

# 인터넷 대부시장에서의 정보비대칭성 문제 : P2P 금융회사 사례를 중심으로

Information Asymmetry Issues in Online Lending :

A Case Study of P2P Lending Site

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## 초 록

Peer-to-Peer(P2P : 개인간) 금융은 인터넷 오픈마켓을 통해 이뤄지는 다수의 대출자와 대부자 간의 신용 대출 서비스이다. P2P 금융은 전세계적으로 빠른 성장을 보이고 있으며, 미소금융(Microfinance)의 성장에 대한 관심이 증폭된 후, 인터넷 대부시장은 사회적 신용대여의 대안으로 부각되고 있다. 국내에서도 제도권금융에서 대출을 받을 수 없는 저신용등급자들이 증가하면서 기존 제도권금융을 이용할 수 없는 금융 소외계층의 대출 서비스의 대안으로 급부상하고 있다.

P2P 금융은 인터넷을 통한 신용 대출 및 대출자 속성 상, 채무 불이행 위험에 노출될 가능성이 높음에도 불구하고 이자율에 비해 대손 위험성이 상당히 낮은 편으로, 대출자는 신용도 보다 낮은 이자율로 자금을 확보할 수 있고, 투자자는 타 재테크에 비해 높은 수익을 얻을 수 있는 장점을 지녔다.

본 연구는 P2P 금융을 개념화하고 국내의 P2P 금융 사이트 중 대표 사이트를 분석한 결과를 통해 P2P 금융 서비스의 논점을 정리하고 연구 주제로서의 가능성을 검토한다. 특히, 기존 금융기관들이 대출 서비스 제공 시 발생하게 되는 정보 비대칭 문제를 P2P 금융 사이트에서 어떻게 적용되는지 논의한다.

## ABSTRACT

Peer-to-peer (P2P) lending is an open marketplace for loans not from bank but from individuals online. Financial transactions are facilitated directly between individuals (“peers”) without any intermediation of a traditional financial institution. A market study by renowned research company forecasts that P2P lending will grow very fast and a couple of P2P lending sites in Korea also are getting attentions by providing the alternative financial services.

In P2P lending market, Lender will enjoy higher income generated from the loans in the form of interest than interest that can be earned by financial products provided by official

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financial institutions. Furthermore, lenders are able to decide who they would lend the money for themselves. Meanwhile, borrowers with low credit scores are able to finance their liquidity requirement with low cost and convenient access to the Internet.

The objective of this paper is to introduce P2P lending and its issues of information asymmetry. We provide the insights from the case study of one of P2P lending sites in Korea and review the issues in P2P lending market as research topics. Specifically, information asymmetry issues in both traditional financial institutions and P2P lending are discussed.

**키워드** : P2P lending, 인터넷 금융, 사회적 신용대여, Web 2.0, 정보 비대칭  
P2P lending, Social Financing, Web 2.0, Information Asymmetry

## 1. Introduction

With the Internet technology and virtual online community, a new way to approach to resolve lending issues was introduced. Peer-to-peer(P2P) lending is an open marketplace for loans not from bank but from individuals online. Financial transactions are facilitated directly between individuals ('peers') without any intermediation of a traditional financial institution. P2P lending platforms are online platforms where borrowers place requests for loans online and private lenders bid to fund these[11].

P2P lending market draws attention as the credit markets have tightened and interest rates have continued to drop. Financial crises caused it hard for more people to have credit services from the official financial institutions. P2P lending market came to have more customer base in both lenders and borrowers that might not have been there. As the first P2P site in the world, Zopa.com was founded

on March 2005 and about 0.5 million members has been registered in U.K. On the one hand, Prosper.com in U.S. started on February 2006, has acquired about 0.9 million members and about 200 million dollar loans originated just in 4 years.<sup>1)</sup> A market study by Gartner group forecasts that P2P lending will soar at least 66 % to \$5 billion of outstanding loans by 2013[8].

