Does Social Lending incorporate Social Technologies?
The use of Web 2.0 Technologies in online P2P lending

A. Ashta and D. Assadi

Microcredit interest costs remain higher than those of commercial banks in spite of significant donor funds, largely owing to transaction costs relative to small loan sizes. With the rise of Web 2.0 and online social interactivity, can these transaction costs be reduced through peer to peer lending? Peer to Peer lending and Web 2.0 have two things in common. The first common denominator is that both of them are rather newcomers in their respective fields and growing fast. The second is that they are both based on mutual and social exchanges between people instead of centrally controlled communications and relationships. The main objective of this paper was to investigate whether they are integrated to support a higher level of social interactions and associations for less (transaction) costs. We find that peer to peer lending consists of diverse websites of microcredit (Kiva, Wokai), social investing (MicroPlace) as well as small loans at market rates (Prosper, Zopa, Lending Club), and even lending between friends and family members (Virgin Money). The paper studies the use of web 2.0 technologies (blogs, interactivity between lenders and buyers, peers' reviews and comments, peers communities and chats) in six such peer-to-peer lending sites. It finds that most of the peer-to-peer lenders are in fact intermediaries between the peers (lender and borrowers) and there is little direct contact between the peers. One website used none of the web 2.0 tools. None of the websites used all the web 2.0 tools. The impact on transaction costs is therefore very little. A discussion of difficulties in establishing platforms in this field and directions for future research are provided.
Does Social Lending incorporate Social Technologies? 
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Presented at the First European Research Conference, Brussels, June 2-4, 2009

ABSTRACT

Microcredit interest costs remain higher than those of commercial banks in spite of significant donor funds, largely owing to transaction costs relative to small loan sizes. With the rise of Web 2.0 and online social interactivity, can these transaction costs be reduced through peer to peer lending? Peer to Peer lending and Web 2.0 have two things in common. The first common denominator is that both of them are rather newcomers in their respective fields and growing fast. The second is that they are both based on mutual and social exchanges between people instead of centrally controlled communications and relationships. The main objective of this paper was to investigate whether they are integrated to support a higher level of social interactions and associations for less (transaction) costs. We find that peer to peer lending consists of diverse websites of microcredit (Kiva, Wokai), social investing (MicroPlace) as well as small loans at market rates (Prosper, Zopa, Lending Club), and even lending between friends and family members (Virgin Money). The paper studies the use of web 2.0 technologies (blogs, interactivity between lenders and buyers, peers' reviews and comments, peers communities and chats) in six such peer-to-peer lending sites. It finds that most of the peer-to-peer lenders are in fact intermediaries between the peers (lender and borrowers) and there is little direct contact between the peers. One website used none of the web 2.0 tools. None of the websites used all the web 2.0 tools. The impact on transaction costs is therefore very little. A discussion of difficulties in establishing platforms in this field and directions for future research are provided.

INTRODUCTION

The last few years have witnessed major changes in information and communication technologies which have created disruptive and radical innovations. New companies such as Facebook, U-tube and Flicker have emerged and caught the attention of the public and financial investors and are valued in millions or billions of dollars. Existing companies such as IBM, Amazon and Google have also taken to these new technologies profitably. These companies have been able to use information technologies to encourage users to create value, providing networks to multiply effects, allowing people to build connections and companies to capitalize on competencies and using new forms of collaborative innovations.

As illustrated in figure 1 below, Shuen (2008) explains that the new internet technologies have led to democratized innovation, crowdsourcing, eco-system platform innovation and recombinant innovation. The major change in technologies facilitating this is termed "Web 2.0", often called "social technology". This technology includes blogs, interactivity, peers' reviews and comments, peers communities and chats. These technologies have led to direct transactions between peers and concomitantly reduced transaction costs in a number of ways: automating the procurement process and reducing paperwork; interoperability and multi-user communications; auctions to get best prices; collaborative planning leading to reduction of inventories; and collaborative design. The spread of these technologies has been influenced by Social Contagion.
IT companies are innovating in new ways

Architectural Innovation
Radical innovation

Incremental Innovation
Disruptive Innovation

Open, ecosystem, platform innovation
Recombinant innovation

Democratized innovation
Crowdsourcing Innovation

Old technology New technology
Old Market New Market

User Company
User Company

Figure 1: Transformation of innovation models

Our research question was whether these Web 2.0 techniques have led to a reduction in interest costs or to an increase of credit availability by the lowering of transaction costs and overcoming information asymmetries in novel ways.

The main objective of this paper is to document such sites and investigate whether the peer-to-peer websites have integrated the social networking tools of Web 2.0 to support the social interactions and associations of the peer-to-peer lending. In other words, the paper aims to scrutinize whether the peer-to-peer websites make use of the social Web 2.0 tools to encourage mutual exchanges and cooperation between peers to lend and borrow money or whether, instead, they centralize the loan transactions. Is the overall performance leading to lower transaction costs and lower interest rate loans to poor people?

Directed by the above research objective, in the next section we will provide some background information on microfinance transaction costs and information asymmetry as well as an introduction to the use of web 2.0 techniques. Thereafter, we will see whether new online lending sites are using these techniques to further microfinance. In the subsequent section, we offer additional directions for further research. The final section would provide our conclusions.

BACKGROUND

In this section, we will provide a brief introduction to the transaction costs that create impediments to the growth of microcredit and to the web 2.0 tools that are being used by online lending sites to overcome such transaction costs.

