

## **Online Social Lending: A Peak at U.S. Prosper & U.K. Zopa**

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*This paper examines social or peer to peer lending in two platforms, Prosper in the United States (U.S.) and Zopa in the United Kingdom (U.K.). The hand-collected sample consists of 600 random loan requests - 300 in each platform – in different stages of fulfilment during the month of February 2011. The results show significant platform differences in terms of basic common characteristics such as loan amount, maturity, and interest rate, as well as credit rating and longer borrower experience in the borrower. Furthermore, different measures of the speed with which the funding takes place emphasize the importance of credit risk in both platforms and the likely use of rules of thumb by the retail lenders. Lenders appear to have limits in the capital invested per loan and fund more slowly loans with lower credit ratings and loan purposes that may be related to lower credit scores. In the case of Zopa, besides lending more slowly, lenders also propose higher rates. Overall, evidence suggests that there are commonalities but also significant differences between Prosper in the U.S. and Zopa in the U.K.*

**JEL Codes:** G01, G21 and G29

**Field of Research:** Lending, asymmetric information

### **1. Introduction**

In the wake of the global crisis that followed the 2008 debacle, with liquidity compromised and credit rationed when most needed, online social lending has become a trendy attractive option. Social lending - or peer to peer - lending sites are online marketplaces where individuals can borrow from and lend money to each other. While social lending is more established in Europe, it has taken off in the United States (U.S.) in the last few years. In light of its quasi-explosive growth and future expectations, there is a developing body of work that examines the opportunities and risks involved, as well as conflicts of interest. However, to our knowledge, there is no previous study on cross-country differences across platforms.

Among the different established platforms for social lending in Europe and U.S., a comparison of U.S. and the United Kingdom (U.K.) seems natural, given the similarities in their capital markets, regulatory commonalities and common language. In the U.K., the platform Zopa stands out in terms of expertise and loan volume, and in the U.S., Prosper and Lending Club lead the industry after an initial shakeout due to Securities and Exchange Commission (SEC) concerns. For this study, since Prosper and Zopa provide free data while Lending Club does not, the pairing of Prosper and Zopa seems appropriate.

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A simultaneous study of social lending sites in the U.S. and U.K. allows testing for differences in terms of loan, lender and borrower characteristics, as well as loan processes. More specifically, lender and borrower experience, borrower credit ratings, as well as loan amounts, maturities, interest rates, purposes and ratings could differ in loan requests made through Prosper in the U.S. and Zopa in the U.K. Furthermore, lending differences across sites, maybe due to platform set-ups or national differences, could also lead to differences in the speed at which the loan requests are fulfilled in a platform, if at all there are differences between characteristics and loan application success rates in Prosper and Zopa.

The number and size of online social lending platforms has experienced a spectacular growth. Overall, there are now more than 35 competitor peer-to-peer lenders set up around the world. Zopa was the very first online 'peer-to-peer' lending marketplace anywhere in the world – a true U.K. innovation in the dotcom world normally dominated by the U.S. According to MSN Money and the firm website, Zopa has around half a million members who have lent since its inception in 2005 more than £123 million between each other for a unique £130 fee per loan.

On the other side of the Atlantic, and according to Lendstats.com and the company websites, the U.S. based Prosper platform is the world's largest peer-to-peer lending marketplace, with more than a million members and over \$231 million in funded loans since its inception in 2006. Currently, Prosper claims an average net annualized return of 10.4% for investors - with only unsecured loans - and offers borrowers interest rates starting as low as 7.4%, always for a flat 1% service fee. Also in the U.S., LendingClub is even larger in terms of total loan origination, with over \$267 million in originated loans since it began operations in 2007.

On Prosper, borrowers list loan requests between \$2,000 and \$25,000 and individual lenders invest as little as \$25 in each loan listing they select. In addition to credit scores, borrowing ratings and records, investors can consider borrowers' personal loan descriptions, endorsements from friends, and community affiliations. In terms of rates, the Prosper system, as well as Lending Club, uses an auction system in which interest rates are fixed throughout the length of the auction. Lenders bid the amount they would like to purchase for each loan at an interest rate determined systematically by the platform. Originally however, Prosper used to apply a reserve interest rate system. In this auction style, lenders bid the minimum interest rate they would be willing to accept for their investment. The loan is then filled, beginning with the lowest interest rate and moving up to higher rates until the loan is completely funded. This is currently the auction style used in the Zopa platform in the U.K. Hence, the comparison of Prosper and Zopa may help examine the effect of auction styles on loan application success rates.