P2P concept is introduced through file sharing sites since the birth of Napster.com. The P2P systems have the distributed network architecture composed of participants that make a portion of their resources such as processing power, disk storage or network bandwidth directly available to other network participants, without the need for central coordination instances such as servers or stable hosts. Peers are both suppliers and consumers of resources, in contrast to the traditional client-server model where only servers sup-

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1) <http://www.prosper.com/welcome/marketplace.aspx>.

ply, and clients consume. P2P architectures have influenced network structures all through the society with the wide use of the Internet. P2P lending platforms differ in the way loans are originated. Some providers mediate borrowers and lenders themselves whereas other providers match borrowers' credit listings and lenders' bids with an auction mechanism[16].

P2P lending removes the intermediary in the middle and lets lenders choose whom they would borrow the money. Borrowers create a listing with information on how much they want to borrow, why they need the money, and how high interest rate they would have. Profile information such as age, sex, location, credit scores and loan history can be presented within the posting. Lenders place bids on listings they like. Borrowers would be provided the money only if they have enough bids to exceed the predefined amount or to fulfill a loan request by a number of lenders. The industry has the term for this "rule of full funding."<sup>2)</sup>

With the adoption of the collaborative potential of the Web 2.0, many online users form communities and exchange their thoughts directly on different issues. Furthermore, Internet users are able to reward or punish corporations using a lot of Web 2.0-equipped sites [3]. Through Web 2.0 technologies, distribution of data not only supports linear and

top-down communication but also spherical, horizontal and bottom-up communication. Moreover, new forms of collaboration and new forms of information got available with the Web 2.0 open standards applications such as tagging, bookmarking, and user-generated content. The barriers between people get never been this thin[5].

Transactions on electronic credit marketplaces occur anonymously between "nicknames." Therefore, information between borrowers and lenders is asymmetrically distributed. Loans are not collateralized and the marketplace faces inherent risk of default[15, 16].

Basically transactions in P2P sites have no securities, that is, the whole lending are executed based on the trust. The sources of trust could be personality of trustee, trust inspiring partners, or trust-certifying third parties. The sources of trust using P2P lending are often intermediary or institution-based. Trustee based sources of trust are not present on these P2P sites[5]. And sometimes it might be a group-wise herd behavior, not a rational one[18].

Lenders should screen the borrowing candidates very carefully in order to reduce information asymmetries or not to face borrowers' default situations at worst. P2P platforms act like an agent to process the available information about borrowing candidates with the large number of credit listings. They work just like the way that e-com-

2) <http://blog.lendingclub.com/how-peer-to-peer-lending-works/>.

merce platforms such as eBay do for retail businesses.

Lender will enjoy higher income generated from the loans in the form of interest than interest that can be earned by financial products provided by official financial institutions. Furthermore, lenders are able to decide who they would lend the money for themselves. Meanwhile, borrowers with low credit scores are able to finance their liquidity requirement with low cost and convenient access to the Internet.

However, not a few issues are raised for P2P lending including possibility of the revelation of personal information on debt requirement, borrowers' fraud with the intentional defaults, and anonymity of the lenders providing the loan.

Historically, majority of borrowers in the P2P sites have not been able to get a loan. The loans in P2P lending typically are not collateralized. Lenders are facing the problems known as information asymmetry under which one party has more or better information than the other. This makes an imbalance of power in transactions to lead the situation of adverse selection. The sites tend to attract high-risk borrowers who have low credit scores. Fear of lending to "lemons," which will make lenders face the default of borrowers, discourages potential lenders from participating in bids.<sup>3)</sup> Moreover P2P's

3) A lemon is a defective car that is found to have numerous or severe defects not readily apparent

biggest drawback for individuals and small businesses is its tiny size only up to thousands dollars of which the amount the official financial institutions with high overhead would not deal with.