The high costs of Microcredit and the need for online lending

One of the problems in lending situations is imperfect information: the lender does not know the borrower’s situation as well as the borrower does. Within this imperfect information stream, there is a special case of asymmetry of information producing special problems such as adverse selection (Akerlof, 1970) and moral hazard (Stiglitz & Weiss, 1981). Some of these problems can be reduced by regular monitoring. However, such monitoring is expensive and not practical for the small scale of loans given by a lender. Conventional solutions have included the development of guarantees, cautions and the development of intermediaries with private information. An often cited example is the
creation of stock exchanges who guarantee information flow from a company issuing securities to the investor who has little information on the companies.

Banks give loans to people based on some amount of trust. The higher the trust, the lower is the interest rate. With extremely low trust, there may even be no loans (we can say that interest rate is infinite). The mechanisms of trust used by banks include collateral, certified accounts, regular reporting, and even presence on the board of directors.

One way large companies lower interest rates is by bypassing the banks and directly issuing bonds. The public gets higher interest rates than that given by banks on deposits. At the same time, the companies pay lower rates than those charged by banks. One of the reasons large companies can do this is that they reduce the information asymmetries and the inherent mistrust because of their well known brand. Often, this is because they are already present in share markets and the stock exchange watchdogs (SEC in the USA, AMF in France) guarantee information flow and external auditors certify that the information is trustworthy. Although recent scandals have shaken confidence in the auditing system, the governments of various countries have quickly responded by new changes in legislation to reestablish trust (e.g., SOX in the US, NRE in France).

However, till recently, small firms and individuals faced large transaction and information asymmetry costs mainly because people didn't know them and so would not lend directly to them. They preferred to lend to banks that they knew. The banks, having private information on these firms and individuals, then assessed the risk of each borrower before lending. However, the banks were not used to taking high risks for small amounts, even at high rates because of usury law limitations or cultural constraints (Attuel-Mendes & Ashta, 2008; Goudzwaard, 1968).

The advent of microfinance changed this situation. Through an extensive use of benevolent workers and donor funds, microfinance was able to considerably reduce transaction costs (Armendariz & Morduch, 2005; Ashta, 2007; 2009 forthcoming; Bernasek & Stanfield, 1997; Bhatt & Shui-Yan, 2001). By innovative schemes of staggered lending and progressive lending, as well as group monitoring, microfinance institutions were able to lower information asymmetry costs. The phenomenal growth of Microfinance from the first organization in the 1970s to 10,000 organizations today (World Bank estimation), testifies to the success of the different variants of the model. Even if only 175 of these microfinance operations are sufficiently scaled for financial sustainability, all are involved in achieving the function of transferring funds from people who have excess funds to people needing these funds.

A simplistic version of the supply chain of money in microcredit is shown on the left hand side of figure 2 as a linear model. Individual donors/lenders give money to donor organizations / social investors. These donors/investors provide this money to Microfinance institutions and then these MFIs lend to individuals. Thus, there are at least two intermediaries between the lender and the ultimate borrower: the donor/investor organizations and the Microfinance institution.

**Development of online lending**

On the Internet, we find a new category of lending companies is indeed emerging, which has been termed "peer to peer lending". The field regroups a few institutions with different missions and different legislative constraints, but all based on the promotion of peer-to-peer contacts. We find that peer to peer lending consists of diverse websites of microfinance (Kiva, Wokai), social investing (MicroPlace) as well as small loans at commercial market rates (Prosper, Zopa, Lending Club), and even lending between friends and family members (Virgin Money). Since academic literature on these sites is non-existent, it is worth documenting them.

This fledging Internet-based peer-to-peer lending industry is evolving rapidly: about $650 million in outstanding debt in 2007 (Lee-St. John, 2008). A rising number of individuals are now looking
towards networks of friends or even strangers on the Internet to finance purchases, pay for one-time events (such as weddings or vacations), consolidate debt, finance their small business or pay off a mortgage. The nascent peer-to-peer lending business on the Internet is based on online facilitators and/or intermediaries who enable and encourage social exchange between borrowers who post a request, and lenders who indicate how much and at what interest rate they want to lend. The demand for funds still appears to outstrip supply, mainly because lending and borrowing peers very often come from different cultures and territories and consequently do not know each other and hesitate to conclude deals.

Our study was initiated in February 2008. We did not find any industry association listing all the peer to peer lending organizations. A search on internet showed that Wikipedia documented five sites Kiva, Prosper, Zopa, Lending Club, Circle Lending (now Virgin Money). An academic research on EBSCO showed that when commenting on peer to peer lending, professional journals and news magazines mention essentially these five sites. For example, Freeman (2006) had covered Zopa and Prosper; Stetenfeld (2008) has talked about Lending Club, Prosper and Zopa. Sisk (2008) covered these three and Virgin Money. Farrell (2008) added GlobeFunder to the list but we could not determine the magnitude of their business from their website. Pratt (2007) has covered Kiva. Holahan (2007) added MicroPlace to Kiva. Additional web-sites have emerged since then (Powers, Magnoni & Knapp, 2008), but we we have limited ourselves to these known examples (before March 2008). Therefore, six specialized websites in peer to peer lending constitute our sample: Kiva, Prosper, Zopa, Lending Club, Circle Lending (now Virgin Money) and MicroPlace.