In this study, the hand-collected sample consists of 600 random loan requests - 300 in each platform – in different stages of fulfilment during the month of February 2011. Although there are discrepancies in the type of information available on lenders and borrowers, most characteristics are, as expected, available on both platforms. These basic common data types in Prosper and Zopa include loan amount, maturity, purpose, interest rate and credit rating, as well as borrower's length of experience in the platform, and time left for the loan request - which is usually less than a month.

Interestingly, the results of the analysis show significant platform differences in terms of loan amount, maturity, and interest rate, as well as credit rating and borrower platform experience. In addition, higher loan amounts and loan purposes that may be related to

higher credit risk slow down the lending speed on both shores. In Prosper, the percentage of loan that gets funding with respect to days left increases with credit ratings and interest rates and decreases with estimated losses. In addition, the number of lenders increases with higher credit ratings and loan sizes. Overall, lenders appear to set limits as per rule of thumb in terms of diversification, with maximum amounts to be bought per loan and caution with lower rated loans. Within Zopa, fulfilled and accepted loan requests show increasing rates with bigger loans, longer maturities, and higher credit risk - as measured by lower ratings and loan purposes. In consequence, as loans get bigger and maturities longer in Zopa, lenders offer rates that are increasingly higher than the borrowers' proposed rates, the borrowers do not accept the conditions, and the loan application fails. In summary, evidence suggests that there are commonalities by also significant differences between the Prosper platform in the U.S. and Zopa in the U.K.

The remainder of this paper is organized as follows. Section 2 summarizes seminal previous work. Section 3 provides a description of the hand-collected sample datasets, and introduces the hypothesis and methodology. Section 4 presents the summary statistics and regression series analysis of speedy progress in both platforms fulfilling loan requests. Section 5 summarizes the limitations of the study and conclusions.

## 2. Literature Review

### 2.1 Banking

Traditionally, riskier more opaque lenders seek funding from private lenders, especially banks. The banking literature documents extensively the superior screening and monitoring capabilities of banks with respect to other lenders, as well as the certification/signaling effects of banking relations in subsequent borrowing from other institutional investors. This literature particularly applies to private firms, but also to distressed firms and retail (individual) borrowers (see Sufi 2007).

Firms appear to borrow from banks when presenting higher credit risk measures and stock undervaluation (Hadlock and James 2002, Denis and Mihov 2003). However, bank borrowers may weigh the information benefits accrued through bank financing against the potential costs of this type of financing, such as monitoring, information monopolies, and transaction costs, the relative contracting costs.

Information monopolies are particularly important in the case of firms with greater information asymmetries, i.e. opacity, and significant growth options. In this context, the firm may be unable of communicating effectively its quality and potential to lenders and be forced to accept a higher rate from their relationship banks, especially if borrowing from only one bank (Houston and James 1996). However, going public offers an opportunity for firms to increase transparency through SEC filings and analyst coverage, which usually translates into access to a broader range of lenders and lower rates (Schenone 2004).

The specialness of banks appears to persist during bubbles. Gonzalez and James (2007) find that banks effectively screened pre-initial public offering (IPO) private technology firms with the highest potential during the 'tech' bubble, despite lack of records and earnings. This was accomplished at a time of superior confidence in getting the loans repaid through upcoming IPOs. On the other side of the macroeconomic and firm cycle, when a firm becomes distressed, lenders increase fees and collateral requirements. However, if a distressed firm enters bankruptcy, firms are more likely to get debtor-in-possession (DIP)

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loans from a relationship bank than from an outside bank. Thus, banking relationships seem to become beneficial once a firm enters bankruptcy (Li and Srinivasan 2010).

Another stream of the literature explores the effect of documentation standards. In this context, recent work by Jiang, Nelson and Vytlačil (2010) hypothesizes that mortgages sourced from brokers with lower documentation standards are of lower quality and more likely to default. Furthermore, they do not find evidence of minorities being charged higher lending standards. However, they do find that minorities default more than white borrowers.

## 2.2 Online Social Lending

### 2.2.1 Findings

Ashta and Assadi (2010) are among the first to study online social lending in an academic context. Their work explores different types of social technology, such as blogs, peer reviews, peer communities, and chats, as well as the use of these technologies in online social lending platforms, which include microfinance loans, social investing, and commercial loans. They claim that Microcredit funds would benefit from social technologies. Consequently, they aim to examine whether social interactions, supported by Web 2.0 technologies, increases communication and decrease transaction costs across several online social lending platforms.