The concept of P2P lending has been formalized into P2P lending service providers in Korea in the year of 2007. As of 2010, they have a couple of P2P sites on operation and a growing number of press releases introduced the P2P sites' services online. However, it is hard to find academic research on this alternative credit service through the Internet.

The objective of this paper is to introduce the concept of P2P lending and elaborate the information asymmetry issues with the marketplace. Specifically, the article reviews the issues with the traditional lending institutions and P2P lending sites. Furthermore, this research would provide the results from the analysis of P2P lending mechanism named "rule of full financing" and the case study of one of P2P lending sites in Korea.

Analyzing the business models of P2P lending, the article takes the following steps. Section 2 gives an overview of information asymmetry problem in the loan market and previous approaches to this problem. Section 3 proposes a framework for explaining the

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before its purchase. Here this term means the debtors with high likelihood of defaults. Details on the definition can be found at Akerlof's paper [2].

information asymmetry issues with P2P lending. Plus, it discusses the factors to lessen the information asymmetry. Finally, Section 4 reviews the information asymmetry issues as a research topic and will provide conclusions and implications of our study.

## 2. Information Asymmetry in the Lending Market

### 2.1 Information Asymmetry Models

Information asymmetry models assume that at least one party to a transaction has related information while the others do not [2]. Information asymmetry situations can be classified into hidden characteristic, hidden action and hidden information[1, 13].

Firstly, hidden characteristic explains asymmetric information on the characteristics of product, services, or utility before the parties make a contract. This is important in that one party should have a transaction or contract before acquiring more knowledge on the characteristic on product or services than the other party. The more complex products or services are, the more likely they have hidden characteristic. The quality of used cars, the productivity with an employee candidate, and the willingness to pay an airline ticket are selected examples. In this case, we are likely to have so called adverse selection that

most of products and services in the market are “lemons.”

Secondly, hidden action accounts for the conditions in which one party could not control or monitor the other parties after the parties make a contract. This situation can be described as agency problem or principal-agent problem. Principal is defined as a party to delegate the right, whereas, agent as the other party to get delegated. The issues with this situation come from the reason that the consequences of the contract are not wholly dependent on the agent’s behavior and the principal does not have knowledge on the degree of the agent’s efforts. Investors with less information than the management, land owners with not much knowledge on the tenants, would not know how their agents work for them in this case. Moral hazard arises in a principal-agent problem, because the principal normally cannot monitor the agent fully. The agent has an incentive to act adversely from the ways the principal expects if the objectives of the agent and the principal are not aligned.

Thirdly, hidden information describes the situations where the one party gets more information than the other parties after they make a contract. Even though the principal can monitor the agent, she would not have the complete information on how difficult the tasks of the agent are. Meanwhile, the agent will have better information on the jobs than the principal does. For an example, the com-

pany that takes loans from banks will know more about their project returns as time goes on. This case differs from the hidden character in that firstly the agent is able to manage the character of the products and services and secondly hidden information situation happen after making a contract.

<Table 1> The Classification of Information Asymmetry

	Description	Type	Examples
Hidden characteristic	Asymmetric information on the characteristics of product, services, or utility	Ex ante	The quality of used cars The productivity with an employee candidate The willingness to pay an airline ticket
Hidden action	One party could not control or monitor the other parties	Ex post	Investors with less information than the management, Land owners with not much knowledge on the tenants
Hidden Information	One party gets more information than the other parties	Ex post	The company that takes loans from banks

These three classifications sometimes emerge mixing up in the information asymmetric cases simultaneously.

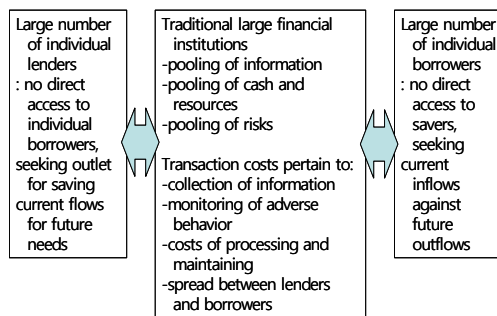
## 2.2 Information Asymmetry in the Loan Market

We can extend our classification of information asymmetry to the loan market. Suppose a simple model composed of a borrower and a lender. The borrower has a project; however, she does not have enough money to finance it. Then she should depend on the lender.