As seen from table 1, the first institution to be established was Circle Lending in 2002. At that time, it dealt with loans between families and friends who are already known to each other and the website was only a facilitator. Recently, this institution was taken over by Richard Branson and is now Virgin Money. The second institution to be started in 2005 was Kiva with founders Matt and Jessica Flannery, which has clearly taken the micro-credit niche. Two other institutions, Zopa and Prosper, which started in 2005 and 2006, respectively, are online market places where borrowers and lenders who are unknown to each other come together. Although some of the loans on these websites may be small enough to be called micro, this is not the purpose. A fifth institution, similar to Zopa and Prosper, is more into community based lending: Lending Club (started in 2007). A sixth institution, MicroPlace, started in 2006 and is also concerned with financing microfinance institutions,. One common denominator of all these websites is the repetition of the underlying philosophy of people helping people. Although some of these have subsidiaries in other countries, we have covered only the parent country. We can also mention that for SEC regulation, some of these operations have had to close down (Zopa US, Prosper) and restart (Lending Club).

<table>
<thead>
<tr>
<th></th>
<th>Started in</th>
<th>Founder</th>
<th>General description</th>
<th>Interest rates to lenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiva,</td>
<td>2005</td>
<td>Matt and Jessica Flannery</td>
<td>Microfinance</td>
<td>None</td>
</tr>
<tr>
<td>Microplace</td>
<td>2006</td>
<td>Tracey Pettengill Turner</td>
<td>Social investing</td>
<td>1 to 3 %</td>
</tr>
<tr>
<td>Prosper</td>
<td>2006</td>
<td>Chris Larsen</td>
<td>market place, auction</td>
<td>Market rates, depend on risk</td>
</tr>
<tr>
<td>Lending Club</td>
<td>2007</td>
<td>Renaud Laplanche</td>
<td>Market place</td>
<td>Market rates, depend on risk</td>
</tr>
<tr>
<td>Virgin Money (ex-Circle Lending)</td>
<td>2001/2002</td>
<td>Richard Branson (ex-Ashish Advani)</td>
<td>Service fee for servicing Social lending</td>
<td>Fixed between family or friends</td>
</tr>
</tbody>
</table>
However, interest costs (including application processing fees, interest rates, opportunity cost of compulsory deposits) remain higher than those of commercial banks in spite of significant donor funds, largely owing to transaction costs associated with small loan sizes. These interest costs vary from country to country from 15% to 100%. Administrative costs, including traveling from village to village, processing time, etc. represent two-thirds of the costs (Dieckmann, 2007). Since these high interest costs have poor ethical connotations (Ashta & Bush, 2008), even more social investors may finance microcredit institutions, if the costs of lending could be reduced, notably by lowering their transaction costs component or further lowering the information asymmetry.

With the arrival of internet, it is now technologically possible for small firms and individuals to get access to a large number of individuals and institutions, thus bypassing the intermediating brokers/investors and banks/Microfinance institutions. The relative low cost of internet technology makes small transactions feasible. However, borrowers also need to overcome the asymmetric information problem. The question is whether new internet tools, termed Web 2.0 social tools, can contribute to overcome information asymmetries and reduce the inherent risk for building up a climate of trust for the parties of a microfinance exchange.

Some preliminary research (Assadi & Ashta, 2009) state these sources of trust: personality of trustor, trust inspiring partners, and trust-certifying third parties. It finds that the sources of trust using peer to peer lending are often intermediary or institutional based. Trustor based sources of trust are not present on these websites. Trustee bases sources of trust exist if these websites are facilitators: most are not. In this paper, we examine whether these online websites are really using all the webtools at their disposal. We are not implying that the use of web2.0 tools is essential for trust: there could be other ways of building it, but this is the area in which we focus in this paper.

**The Web 2.0 social media**

The term Web 2.0 is believed to have been coined by Dale Dougherty and then popularized by Tim O'Reilly (Lenrevie, Lévy & Lindon, 2006). It stands for a generation of social media that allows users to jointly create and manipulate content. Such media can take many forms, from the virtual worlds of Second Life, Microsoft Office-compatible Google Documents and Spreadsheets, blogs, wikis and group messaging software programs.

For solving problems, innovating, taking decisions, and even predicting the future, collaboration and aggregation of information in groups are considered to be better than the enlightenment of any elite few, no matter how brilliant (Surowiecki, 2004). Now, web 2.0 tools can enhance collaborative environments by making the practices of knowledge work more visible and accessible (McAfee, 2006). These tools enhance meaningful in-house dialogue and facilitate mass virtual collaboration to solve a problem or to improve an operation (Tapscott & Williams, 2006). Blogs, for example, can potentially bring organization and their constituencies together in a way that improves both image and bottom line (Scoble & Shel, 2006). Dell currently has several sites that support user-generated content and give its customers and community a voice (Armano, 2007). Many companies, such as Ernst & Young, recruit new employees primarily on Facebook (Hollis, 2007).

Empowered by the collaborative potential of the Web 2.0, many individuals now take the initiative to form communities and exchange directly on different issues. Moreover, a growing number of Web 2.0-equipped sites now enable Internet users to reward or punish corporations for their behavior and provide an opportunity to create brand affinity by driving communities to form around companies such as Harley-Davidson (Armano, 2007). Consumers on the internet share not only their purchase experiences with the rest of the world, but make their buying intentions transparent as well. Intentional
buying groups show clearly their intentions. This phenomenon, dubbed "Intention Economy" means letting consumers make their buying intentions known, and then inviting suppliers to bid for their business.

