

## An Overview Study on P2P Lending

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### Abstract

Recent years have seen a boom in small private loans. Once developed, P2P lending quickly spread to all countries. This article gives an overview study on the research development of the P2P lending from the theoretical and empirical literature on P2P lending at home and abroad.

**Key words:** P2P; Internet lending; Information asymmetry; System analysis

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### INTRODUCTION

With the help of the internet which is much more convenient, fast and transparent than the traditional ways, P2P lending network was born at the right time when small and micro credit was boosted with the high demand of capital flow in middle and small-sized enterprises and the high threshold of bank's loan. P2P lending network is one of the small and micro credit patterns which rely on internet technology to complete the debit and credit through the P2P web community communication platform. Usually the borrowers are individuals and mid-small size companies as well as smaller investors who have insufficient money and limited investment channels.

These convenient, fast, transparent and direct small credit transactions originated from England and soon spread across countries and are now accepted by all kinds of small lenders and borrowers who have problems in investment and loans.

All kinds of credit network platforms have sprung up as P2P emerged, followed by endless discussions and research. The domestic and foreign research on P2P credit network mainly concentrated on the following several aspects.

### 1. THE RELATED RESEARCH WORK ABROAD

On October 2, 1983, Mr Yunus started the Grameen Bank to offer micro loans to the poor, starting a new page for micro loans bank. The following decades have witnessed the vigorous development of the Micro-credit companies, coupled with the booming and popularization of Internet technology. Micro credit is no longer a "off-line" mode as the "online" mode emerged. And traditional banks require companies to have high credit rating which fails the small micro enterprises so that they have to transfer into P2P credit network market, also contributing to the development of the certain market (Agarwal and Hauswald, 2008). P2P lending provides not only a lending mode that those companies need, but also a new option for individuals investors except for saving and traditional ways of investment (Slavin, 2007).

ZOPA, the earliest platform of P2P credit network, was born in Britain in 2005. PROSPER, founded in 2006, the most active credit is generally used for online auction on loan on the network platform. Foreign studies in this field are systematic and deep and will be introduced by the following two points.

#### 1.1 Theoretic Study

When doing transactions on the credit network market,

both sides could not have direct communications which will inevitably produce the information asymmetry problems, what's more, most of the P2P network platform adopted unsecured credit loans, all contributing to huge credit risk which results in the much higher loan interests than that in traditional loans (Klaftt, 2008). P2P is similar to social platform, and it is more convenient to acquire the information of the social capital quality compared to traditional financial market, namely soft information from borrowers. Robert and Benjamin (2010) have found that we can choose high quality borrowers by integrating the credit systems in the community to get access to borrowers' reputation, personal credits, etc. This way can effectively reduce the probability of moral risk and adverse selection. Although the cost is relatively high, it is still lower compared to the traditional lending patterns.

Research on the role of social networks in lending activities found that people who have rich social network resources are more likely to get a lower loan interest, and loan default rates are lower (Lin, 2010). Studies from Freedman and Jin and Everett (2008) show that loan default rates will be lower when the lenders have connections with borrowers in real life like alumni and colleagues. It is obvious that social network in real life have a great impact on the credit activity. The other aspect concerned with Regulatory, if the supervision on the borrowers is directly operated by the lenders, the cost will be very high, on the contrary, intermediary institutions like banks with its technology and scale advantage to make the post-supervision can greatly reduced the costs (Diamond, 1984). Since the financial intermediaries are just regulators, not lenders, whether the financial intermediaries will conscientiously do the regulation job will also be a problem. In refer to this question, the study from Blackwell, Winters (1997) shows that lending rates is positively related with bank supervision and negatively related with intimacy between companies and banks. Therefore, borrowers can effectively lower the cost of financing through relationship. Besides, in consideration of for-profit funds, if financial intermediaries fail to judge the repayment ability and credit level of some borrowers, higher borrowing rates will be implemented and will mistakenly make some high quality borrowers unable to raise funds, or receive money at higher interest rates, which pushed up lending rates, results in the problem of credit rationing (de Aghion & Gollier, 2000).