Firstly, hidden character works here to explain the situation that the borrower has more information on the project than the lender. Basically, the return from the project is given exogenously. There is no way for the borrower to choose the probability distribution of the return from the project. The lender needs information to tell the “low quality” borrower.

Secondly, agency problems arise when hidden action could happen as the lender does not entirely know how the borrower will use the borrowed money. As an agent to pay back the loan, the borrower may work her best or less hard than self-financed. Moral hazard will follow when the lender cannot observe the borrower’s efforts. The borrower may have moral hazard both before and after the project returns realized.

Thirdly, hidden information issues come out if only the borrower knows the returns from the project whereas, the lender does not. The borrower has an incentive to report the returns from the project wrongly on purpose. All the classification of information asymmetry applies to the loan transaction no matter how simple the model is.



<Figure 1> Intermediation of traditional financial institutions

For the loans from financial institutions such as bank, informational issues still hold, even if they work in between lenders and buyers as illustrated at <Figure 1>. The borrower is privately informed about its own credit risk. Moreover, the borrower as an agent to take a loan from bank could have moral hazard like the ways they have in the simple model[9].

In order to consider the execution of the loans, banks will need to have information on the potential borrowers. This kind of information has the characteristics of public goods in that some information acquired by

one bank can be used by another bank. So they have ‘free-rider’ issues for the information. That is the reason that banks, in the screening process, share the information from the credit score systems.

Stigler and Weiss pointed out why credit is rationed in the loan market of financial institutions making use of the concept of information asymmetry; equilibrium does not always entail supply equaling demand[19]. They have an excess demand for funds and banks making loans care how high the interest rate they receive on the loan, and how risky the loan is.

Interest rate working as the price in the loan market may affect the riskiness of the pool of loans. The rate sorts potential borrowers to have negative adverse selections as they have hidden character. Bank makes use of the rate as a screening device to identify “good borrowers.” The borrower who is willing to pay higher interest tends to be riskier. Plus, the rate affects the action of borrowers. If bank raises the interest rate, the borrowers’ behaviors changed to have riskier project to meet the requirement. Potential borrowers who are not provided with loans would not be able to take loans even if they are willing to take higher interest rate than the market rate and other additional collateral requirements.

With the reference on the Stigler and Weiss’s study, we are able to explain that the higher interest rate is the riskier the

bank in that the lemons in the loan market would bear the risk enough to pay high interest rates[19]. The borrowers who could take loans in lower interest rate would not deal with the bank. Thus, pricing mechanism does not work fully in this market and credit rationing exists.

Bester showed that they have no credit rationing in equilibrium if banks compete with the selection of collateral requirements and the rate of interest in order to screen investors' riskiness[6]. His argument had the assumption that banks decide rate of interest and the collateral at the same time and differentiate contracts as a self-selection mechanism. The rather "safe" investors are more willing to accept the conditions to increase more collateral with low interest rate. Borrowers with low probability of default choose a contract with a lower interest rate and higher collateral than borrowers with higher probability of default.

A signaling convention works for adverse selection as well. The rather "safe" borrowers would invest in observable characteristics to distinguish their character from risky borrowers. If banks make use of the collateral requirements as a signaling mechanism, then no borrower will be denied credit. Bester's self selection mechanism model makes it clear that the borrowers will choose the contracts that suit them[6]. And Puro said that third party decision aid could help lenders to make right decision[17].