These applications create the possibility of strong collaboration. They enable distant peers to create, share, edit, categorize, and exchange information directly and independently. Every change or comment is preserved on the hosting web server. (Yu & Hui, 2007).

The revolutionary potential of these technologies reside in the ability to let atomistic individuals to form, by themselves, new groups, organizations, social networks and peer-to-peer collaborations. More than one billion consumers are now on the Internet. Many of them comment on commercial offers and post reviews and experiences, and are adding to the knowledge available on each brand and business. In fact, collaborating through Web 2.0 technologies is also referred to as “crowd sourcing” (Tapscott & Williams, 2006).

Through Web 2.0 technologies, distribution of data becomes spherical rather than linear, including horizontal and bottom-up, not just top-down communication. Furthermore, Web 2.0 open standards applications such as tagging, bookmarking, and user-generated content enable new forms of collaboration and new forms of information. The barriers between people have never been so thin. Web 2.0 technologies embrace the idea that the more people use a service or application, the stronger and more valuable it becomes, following "power laws". An illustration of such a network is provided in the right hand of figure 2 as a potential syperical web2.0 based model, where people network with each other using the website as a platform to create content.

A McKinsey survey by Bughin & Manyika (2007) includes the following nine web 2.0 tools, ranked in order of respondents' interest and importance attached: web services, peer-to-peer networks, collective intelligence, social networks, podcasts, Blogs, RSS (Really Simple Syndication), Wikis and Mash-ups. Definitions of each tool are available in that survey. The survey points out that different industries use different tools. For example, Communications and media industries use RSS, Blogs and Podcasts more than the average user. Similarly, Knowledge-focused industries such as high-tech use Mash-ups, peer-to-peer networking, social networking, collective intelligence and wikis more that average users. This is not to say that they lay less importance on Web services. Web services continue to be the most important, but both these industries use web-services as much as any other user. Thus, we can conclude that even if web 2.0 tools are used differently in different sectors, they all tend to favor horizontal collaborations and interactions between individuals and peers.

Our question is whether Web 2.0 tools are being used in the P2P online lending websites to reduce information asymmetry and transaction costs in microfinance. Theoretically, the question si whether...
the online lender's system resemble and intermediation linear chain as in the left hand side of figure 2 or a platform spherical model as in the right hand side of figure 2. The question is not only theoretical but also practically important because the ostensible mission of these websites is to encourage transactions between peers. In this paper, we examine the web tools these website-based lenders use to build trust and reduce transaction costs.

IS ONLINE LENDING USING PLATFORM TECHNOLOGY TO REDUCE TRANSACTION COSTS?

Do Online Lending sites resemble Web 2.0 Platforms or are they Intermediaries?
The first exploratory step of our research discovers specific business missions of the members of our sample and leads to discovering particulars patterns in online peer-to-peer lending. Our first question was whether these websites were actually peer-to-peer. From the description of the transactions on the various websites, we noted the movement of funds. From this it appears that the only facilitator dealing with peer to peer lending, without intermediary, is Virgin Money. In all the others, the peer-to-peer lending site is an intermediary. In fact, four distinct online role models appear, which we will treat successively: microcredit, social investing, commercial market places and social lending. In the discussion below, we explore only the question of the business role by determining how money is transferred between entities. Further details of the operators may be obtained from their websites.

A. The online microcredit model (Kiva)

Kiva is as an intermediary of microfinance for it partners both with lenders and borrowers. Its model is the linear one depicted in Figure 2. On the borrowers' side, Kiva works with, "Field Partners" which are local microfinance institutions. Usually such institutions have limited funds, but have access to and ability to choose qualified borrowers/entrepreneurs from world-wide impoverished communities. Kiva does not distribute the funds itself to the final borrower. On the other side of Kiva, lenders can directly sponsor a business/borrower, but sends the funds to Kiva. Therefore, the entire peer to peer process contains two intermediaries. The first is Kiva.org. When a lender loans, the funds are sent to Kiva.org via PayPal or a credit card. From Kiva.org the funds are sent to another intermediary, a field partner (a microfinance organization), which distributes the funds to the assigned entrepreneur. So, lenders basically trust the intermediaries who facilitate the transfer and repayment of the microcredit. Trust may be less important on Kiva as essentially lenders are making donations. Their interest in getting the loans repaid is really so they can lend them out again and feel they are getting better “value” for their donation. However, these donor-lenders may still want to verify that their philanthropic mission is fully satisfied through a transfer of loans to genuine entrepreneurs. This may explain the listing of entrepreneurs on the site of Kiva.org. Some field partners work with groups of entrepreneurs. Here, the group guarantees repayment of each individual member. No interest is currently charged or paid on loans. Once a loan is repaid, lenders can re-loan or withdraw their funds.

To become a "Field Partner", the prospective microfinance institution must currently serve at least 1,000 active microfinance borrowers; have a history (at least 2-3 years) of lending to poor, excluded, and/or vulnerable people for the purpose of alleviating poverty or reducing vulnerability; be registered as a legal entity in its country of operation; be able to show at least one year of financial audits; and preferably be registered on the MIX Market (www.mixmarket.org). These requirements help to build trust with the ultimate lender.