## 1.2 Empirical Study

In the lending market, information is the key factor to successful financing (Stiglitz, 1981). The information we can observe and get from the internet is called "Hard Information". Since investors can not have direct communications with the borrowers when investing on the net credit platform, decisions will be made through direct information, including the borrowers' condition: debt/income ratio, credit rating, credit card number and

so on, also including the characteristics of the borrowing information: loan amount, interest rate, purpose, etc. The main method of gathering information above is to develop the open data from net credit platform like ZOPA, PROSPER, Lending club. A large number of research show that the "hard information" will have significant impact on the result of the loan (borrowing rate, the number of bids and borrowing rates), it even has certain relevance with the borrower's repayment quality (default). The conclusions vary according to different emphasis of research.

Klaftt (2008) analyzed the data on the Prosper and concluded that the credit rating has greatest impact on the loan interest rates, and the impact is greater than the borrower's debt-to-income ratio. Other information (such as bank account information, whether their own property or not, etc.) is almost irrelevant with Borrowing rates. Surprisingly, however, when loan results is taken as dependent variable, The presence or absence of the borrower's bank account crowd out the borrower's credit rating to become the most important factor. Since the borrower's credit rating is a more complex variable containing bank account information, the conclusion above is hard to explain. Klaftt (2008) also pointed out that borrowers with poor credit rating that could not make a loan in the traditional financial institutions can hardly borrow money through P2P. His analysis of the data shows that HR list of those borrowers who have worst credit rating accounted for 57.4% of all loan list on Prosper, but only 5.5% of them get the loans successfully, on the contrary, the successful borrowing rate of the borrowers with a AA credit rating is as high as 54%.

And some studies are related with population characteristics, research from Herzenstein, Andrews, Dholakia and Lyandres (2008) introduced that characteristics such as race, gender, has no significant influence on borrowing rate, on the contrary, study form Ravina (2007), Popeand and Syndor (2008) shows that race, age, gender, weight, appearance, personal characteristics do seriously account for a successful loan, they particularly emphasize that race affects significantly on the success rate and interest rate of a loan, and they calculated that the black's borrowing cost is 1.39% ~ 1.46% more than that of the whites under the same condition. Popeand and Syndor (2008) also pointed out that the extra interest cost the black pay can't make up for the higher risk of default.

Study from Gollier Aghion and DE (2000), and Prescott (1997) found that when the borrowers freely form a loan group in which all members are bound together, they can guarantee for others in the group (i.e., if there are any members fail to repay the loan, other members will pay), if one of the team members being blacklisted, the entire team will be blacklisted, to some extent, the risk of adverse selection and moral hazard can be reduced in this way. Furthermore, people with good credit are not willing to form a group with people

with poor credit, which will bring out obvious credit gap between two kinds of groups. Borrowers with poor credit and qualifications will form a team, and borrowers with good credit and qualifications form a team separately, due to the two extremes exist at the same time, it causes the high level of interest rates. It also raises the interest rates of groups with high credit levels. But the cost of credit evaluation of the team is much lower than the cost of individual people. It is visible that the policy is a coin with two sides, we should avoid disadvantages. In P2P lending network, although borrowing groups are not fully realized due to the fact that deviation exists in the understanding of each other's credit and financial situation, we should notice that group lending is more likely to be the future of P2P lending market.

From the reviews above of the research on P2P network, it can be seen that the theoretical research of P2P loans in foreign countries mainly focused on the problems of information asymmetry on lending, the role of intermediary institutions in lending activity and how to improve the success rate of borrowing by forming borrowing groups. It is concluded that the intermediary role P2P lending network platform play in trading activities can effectively reduce the information asymmetry problems between borrowers and lenders, and borrowers can improve the success rate of borrowing by forming certain groups. Foreign scholars concluded that some hard information will affect the borrowing rate through empirical research on the public data available on the Prosper. In addition, the soft information of borrowers will also have influence on it.