### 3. Case Study for Information Asymmetry Issues with P2P Lending

#### 3.1 Methodology

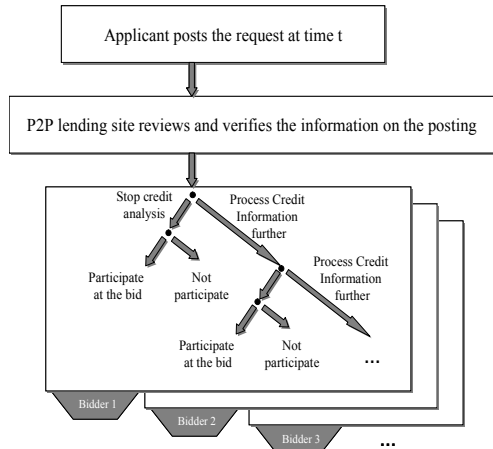
For the analysis of traditional loan examination, we have the bank's lending decision in the view point of the possibility of credit rationing, using Thakor's flow chart of spot lending decision. The model simplifies the role of information for the every step in the screening[9]. However, this model is surely not fit to P2P lending as it is. Additional modifications are required to explain the role of information in the participation and decision making of bidders in P2P lending market. <Figure 1> 2 shows the modified framework for the information asymmetry issues in P2P lending market.

Contrary to the cases of financial institutions, P2P lending site would not take advantage of the consolidation and pooling of cash, information and risk. Instead, it helps lenders and borrowers communicate with much information. We can expect that the information among those parties will play a key role to resolve the information asymmetry issues.

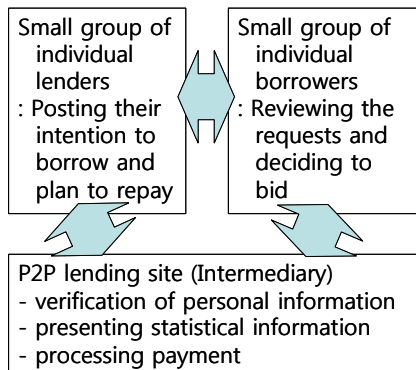
When it comes to the flow of information, lenders and borrowers have direct communications, while they get the objective infor-



mation from the intermediary like the ways illustrated in <Figure 3>.



<Figure 2> Flow chart of the P2P lending



<Figure 3> Information flow of the P2P lending

### 3.2 Understanding the case

#### 3.2.1 Overseas P2P lending sites

First, P2P site in the world Zopa.com was founded by initiators of Egg which is an in-

ternet bank in U.K. on March 2005. It took 31 million dollars from institutional investors such as Benchmark Capital and Wellington Partners. In result, about 500,000 members are registered in U.K.

Prosper.com is the first P2P service in U.S. It was started on February 2006. About 0.9 million members were registered and about 200 million dollar amount loans were originated just in 4 years.<sup>4)</sup> Venture capitals such as Omidyar Network invest on it about 20 million dollar. 960,000 members have originated \$197 million in loans as of June 2010.

Basically, business mechanism of Zopa and Prosper look very similar as P2P finance services. The first, they intermediate private finance transactions. It means that they just match borrower and lender on the internet. Because customers transact with each other privately, the return condition also depends on their private contraction except some restrictions. And both of them employ Dutch auction for their bid systems. Especially, proposals of borrowers can be successful if and only if cumulative sum of bids are equal or bigger than the proposed amount. And they charge some fees for intermediation. Customers should pay 0.5% to Zopa, 1% to Prosper.

However, there are some differences between Zopa and Prosper. Both of Zopa and Prosper check the credit levels of each re-

4) <http://www.prosper.com/welcome/marketplace.aspx>.

requestor which were analyzed by credit-rating agencies. But only Zopa excludes some risky person with strong criteria with 6 year credit history, identification, good repayment records and over 10 thousands annual salary. Furthermore Zopa forces diversified investment at least on 50 people. Furthermore, they collect debt with other financial institutions when borrowers cannot repay it. Otherwise, Prosper also checks the credit of requestors, they accept everyone, even though no-credit level. Moreover Prosper adopt the community management skill of microfinance to manage borrowers at community, so called peer monitoring system. They promote borrowers to build and participate in the communities.