On the lenders side, Kiva encourages potential loan givers to choose directly among uploaded entrepreneur profiles on the site and sponsor a business. The course of a loan is usually between 6-12 months and its amount can be as little as $25 at a time. Once a loan is repaid, the lender can withdraw the funds or re-loan them to a new entrepreneur. Lenders periodically hear back from their sponsored entrepreneur and remain informed on the progress of the entrepreneurship, via email and online
journal updates, often written by partner representatives and loan officers. Kiva never facilitates the interaction and communication between lending and borrowing individuals. The website of Kiva is not interactive and does not promote peer-to-peer connections.

B. Online social investing (MicroPlace)
MicroPlace distinguishes itself from Kiva and the other entities and refers to its lenders as "investors". These lenders invest in market notes of security issuers. These security issuers then provide the funds to microfinance institutions who give the funds to poor people. The original investors get returns of 1 to 3%. MicroPlace is a registered broker-dealer which allows the social investors to buy the bonds of security issuers. MicroPlace earns a commission from the security issuer. It can take only funds from American retail investors. MicroPlace is therefore also following the linear model.

Once client repayments are received, the institutional investors receive their principal (plus interest) and can then pay back their own investors, i.e., people who purchased those original securities. Unlike Kiva, where lenders provide capital to microfinance institutions directed to specific entrepreneurs, MicroPlace is mainly a market for microfinance securities, not just requests for loans, and the investors target specific Microfinance Institutions and not the ultimate entrepreneur (2008b).

C. Online Commercial Lending Market Places (Zopa, Prosper and Lending Club)
Zopa, Prosper and Lending Club9, three other members of our sample, provide a matchmaking service of introducing borrowers to lenders who previously did not know each other. This process helps borrowers to get lower rates than commercial credit and offer lenders higher rates than bank deposits. Also, many borrowers would otherwise be unable to get any loans from banks: for example, new companies who have no financial history seem to have difficulty in getting loans from banks during the first two years because they do not have financial information to provide (Farrell, 2008)10. These firms find that they can get small loans directly from people on these websites. Freeman (2006) finds other similarities between Zopa and Prosper: “both vet potential borrowers, assess the credit risk, and distribute that risk among a number of different lenders, all individuals who determine how much money they wish to loan out at what level of return”. Any individual can register as a borrower and can build a profile for himself/herself. Loans from a lender can be distributed to a single person or divided amongst several borrowers. Conversely, a borrower's loan might come from a single lender or several, to reduce risk. An auction mechanism is used to allow borrowers to get the lowest rates for their credit rating. They are all using the linear model. Most of the lending may be consumer lending.

D. Online Social Lending (Virgin Money)
Virgin Money (USA) differs from the three previous online peer to peer lenders because it focuses on loans between people who are familiar with one another (family and friends). The Virgin Money people deal with the paper work such as loan documents, payment processing, reminder emails, and year-end statements. Virgin Money is the only real peer to peer movement of funds as shown in the spherical model of figure 2. This distinction exists because the borrower and lender know each other before contacting Virgin Money. It is ironic that there is an absence of the Web 2.0 tools on its website to encourage direct contact and trust building between peers.

Therefore, the only real direct peer to peer lending is through Virgin Money, which is merely a facilitator offering services to the peers who already know each other. All the other five are intermediaries and money flows through them. However, the motivation of these five differs. Prosper, Zopa and Lending Club seek to maximize profits for their clients and for themselves. At the other extreme, Kiva is a not-for-profit and its lenders also do not receive interest. In between, MicroPlace is looking for a small return and falls into the category of social investors.
The following table summarizes our findings of the different internet models used and the position in the chain of each operator.

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Broker/agent</th>
<th>Wholesale</th>
<th>Facilitator</th>
<th>Retailing</th>
<th>Customer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiva</td>
<td>Donors or Grants and interest free loans</td>
<td>Kiva</td>
<td>-</td>
<td>Micro-finance institutions</td>
<td>Entrepreneurs</td>
<td>Linear</td>
</tr>
<tr>
<td>MicroPlace</td>
<td>Individual investors</td>
<td>MicroPlace</td>
<td>Security issuers</td>
<td>Micro-finance institutions</td>
<td>Entrepreneurs</td>
<td>Linear</td>
</tr>
<tr>
<td>Lending Club</td>
<td>Individual, business investors</td>
<td>Lending Club</td>
<td>-</td>
<td>-</td>
<td>Individuals</td>
<td>Linear</td>
</tr>
<tr>
<td>Zopa</td>
<td>Lenders</td>
<td>Zopa</td>
<td>-</td>
<td>-</td>
<td>Individuals</td>
<td>Linear</td>
</tr>
<tr>
<td>Prosper</td>
<td>security issuers</td>
<td>Prosper</td>
<td>-</td>
<td>-</td>
<td>Individuals</td>
<td>Linear</td>
</tr>
<tr>
<td>Virgin Money</td>
<td>Relatives, friends</td>
<td>-</td>
<td>Virgin Money</td>
<td>-</td>
<td>Relatives, friends</td>
<td>Spheric al</td>
</tr>
</tbody>
</table>

Table 2 – Intermediation functions in the online P2P micro-lending websites

Are these social lending sites using the full range of web 2.0 tools?

