed to make ongoing reports required by Regulation Crowdfunding during the two-year period immediately preceding the filing of the required new offering statement;
- should not be a development-stage company that has no specific business plan or purpose, or has indicated that its business plan is to engage in a merger or acquisition with an unidentified company or companies.

6. Regulatory Framework of Peer-To-Peer Activities in China

The first P2P lending platform, PPDAl Group was established in 2007 and this was the starting point of a rapidly growing fintech lending industry which was peaked in 2015 and the number of platforms increased to 3,500. In 2018 the Chinese P2P industry intermediated to loans from 4.1 lenders to 4., borrowers [24]. The P2P platforms are not institutionalized, rather they are established as consultancy firms and have a limited capital base mostly in the amounts between RMB 5 million to 20 million [25].

The incredible emergence of the P2P market sourced by the unregulatory period that impose nearly no regulatory burden to the early platforms since 2015. While the P2P market was built by millions of investors with the hope of abnormal returns, it created a fertile soil for enormous irregularities [26]. After this period of unregulation, in 2015, the collapses of hundreds of platforms triggered an inevitable crisis. Since then, the process of building a comprehensive, systematic regulatory regime governing the P2P sector has been ongoing. A dual supervision module is created under the regulatory responsibilities of China Banking and Insurance Regulatory Commission (CBIRC) and provisional governments. The new system has three main requirements imposed on platforms:

- a requirement of recordation and registration;
- a requirement of custodian and
- a requirement of mandatory information disclosure.

These requirements considerably raised the threshold of online lending market and will undoubtedly lead to a substantial restructuring of the sector [26].

On July 18, 2015, when the China's central bank (PBOC) issued the first official regulatory document – Guiding Opinions on Promoting the Sound Development of Internet Finance (the Guiding Opinions 2015). In this document P2P lending platforms were defined as “information intermediaries” instead of financial institutions. This definition caused the function of deposit taking to be removed from P2P activities. P2P platforms separated their own funds from the investor and borrower's funds by entrusting a commercial bank to deposit funds for lenders and borrowers. By that way, financial consumer protection was built as platform-related fraud, embezzlement, and other misconducts were removed entirely. The nature of role of P2P platforms was changed into only information intermediary and this created “One + Three” system. The “One” is the “Interim Measures 2016” which outlines the requirements related with the recordation, third-party custodians keeping funds, and information disclosure practices. The “Three” means the “Recordation Administration 2016”, which stipulates rules regarding P2P platforms' recordation and administration at length. Consequently, the function of P2P platforms resembled traditional brokers acting in accordance with an intermediation contract [27].

In fact, the operations of the P2P platforms go beyond the traditional brokers as they are supposed to investigate and verify information relating to transactions, the qualifications of the borrowers, the authenticity of information provided by the parties, and in some cases the authenticity and legality of the project needing funding, as well as providing credit ratings, lending matching, financing consulting, risk education, and online dispute resolution services [27].

Because P2P lending platforms are information intermediaries, but not financial institutions per se, it is natural to exclude the deposit-taking business from their business scope. This is why Chinese P2P platform should separate their own funds from the lender's funds and borrower's funds by entrusting a commercial bank to deposit funds for lenders and borrowers. Thus, to fulfill the role of an information intermediary, it bears the responsibility to disclose relevant information to lenders.

“Online lending information intermediary institutions refers to financial information intermediary institutions legally formed to specially conduct online lending information intermediary business activities. Such type of institutions takes the Internet as the primary channel, and provides information search, information release, credit rating, information

exchange, credit matching and other services for direct lending between borrowers and lenders (i.e. accommodators).”

Together with the concept of the intermediation contract in Contract Law of the People’s Republic of China 1999 (herein after “Contract Law 1999”), it is clear that online information intermediaries are, in essence, brokers which are the same as traditional brokers acting in accordance with an intermediation contract.

Under the existing regulatory environment for P2P platforms, there is no need to take permission from public authorities, even there is no special license requirement. However, in order to keep the operations of the platform as a broker, some limitations are imposed which endangers their commercial flexibility and sustainability. Referring to the fact that only 1.5% of the existing Chinese platforms are profitable, tight regulatory control with their attached costs may give further harm to the sector.

The Interim Measures 2016 rules that the online lending shall be generally in a small amount and sets the upper limit of the balance of loans of the same natural person on the platform of one online lending information intermediary institution as 200,000 Yuan. Also, there exist an upper limit of the balance of loans of the same legal person or any other organization on the platform of one online lending information intermediary institution as one million Yuan.