Borrowers who are members of communities should care their own reputation and relationship with other members in same communities. If a borrower doesn't repay before due day, not only the borrower's credit but also communities credit would be lowered. So this system forces them to repay in time as kind of pressure. There is a leader of every community. The leader does their role as a community manager of the Prosper and takes at most 4% commission. And the last, Zopa has guarantee insurance service for borrowers. If a requestor who already contracted insurance fails to borrow, Zopa introduces other loan service.

<Table 2> Comparison between Zopa and Prosper

	Zopa	Prosper
Loan Expiration	1yr~5yr	3yr
Max Request	£15,000	\$25,000
Max Bid	£25,000	\$25,000
Security	N/A	N/A
Early Repayment Commission	N/A	N/A
Borrower Commission	0.5%	1%
Lender Commission	0.5%	0.5%
Interest Rate Cap	N/A	30%
Debt Collection	Collection Agency	Collection Agency
Risk Management	Portfolio, Credit Filtering	Group Management

### 3.2.2 A P2P lending site in Korea

More than 8 million people in Korea are not able to have credit services from the official financial institutions because they are the credit delinquents or do not have any financial records. Consequently, about 3 million borrowers have lent more than \$18 billion from private loan market. And 50% of the market is occupied by Japanese private lending companies. Their interest rate is very high as 50% to 60%, even higher in illegal private lending sector.

In this context, alternative financing was welcomed in the lending market.

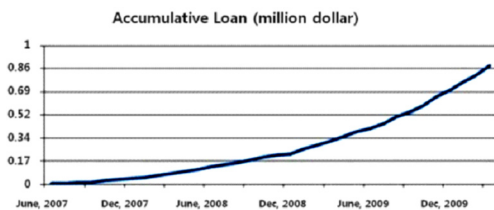
P site's P2P lending market follows the rule of Dutch auction for Borrowers' requests with the same way they have for Prosper.com. The borrower's request amount is lim-

ited to \$25,000 while the lender's bid amount is limited to \$100.<sup>5)</sup>

P site has achieved fast growth as shown in Figure 4. As of March 2010, more than \$1 million in loans was originated with the total 700 loans out of 7,000 requests on the site.

〈Table 3〉 Online P2P Lending Sites in Korea

	P site	M site
Max Request	\$25,000	\$25,000
Max Bid	Up to the membership level	\$30,000
Security	N/A	N/A
Early Repayment Commission	N/A	N/A
Borrower Commission	N/A	2.5%
Lender Commission	N/A	2.5%
Interest Rate Cap	30%	60%
Interest Rate Determination	Universal Type	Average Type
Private Lending Registration	N/A	Required



〈Figure 4〉 P site Accumulated Loan

5) Recently P site adopted the differentiated limits by the membership levels : Newbie : ~\$100, Silver : ~\$200, Gold : ~\$400, VIP : ~Requested amount.

On average, they have 30 loans out of 270 net requests per month. The amount per loan for recent 2 years is about \$2,000 with the interest Rate of 28%. Like other P2P lending sites, P site user profiles show that most of lenders are with low credit scores, having 96% lenders under the credit rate 7, out of the credit scales from 1 to 10.