Our research objective was to determine whether peers build direct trust with each other on the microfinance websites through the Web 2.0 technologies which potentially enable direct, immediate and horizontal interactions and transactions. What are the performances of the members of our sample with regard to this issue?

Table 3 resumes the web tools being used to facilitate contact. We have not observed all the web 2.0 tools surveyed by Bughin and Manyika (2007) because some tools are typically used in-house and/or are not observable, while other tools are used to relate to external customers and are more visible. For example, peer-to-peer technology of sharing files across a number of users' computers rather than maintaining the files in a large central server, is not visible to the outside observer (such as us) unless the firm outlines such procedures explicitly on its website. Similarly, wikis are often used more for in-house collaboration and knowledge building than for sharing information with workers. We have classified the tools which we surveyed into blogs, interactivity, peers' reviews and comments, peers' communities and chats, as shown in table 3. We find that five sites use blogs, two sites have other means of interactivity, one site is using Wikis and three sites are offering Peer Community and Chat Services.

However, not all these blogs are interactive. Some are only one-way communication channels. For example, we note that blogs may be institutional; they may permit comments; and they may allow people to initiate new topics. Similarly Communities may be open only to lenders; only to borrowers; or to lenders and borrowers. Based on this, we find that overall effectiveness is less than the optimal if the tools were being optimally used.

Although at first glance, it is surprising to see that Virgin Money does not use any web 2.0 tools, it must be remembered that the people using Virgin Money already know each other and may not need such tools.
Table 3 - Web 2.0 social tools on the Peer to peer lending websites

<table>
<thead>
<tr>
<th>Website</th>
<th>Blog</th>
<th>Interactivity between lenders and buyers</th>
<th>Peers' reviews and comments</th>
<th>Peers Communities and chats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiva</td>
<td>Journals of entrepreneurs with photo, message. Possible link to the lenders’ blogs. Kiva Blog, ”Inside Kiva”, an info. letter with links. No interactivity with readers.</td>
<td>None</td>
<td>Comments on the journals of the entrepreneurs. No interactivity</td>
<td>Communities only for lenders (since August 2009)</td>
</tr>
<tr>
<td>Lending Club</td>
<td>General blog for all members, allows comments and discussion by authorized people (we see the same person writing all the time).</td>
<td>No direct contact or exchange on the site Possible exchange via common out-of-site affiliations like FaceBook, MySpace.</td>
<td>Possible comments on borrowers or lenders in the out-of-site affiliations websites. None on their website.</td>
<td>None</td>
</tr>
<tr>
<td>MicroPlace</td>
<td>Institutional blog, personalized with pictures. Can comment but not initiate.</td>
<td>Listing of borrowers. No interactivity</td>
<td>General information on borrowers. No peer comment</td>
<td>None</td>
</tr>
<tr>
<td>Prosper</td>
<td>There are two types of blog on prosper.com : institutional blogs and affiliated and linked to blogs. The institutional blogs are not personalized. Still, they allow comments even if users cannot initiate new topics.</td>
<td>&quot;Questions &amp; Answers&quot; on borrower’s listing.</td>
<td>None</td>
<td>Prosper Groups, created by lenders and borrowers, Rated on repayment performance</td>
</tr>
<tr>
<td>Virgin Money</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Zopa</td>
<td>Institutional blog for all members. Can comment.</td>
<td>The discussion board is interactive</td>
<td>Not on the site. Possible via the personal borrowers’ blogs (if linked to the site’s listing)</td>
<td>Discussion board for members</td>
</tr>
<tr>
<td><strong>Total using tool</strong></td>
<td><strong>5</strong></td>
<td><strong>3</strong></td>
<td><strong>1</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>

Updated September 25th, 2008

The only significant results, irrespective of which statistical analysis we used, is that peer-to-peer lending sites use significantly more blogs than most websites. Other web 2.0 tools that we examined indicated that these lending sites are not significantly different to those found in the McKinsey survey. It may be interesting to discuss why peer-to-peer lending websites may not use the web2.0 technologies to promote direct P2P interaction. A notable reason could be that these web-site operators in our sample are intermediaries who make their money through intermediation. If there was direct connectivity and interactivity between borrowers and lenders, there would be no need for the intermediary. The McKinsey survey describes "webservices" as "information systems to make it easier for different systems to communicate with one another automatically in order to pass information or conduct transactions". They provide an example of a supplier and retailer updating each other's inventory. However, the retailer does not let the supplier update his or her customer's inventory. So, it is evident that this kind of webservices would not be found between borrowers and lenders that we studied because the intermediary is more in the position of retailer with the lender being the supplier.
and the borrower being the customer. However, such webservices may be being used between the website of the intermediary and the borrowers or between the intermediary and the lenders, without visibility to the public.

In a similar vein, it is useful to note that peer to peer lending websites do use more blogs, but these blogs are one-way instruments. As a result, there is no real possibility for comments and dialogue. So, the blogs provide only one-sided information and opinions. The blogs are serving a corporate advertising purpose and not a market feedback mechanism.

**Has online lending impacted credit availability, interest rates and transaction costs?**

The commercial lending sites such as Lending Club, Prosper and Zopa, may result in lower rates of interests for borrowers and higher rates of interests for depositors than brick-and-mortar banks, but these banks would soon match them by banking online. Many of these sites are not explicitly aimed at the poor, except for MicroPlace and Kiva, and so their impact on the poor is negligible.