7. The Comparison of Regulatory Infrastructure of Peer-to-Peer Lending in US and China

In relation with regulating the fintech applications, there exist a popular phase; sandbox which refers to a mechanism for developing regulation that keeps up with the fast pace of innovation. As the core idea there exist no sandbox in both US and China. It worth to mention that unlike US and China, there exist sandbox in UK and Japan.

The regulation of financial services mainly depends on the characteristics and development level of the countries. Thus, the comparison of the regulations applied in US and China, it is required to analyze the P2P market attributes in each country. The P2P market in US is concentrated market by two main platforms and the lending is mainly realized as small individual loans. The P2P market in China is a fragmented one which is compromised by many, most of which are small sized platforms and developed very rapidly as a broad segment of society has accessed to this high-yield investment opportunity.

The already existing financial regulation also affects the ruling about the innovative financial services. The complex regulatory environment at state and federal level in US imposed extensive and tight regulatory requirements for P2P platforms. The notary business model applied in US for P2P lending necessitates the banks that extends the loan to the borrowers to issue securities for the lenders, this model necessitates the involvement of securities and exchange commission whose registration requirements are times consuming and costly. The lenders are also protected under the ruling of Consumer Financial Protection Bureau and Federal Trade Commission. In China, the regulation fell behind the development of the market which caused numerous P2P platform failures, but the tightening of the regulation continues by China Banking Regulatory Commission which also aims to involve the local authorities in order to enable self-regulation.

Although the role of P2P platforms is defined differently in US and China as they are functional intermediaries in US and act as brokers in China, both of the regulation requires the platforms to hold the investments of the Lenders in bank accounts. This requirement does not affect the credit risk exposure, but ease the control of fund flows for the regulators.

There exist a “keep it small” attribute in both of the countries for P2P lending and borrowing in order to limit the effects of any defaults to the system as a whole. There exist limitations for the amounts invested, as well as the amount lend. In US, the individuals may request a loan in the maximum amount of 25,000US\$ and each investor can contribute a loan at minimum 25US\$. In China, the upper limit of the balance of loans of the

same natural person on the platform of one platform as 200,000 Yuan (nearly 31,00 US\$). Also, there exist an upper limit of the balance of loans to a borrower as by an individual platform as one million yuan (nearly 155,000 US\$).

It is fact that financial control and financial innovation should be balanced in order to utilize the capabilities provided by fintech financings and develop a supportive environment for new generation services. The existing regulation in US for P2P lending is too stringent especially in the fields of registration and this curbs the development of the market. In China, the experience of problems and fraudulent behaviors in the market, there is still a need for further regulation.

The regulation in US considers P2P platforms as issuers by SEC that requires registration before it conducts business and should follow information disclosure requirements after registration. Some of the Chinese researchers proposes that as P2P lending activities should be treated as security transactions, and therefore are the security based approach to regulation is the appropriate regulatory model. However, as a loan originated by lenders cannot be considered as a security, as such it is not accepted as security under Securities Law of China. Furthermore, as securities regulation requires the approval of each securities issuance which makes the process costlier and time consuming that surely hinders P2P market [28].

8. Peer-to-Peer Lending in Emerging Market Countries

In the framework of P2P lending, there are 42 emerging or developing economies in Asia, America and Europe as determined in a ADB Working paper [29]. Although those countries are categorized under the same group, each have its own peculiarities in the level of financial development, financial access, financial efficiency and depth, as well as financial literacy. Furthermore, they also have their own capabilities in internet access, mobile banking, even use of ATMs. Some of those countries have domestically owned P2P platforms, some of them have platforms operated by the foreigner(s) and some of them have no P2P platforms operating. With the aim to propose some regulatory issues to manage P2P lending, it is natural that each country will act depending on their peculiarities. However, still there exist main

It is generally accepted that P2P lending has the potential to boost financial inclusion and economic growth in emerging market countries as it channels the funds from the investors to the lenders in a more convenient and effective way. Rapid growth of the use of IT devices and technologies at individual level, and the investment opportunities even in small amounts contributes to the spread of P2P platforms in emerging market countries. Recent research has focused on the potential contributions of fintech-facilitated funds flow in the economy, and generally have reported that it can increase financial stability by providing access to alternative funding and creating efficiency pressures on banking sector. However, P2P lending may cause weakening lending standards and introduce more procyclical credit provision in the economy [30].