〈Table 4〉 Summary of P site Current Condition

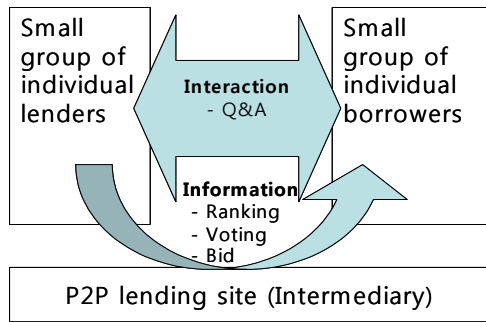
Total Bidding	672	Total Repay	6675
Normal	5073	Short Term	914
Long Term	581	Votes	27
Bad Debt	80	Normal Repayment	76%
Short Late payment	13%	Long Late payment	8%
Bad Debt Late payment	1%	Total Late payment	24%
Bad Debt Rate(amounts)		5.2%	

The most important point with P site is that the borrowers who succeeded to get financed are very likely to repay the debt, having the repayment ratio of 95%. The expected returns from the lending will be not bad in that the average interest rate in the site reaches 25 to 30%.

### 3.3 Information Asymmetry Issues in the Case of P Site

In case of P site, the intermediary is sup-

plying not only bid specific information likes the verified personal information, the number of bids, the achievement rate for requested amount, but also signal information such as ranking and voting points, as shown <Figure 5>.



<Figure 5> Information in the P site

The intermediary basically shares the ranking information which will let potential lenders know what is going on with the current requests from borrowers. Such information generates signaling effect for potential lenders to know what requests they are going to take part in. Consequently, group decisions of borrowers depend on the information the intermediary supplies.

### 3.3.1 Searching listings

A borrower listing is a request by a borrower member for a loan. Borrowers put purpose of the loan, and write a description about how they plan on the usage of the loan. The conditions with the loan like amount, repayment period, and interest rate cap are

presented. Hard information such as credit rating, asset and income is verified through P2P lending site.

Lenders can browse all the listings by clicking on the Investment section. Lenders are able to view all listings and sort those by different variables such as time left, participation rate and qualitative characteristics. Lenders can see the borrower's available credit history and the prior loans in the P site.

In the perspective of information asymmetry, lenders are in a position to face the problems of hidden character of potential borrowers. Following the processes in the flow chart presented in <Figure 1>, lenders would gain more information on borrowers to identify the possibility to be in a default situation.

In this process, P site is providing the verified information such as borrower's identity, address, income, credit and asset in case the borrower sends the required backup materials to verify the information. Borrowers can signal their type, therefore, credibly transferring information to the other party and resolving the information asymmetry. It is possible for this kind of information to function as a signal of an ability to repay. Assuming that people who send the materials for verification are transparent and willing to reveal their credit status, lenders will have more information to assess the credit of the borrowers with verified information. Even though the more information on borrowers will

not guarantee their timely repayment, lenders will consider the signals from the borrowers with the verified information.

### 3.3.2 Participating in bids

The P site has reverse auction mechanism with the rule of full-funding as mentioned above. In this process, lenders reviewing the information on the posting are able to bid on the loans. Loans are funded if the full amount of the request has been met and if not enough lenders bid on the loan request to meet the desired amount - the borrower will not receive a loan. The more lenders who compete to place bids and lend the borrower money, the lower the borrower's interest rate will fall. That is, borrowers can choose the maximum interest rate that they're willing to accept for the funds that they would borrow. This rate is a starting rate for the reverse auction, and does not necessarily represent the final rate of the loan.

Therefore, the initial target for the loan request is to have enough bidders to have full-funding and then to have lower interest rate with the inflow of more bidders. Lenders will care if the auction they participated gets funded, how high the interest rate is, and whether the borrower repay the loan in a timely manner.

In the viewpoint of information asymmetry, lender will refer the actions taken by other lenders in that they are not likely to

have enough information on borrowers. An information cascade will occur as lenders observe the actions of others and then make the same choice that the others already made, independently of their own private information signals. As the information what other lenders are doing is normally available in the P site, rational lenders are able to refer other lenders.

This information cascade could work positively and negatively in the point of financial returns at the same time. Collective reviews on the loan can provide more exact ways to evaluate the possibility of default or delayed repayment. Simultaneously, the bidders may follow the participations of the previous bidders without enough assessment on the loan.