## 2. THE RELATED RESEARCH IN CHINA

Drawing lessons of mature cases from P2P network platform abroad, the first P2P credit network in China called PPDAl which established in August 2007, headquartered in Shanghai. PPDAl is a pure intermediary type network platform, which mainly borrowed from the success of Prosper. Domestic P2P network platform sprung up over the following years, after years of trial and development, management mode is gradually mature in the groping process. There are also some other successful domestic credit network platforms such as CreditEase, a compound intermediary borrowing lessons from Zopa (Zhang, 2013), QIFANG, the first network dedicated to student loans, 51Give, providing micro-finance services to farmers and students, Wokai, concentrating services on farmers. Both 51Give and Wokai are founded by foreigners and cooperated with small local credit institutions and check on the credibility of the borrowers. Some of the P2P lending sites which have larger influences are Hongling Capital, CreditEase, DAIBANG, Renrendai etc. The following articles focus on domestic literature research about P2P lending.

### 2.1 The Early Theoretical Study

Domestic study on P2P lending network started relatively late, and concentrated on the introduction of the net loan, comparison between operation modes, etc. (Wang, 2012) (Chen, 2010) (Wang, Chen, Xing, 2009) (Sun, 2010) (Xin, 2009) (Zhang, 2010), among which the most comprehensive generalization is given by Chen. Chen (2010) illustrated four types of network credit business model: first, based on enterprise network behavior parameters, banks carry out comprehensive credit for certain enterprise and then the enterprise make a unsecured loan with its risk borne by the two parties jointly. Second, the credit network platform becomes an outsourcing service provider in the front process for bank financial business loan. In other words, the net companies work with domestic bank credit enterprise to bring out a new concept "loan supermarket". Third, typical P2P lending patterns. Fourth, loan network community specially provides loans for students. Followed are some system studies. Wu and Cao (2011) put forward several suggestions to strengthen the regulation of P2P lending platform, including: (a) the perfection of the mechanism of user identification; (b) strengthen the capital management mechanism; (c) establish and improve the anti-money laundering system; (d) accelerate the construction of credit rating system; (e) improve safety technology of P2P web site. Huang and Ji (2012) put forward that several network platforms set up a unified borrower credit rating system and introduce insurance system and other measures to control the current risk in net risk. They propose that several common network lending platform set up unified borrower credit rating system to control the current risk in network loan. You and Zhang (2010) found that the foreign advanced computer technology, a sound credit system, perfect legal system provide support to the mature development of net loans after the comparison between the P2P network credit platforms at home and abroad.

### 2.2 Recent Empirical Research

Guo (2011) collected 16766 transaction records since 2008.8.25 to 2010.5.15 from PPDAl and studied the P2P lending financing cost and financing availability. Six related conclusions are drawn: (a) financing cost is negatively related to credit scores and the amount of borrowing, (b) the cost of financing and the historical flow standard, total number of bid are closely relative to each other, (c) borrowing ways have no significant impact on the cost of borrowing, (d) the finance availability is positively correlated to the borrower credit rating, historical success amounts and the total number of bid, (e) availability of financing are negatively related to borrowing deadline and the amount of borrowing, (f) indication that the existence of the social capital can effectively enhance the availability of credit.

There are also some conclusions draw by using questionnaires and case studies on the influence factors



of the P2P lending practices: the borrower's borrowing information, authentication data has significant influence on borrowing rate, interest rates and borrowing amounts make sense but smaller, borrowing time limits almost means nothing to borrowing progress (Li, 2011). And there are researches on how to improve the yield of investors from the Angle of investment. By developing and combining information of investor behavior and the borrower credit information, Luo (2012) established a quantitative loan evaluation and investment decision-making model from three aspects: the investors structure, the borrower credit risk analysis and comprehensive analysis of the information sources, which can help investors make investment decisions.

We can infer from the articles above that we have quite a few domestic research results but mainly concentrated on the operation comparison between different P2P network credit platforms, system construction, risk study and so on. In terms of domestic empirical research, due to the relatively late start and insufficient published data, there are only a few references. But with the rapid development of P2P, related research should also keep up with the steps of development. First of all, we should make necessary extensions and in-depth progress on the basis of existing research, such as further study on the internal governance issues when do research on the operating mechanism of the net credit platform. In-depth study of risk control, transaction safety and efficiency etc should also be taken into consideration when studying the credit risks. Secondly, in terms of research method, it should also be improved, especially the application of quantitative analysis method on these problems, and targeted research for different problems with different methods. Third is to expand the research angle of view, the P2P network itself is a product of interdisciplinary integration, so a wider perspective on the study of these problems is needed.

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