Even for the two sites aiming at the poor, in fact there is no disintermediation because the MFI as well as the lending site exist as intermediaries. Both these entities still need to have operating and financial sustainability. So, even if spreads are limited by this new online transaction method, they do not really reduce overhead costs of the Microfinance Institution, which is the biggest component of the transaction cost.

Moreover, the poor are not directly connected on the internet as they do not have the education level to use internet nor the complementary capital to access it. Therefore, all the uploaded stories are written by the associated Microfinance institutions or by Kiva workers. This process adds to the costs of the system.

**FUTURE RESEARCH DIRECTIONS**

This is a first paper on this subject, in an evidently new field. Obviously, the number of questions for future research is numerous. We can at least advise the following fields of investigation.

Considering the preceding findings, one hot axis for development would be examining why P2P online lending websites not promote direct interactions and transactions. The research seems to be pertinent and urgent when one considers the social potential of the web2.0 tools and the expectation of direct horizontal connection that it connotes. Although microfinance lending operators often explain that the poor borrower in poor countries is illiterate and cannot afford to have a computer, this excuse may be valid only for microfinance segment online lending and only to some extent. It doesn't explain why microfinance online sites do not connect the lender directly to the Microfinance institution. It also doesn't explain why commercial operators in developed countries not make direct connections.

Future research needs to explore issues such as whether lenders and donors are inhibited by culture from proclaiming that they are donors. Also, do borrowers and recipients feel any shame or other refraining emotions in openly disclosing that they need financial help? Although Kiva is helping build borrower profile in a bid to help the microcredit movement, do the illiterate borrowers understand and approve of their virtual images placed in public places?

Even with a technology like this, competition has taken its time to emerge. A participant at the Microfinance and New Technology Summit in New Delhi (Oct 21-22, 2008) explained that the people having information technology did not have a proper understanding of the microfinance sector and people in the microfinance sector were probably having little grasp of the required technology. Also, neither Kiva nor MicroPlace nor any of the peer to peer lenders may be making large profits as yet, although the potential is enormous. Nevertheless, a USAID study released in September 2008 (Powers et al., 2008) indicates many new websites have begun to emerge.
Surprisingly, almost all commercial sites we reviewed are national/domestic. Although we have focused on the American sites, many of the commercial sites also have presence in other countries with separate companies and separate websites. Therefore, except for donations, funds seem to be unable to move across borders. It may be interesting to compare national legislations (sometime State legislations within federal countries) to understand the blocks to a truly global economy allowing a truly social movement of funds from the rich to the poor. The successive suspending of Lending Club, Prosper and Zopa for SEC regulations means that there are important regulatory issues to be studied. An important question is whether international/global legislation will follow or precede and facilitate the new reality being ushered in by these peer to peer lending operations, whether commercial, social or donor.

CONCLUSION

The paper studied the use of web 2.0 technologies (blogs, interactivity between lenders and buyers, peers' reviews and comments, peer communities and chats) in six peer-to-peer lending sites. It finds that most of the P2P lending websites are in fact intermediaries between the peers (lender and borrowers) and facilitate little direct contact between the peers. The only site which permitted direct contact was Virgin Money. However, Virgin Money is unremarkable because the borrower and lender are already known to each other in their model.

Virgin Money is the only website with did not use any of the web 2.0 tools. Since the peers are known to each other in their model, the facilitator did not need to use Web 2.0 tools to bring them together. All the other intermediaries use at least one Web 2.0 tool. None of the websites used all the web 2.0 tools.

The paper raises questions of why these websites, particularly those relating to microfinance (Microplace and Kiva), would keep their intermediation functions. Some institutional reasons may be involved.

Immediate profit-making is the most likely reason for maintaining intermediation roles because web2.0 tool give less scope for such immediacy. With time, people may make websites which will permit people to borrow and lend directly. Government regulations may then become more relevant. As with Napster, other stakeholders may want to make money through such developments such as insurance companies, certifiers, etc. and regulation would need to balance these alternative stakeholder interests.

In MicroPlace's case, their website suggests that they would like to view themselves as a platform where at the very least investors, security issuers and MFIs are present. It would be difficult for individual entrepreneurs/borrowers to be present because the poor may not have the literacy level to use internet to update their profiles. Kiva is using an enormous amount of donor funds to get volunteers, its own employees and that of partner MFIs to upload borrower profiles11. MicroPlace has therefore obviated this expense by positioning itself in relation to lender/investors and MFIs.

However, even MFIs are not present on the platform directly. Since interest is being charged (as opposed to free “donor” loans in the case of Kiva), the Securities and Exchange Commission does not allow MicroPlace to give loans to MFIs directly. As a result, MFIs have no interest in registering on their website. MicroPalece therefore has to attract Security Issuers who already have their contacts with MFIs. Moreover, MicroPlace does not have the capacity to rate the MFIs. For all these reasons, the MFI is not on the MicroPlace platform. A Microplace spokesman adds "MFIs are simply not sophisticated enough themselves to be able to create a security to offer to US investors. As you can appreciate, it's an expensive and complex process even for the largest organizations like Calvert or Oikocredit."