### 3.3.3 Monitoring Repayment

Borrowers repay both principal and interest monthly. Borrowers and lenders can communicate through the bulletin board associated with the loan. If they fail to repay on time, the information on borrowers is revealed to the lenders gradually. P2P lending was basically intended to make a personal connection between borrower and lender, and therefore have borrowers with more possibility to repay their debts than the people faced with large obligations to unsympathetic financial institutions.

In the perspective of information asymmetry, hidden actions and hidden information issues could come out in this stage. The bor-

rowers with the malicious intentions would not repay intentionally. Or, the borrowers may face unexpected change of their income. Persistent efforts to communicate through the web site may help lessen the asymmetry between the borrower and the lenders. The social networks with web 2.0 features are found in P2P lending sites are analyzed in the research of Lin(2009)explaining the effects and patterns of social networks on the fund-ability and appropriateness of the repayment[12]. The intervention and coordination of groups and group leaders play a key role in the full funding and timely repayment[7].

### 3.3.4 Synthesis

Information asymmetry issues in P2P lending market are not fully resolved as long as they have hidden characters of borrowers. However, during the whole processes, the information from borrowers, potential borrowers, and the intermediary and communication among them, are expected to lessen the issues by helping lenders choose, review and decide to participate in the bids. From our case study, we find that P site has some sort of witness the screening processes while borrowers and potential borrowers are filtering the candidates to make loans. Consequently, the signaling information and the actions by following lenders will play a key role for good performance of repayment. The impact of information on the decision is still left for the further empirical

studies.

## 4. Conclusions and Implications

This paper aims to introduce P2P lending and provide the insights from the case study of one of P2P lending sites in Korea. The analysis shows that P2P lending has the mixed characteristics of auction, microfinance and Internet marketplace. Even though P2P lending market is growing very fast, it contains the major issues of information asymmetry that the traditional financial institutions have.

Information asymmetry issues has made the traditional financial institutions have credit rationing to attract more borrowers screen the potential borrowers with the lower interest rate than the equilibrium interest rate[19]. Higher interest rates tend to attract worse borrowers, which happens in P2P lending. This implies that P2P lenders should exercise similar credit rationing if they do not have other hard information and pursue financial returns like traditional banks[4]. However, the data analysis of the P site showed that hard information, if any, does not work at all as information for choosing and bidding on the borrowers according to Ho[10].

The point with adverse selection is the screening. The P site rejects more than 80% of the people asking for loans. This kind of rejection works like the credit rationing pro-

tecting the credit not to be toxic assets; most of borrowers are discouraged, though. However, the current screening with the P site does not accompany underwriting to verify loan requests to the level of the intermediary's responsibility by providing lenders the reliability and anti-fraud index. Effective underwriting is hard to realize, needs much labor, and consequently expensive. As such, providing underwriting information on the site will act as a 'double-sided sword' to secure asset stability and not to grow customer base in a short time.

Furthermore, as long as it is concerned with the repayment, P2P lending sites are operating somehow differently from the ways happening in offline microfinance's advantage-group monitoring. P2P lending sites tend to have the portfolio of lenders with the objective of more profits rather than donor behavior, borrowers with little individual ability to build a reputation, and contracts with legally binding responsibilities, which is different starting point from microfinance in the area with low level of capital. Additionally, the identities online could be disguised and much easier to be manipulated[14].

As this paper is a type of case study, it has some limitations for academic society to make up for. Above all, we should avoid the. For generalizability, further analytical and empirical studies should be followed. Specifically, analysis on borrowers' profile information would show any specific dependency in

the decision making in bids with the empirical research. Moreover, Social networks on web 2.0 and groups on top of such networks remain as additional topics to explore. And further studies are required to explain the working mechanism of P2P lending market and provide appropriate evidences to verify if P2P lending will be an alternative for the credit financial services in the future when we are likely to have more frequent financial crises that caused it hard for more people to have credit services from the official financial institutions.

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