The conditions contributing to the development of effective P2P market for the emerging market countries are high proportion of internet connectivity in population and the required infrastructure for high-speed internet. The IT capacity for the performance of P2P platform can be developed domestically or purchased from foreigners. In fact, apart from those technical issues, the expansion of P2P market in emerging market countries is mainly affected by the level of financial development which incorporates financial access, efficiency and depth of the country, as well as financial literacy [29]. This study is amongst the ADB Economics Working Paper Series and explores cross-country variations in P2P lending using a cross-country panel dataset from 62 economies, of which 42 emerging or developing economy, covering 2015–2017. The main finding of the analysis is that “formal financial institutions’ access and efficiency, as well as financial literacy, best explain the observed expansion in P2P lending per capita”. They also report that the effect of financial access is stronger in emerging economies.

It is a fact that several emerging market countries are in the process of developing regulatory framework for P2P market. In India, the securities and banking regulators prepared and shared a consultation paper with public in order to develop a balanced regulation of crowdfunding and P2P lending. Vietnam has been exploring the possible regulations. The security commissions in Thailand and Malaysia has allowed a limited number of platforms to operate and develop their own regulations [31]. In Indonesia the operations of P2P platforms commenced without any regulation in 2016.

9. Conclusions

In any kind of financial innovation, the regulatory framework should address firstly formulating specific regulatory scheme, then the regulation should be conducted in a consistent manner especially in relation with consumer protection. Thereafter, the industry self-discipline should be improved. In this framework, the Financial Service Authorities should be proactive which means that they should prepare the legal infrastructure of P2P lending activities. Otherwise, as in the case of China, big failures can affect the health of financial system. They should consider that the operating platforms could be established by the foreigners as well. They should monitor the existence of the platforms and determine the establishment requirements. The Financial Service Authority can also prefer branching out to other government agencies and creating government-linked organizations to delegate the task of professional regulation and industry practices monitoring as it is the case in India.

The Financial Regulator should decide about the business process for P2P lending, generally there exist to basic mode:

- (i.) Debt Based Lending in which raising of funds is realized by issuing debentures or debt securities through the platform, these funds are lent to borrowers through the platform,
- (ii.) Fund based Lending in which raising of funds is realized by pooling under a separate bank account by the platform, these funds are lent to borrowers through the platform,

Debt Based Lending, also named as Notary Model, has been applied in US strictly and this prohibits the development of P2P lending market meaning that it negatively affects financial innovations. This model necessitates the involvement of securities and exchange commission whose registration requirements are time-consuming and costly. However, it is fact that in this model lenders are well protected.

In Funds based Lending, the platform acts as an intermediary in the form of a broker. In China this role has been defined as information intermediation. The roles attached to the broker may differ but generally involves performing the requirements related with the recordation, third-party custodians keeping funds, and information disclosure practices. After selecting the structure of the P2P market, the emerging market countries should build the required regulatory framework in order to address risks that emerges from the expansion of the market. All in all, data privacy and cyber security issues should be addressed under specific rulings such as the EU General Data Protection Regulation (GDPR) and Law (Undang-Undang or UU) No. 8/2011 regarding Electronic Information and Transactions, as well as the Ministry of Communications and Information Technology (MOCIT) Regulation No. 20/2016 on Personal Data Protection in Electronic Systems in Indonesia [32].

A licensing process should be designed for the platforms in order to let them to operate. In some emerging market countries, this is already designed as a two-step process whereby firstly a registration letter is given to the platform at the establishment. In the second step, a full license is prepared for which there exist harder regulatory approval requirements.

In many countries, the terms of establishment of a P2P platform differ according to the selected structure mentioned above. The regulatory authority may require a minimum level of capital in the establishment stage of a platform in order to ensure that the platform can operate effectively as it is the case in UK, India and Indonesia. Other countries such as US requires the platform to be established under specific regulation which imposes indirect capital requirement. The allowable foreign capital as percentage of total required capital should also be determined. Furthermore, the limitations of the operations of the platform should be specified. Generally, the platforms are not allowed to realize balance sheet lending and provide guarantees in any manner. In order not to create confusion of ownership generally, a lock-in period has been determined during which the securities acquired from the platform shall not be transferable by the purchaser.

It is generally accepted that P2P system well functions when the platforms are established in such that small amounts are collected from multiple investors through a web-based platform and also comparatively small loans provided by the platform to individuals and/or Small and Medium Sized Enterprises that have trouble to access to bank funding. In this framework, generally a maximum amount of investment should be determined in a predefined time frame by an individual investor referring to her annual income or net worth as it is the case in US, China and many other countries.

This study provided an analysis of the current operational and regulatory aspects of P2P lending activities in two extreme cases US and China and an initial regulatory framework for the emerging market countries. Future research should examine additional cases of regulatory and institutional responses to the expansion of online lending markets in developing countries, to allow for cross-country comparisons and identify innovative policy solutions.

Patents

This section is not mandatory but may be added if there are patents resulting from the work reported in this manuscript.

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