Even Security Issuers are not yet present on the MicroPlace platform. Since there are only two security issuers who are dealing with MicroPlace, it is too early to determine whether they are on a platform. One reason could be that there may not be many security issuers dealing with MFIs and therefore the
market is too small a niche for the moment. A second reason could be that these two may be sufficiently large to attract all existing investors that MicroPlace has been able to mobilize thus far. The Microplace spokesman confirms that although the technology we are dealing with allows instantaneous communication and transfer of funds, it is embedded in an an orthodox regulatory environment and for a new player such as MicroPlace, the attraction of security issuers and their involvement on the site is a long process: "We have many security issuers in the pipeline, but bringing a retail investment to market in the US involves many regulatory, cost and other hurdles. We try to lead security issues down the path and make it easy, but the fact is it just takes time and perseverance to get through all the necessary details, and MicroPlace may be one of many competing distribution channels for them. As we have more issuers on the site, raise more capital, and develop more of a standard "toolkit" for completing the process, it will be easier- we're just enduring a few expected growing pains now">

This then brings us to the question of what measures are required to get lenders/investors to bring more funds to MicroPlace. As with security issuers, there are undoubtedly patterns of social interaction that are deeply embedded in systems of procurement, based on history, country, laws, institutions, geography and resources (2001). The role of these factors in influencing technology adoption may influence the development of web 2.0 in areas as conservative as investing, lending and borrowing money.

Additionally, there may be a failure to create the excitement necessary for social contagion\textsuperscript{12}. This could be because people are hesitant to talk about money and giving to charity. Alternatively, it may be because these operators (Kiva and MicroPlace) have not been able to find the appropriate mavens or connectors\textsuperscript{13} to spread the "buzz" effectively beyond the initial novelty impact\textsuperscript{14}. According to our Microplace spokesman, in addition to buzz, viral marketing, culture and institutions, an essential issue is of understanding typical ecommerce behavior: "what's important to our customers, understanding what inspires them to invest etc. etc. However, it is possible that we are judging harshly a movement which will take time to be accepted for cultural reasons and perhaps the benefits of web 2.0 tools are to increase the users’ enjoyment of the platforms and services - ultimately to the benefit of trust through transparency and open communication-- and to help spread the word about the new platforms virally. Then again, it is possible that web 2.0 tools are only part of the story and many other marketing and product-mix factors go to explain the success or failure of online lending, whether its commercial or microcredit.

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**KEY TERMS & DEFINITIONS**

Peer to peer, p2p, social lending, online lending, microcredit, microfinance, technology, web 2.0, trust, innovation

**END-NOTES**

1 Our thanks to Alain Bultez of the Facultés Universitaires Catholiques de Mons for his statistical analysis and to the participants at Asia Microfinance Forum in Hanoi, Vietnam: August 26-29, 2008, the participants at the Atout workshop organized by Jacques Thépot, as well as to Jonathan Greenacre, an anonymous MicroPlace correspondent for their reviews and comments and to Zopa for helping us understand further. An earlier version of this paper was published by the internal working paper series of our school's research center Cahier du Ceren n°23 (June 2008). Our thanks to Banque Populaire du Bourgogne Franche Comité for financing the Microfinance Chair held by Arvind Ashta.


4 The distinction between the two is that adverse selection is the problem faced by an agent before the event while moral hazard is the problem faced after an event Mishkin, F.S. (2004). The economics of money, banking and Financial Markets. Paris: Pearson Addison-Wesley.

5 For example, securities intermediaries such as stock exchanges create rules for doing business that add to information flow and to ethical norms for participating and their own credibility and reputation are a function of fixed and human capital invested in the exchanges Mahoney, P.G. (2002). Information Technology and the Organization of Securities Markets. Working Papers -- Financial Institutions Center at The Wharton School, p. 1. Value would be added to the society (in the Pareto optimality sense) if the adverse selection problem could be resolved by the provision of information. However, a free rider problem emerges if people with information provide this publicly. So some intermediaries (like banks) prefer to keep the information privately.

6 The interest rates also vary from author to author: For Example Dieckmann (Dieckmann, R. (2007). Microfinance: An emerging Investment opportunity: Uniting social investment and financial returns. Frankfurt: Deutsche Bank Research, p. 20.) suggests a range of 15% to 70%. However, with Compartamos, Mexico having charged 100% the range is increased to 100% in line with Ashta (Ashta, A. (2009 forthcoming). Microcredit Capital Flows and Interest Rates: An Alternative Explanation. Journal of Economic Issues.). There is some evidence that Compartamos may be an outlier and that normal interest rates have reduced from 35% to 28% from 2003 to 2006 (Rosenberg, R., Gonzalez, A., & Narain, S. (2009). The New Moneylenders: Are the Poor Being Exploited by High Microcredit Interest Rates?, Occasional Paper, vol. 15. Washington, D.C.: CGAP.)

7 The Weblog of Tim O'Reilly can be viewed at <http://www.oreillynet.com/>


9 In the US, SEC permission is required. This has entailed Lending Club and Prosper to close one by one. Lending Club has reopened after clearance.

10 However, this may vary from one weblender to another: it may be harder in credit risk (not liquidity) terms to get a loan from Zopa, for example, than a bank, as is borne out by their tiny levels of default below 0.2% of all funds ever lent (source Zopa).

In March 2009, after four years of operations, Kiva has served a little over 90,000 borrowers. With the power of internet's outreach at low costs, it seems that despite the best promotions, including testimonials by people like Bill Clinton and heavy subsidies, clearly Kiva has not tapped the power of Web 2.0.