Lin, Prabhala, and Viswanathan (2010) examine the relationship between a borrower's social network in an online social lending platform and the ability to fulfill loan requests at lower interest rates using Prosper. This site allows users to be friends with one another and join groups. Their analysis suggests that borrowers with a strong social network seem to receive lower interest rates than other borrowers. Interestingly, defaults are less likely for borrowers whose neighbors are also less likely to default. The authors conclude that social networks appear to provide economic value, not only to the participants, but to third parties evaluating the network.

Hildebrand, Puri, and Rocholl (2010) explore the relationship between loan performance and the incentive structure for an intermediary responsible for originating the loan, using Prosper as well. In Prosper users can join groups headed by a leader who aids borrowers in securing the funds necessary to make a listing successful. Borrowers are only able to join one group at a time, with permission from the group leader. The leader assists in the origination process, because an endorsement from the leader will encourage others in the group to endorse the borrower, making the probability of success higher.

The Hildebrand, Puri, and Rocholl (2010) study uses a dataset that spans a length of time between two major Prosper policy changes. Prior to September 12 of 2007, Group Leaders could charge a fee for helping a borrower originate a loan. Some Group Leaders chose to charge this fee, while others did not. Afterwards, this incentive was eliminated. The authors find that the change in policy changes the quality of loans originated by a Group Leader. In groups without a leadership incentive - prior to the policy change - the borrower benefited from being in the group through lower interest rates and a high probability of successfully originating the loan. In the groups where leaders charged an incentive, however, default rates were substantially higher than in groups where leaders did not charge an incentive. The reason for this is that group leaders could still make money from a defaulting loan, by placing the costs on other lenders. The authors further confirm it by testing loans in which leaders have 'skin in the game'. In other words, loans

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where a leader could charge an incentive but also invest in a portion of the loan seem to outperform those where the leader does not invest in the loan.

Iyer, Khwaja, Luttmer and Shue (2010) examine whether lenders in online social lending platforms are capable of effectively screening credit worthy borrowers. In order to test if non-traditional lenders are able to effectively screen borrowers for credit worthiness, the authors look at credit scores for transactions which have been conducted on Prosper. The results show that lenders are, to some extent, capable of estimating the creditworthiness of a borrower, based on the mix of hard and soft information provided.

The authors also examine implications on the broader banking industry. Because lenders in these marketplaces are able to make credit decisions, these types of systems might be a good source of funding for smaller borrowers, where the cost of lending might be too large for a bank to adequately provide funding to the borrower. However, the authors do question the quality of credit score as a metric of creditworthiness. In other words, the authors are not entirely convinced that an individual's credit score (which is determined based upon an individual's past financial behavior, among other things) is an accurate reflection of creditworthiness.

Grinblatt, Keloharju, and Linnainmaa (2010) explore the relationship between intelligence and investor returns. The authors use a data set of IQ scores from Norway, along with a list of equity transactions conducted by individuals, and stock price data on each position made. The authors find that investors with a high IQ outperform those with lower IQ's. In addition, they find that predictive behavior is much more prevalent during the stock purchase process over stock selling, in both high and low IQ groups, and that higher IQ investors tend to predict long positions better than short positions. Overall, higher IQ investors seem to either have access to inside information, or be better at processing information that is available to the public.

Another working paper, by Duarte, Siegel and Young (2010), analyzes the role trust plays in financial transactions, even in an economy with an effective legal system acting as an enforcement mechanism. The authors use a data set compiled from Prosper as well as a website called Mturk, by Amazon.com, which allows users to work on projects in exchange for a fixed fee. The authors had workers label the people in each picture according to certain demographic characteristics as well as perceived trustworthiness and willingness to loan to the individual. The results suggest that their method for determining trustworthiness performs nearly as well as traditional determinants of creditworthiness. In fact, the authors find that borrowers deemed trustworthy by the unaffiliated third-party workers receive 31% more bids than the average auction.

Finally, directly in the field of discrimination and online social lending, Pope and Sydnor (2008) examine loan listing for a year and find that blacks are less likely to receive credit, tend to default more, and pay higher interest rates, although not high enough according to the authors.

In addition, Ravina (2008) examines whether beauty, race and the way a loan applicant presents himself/herself affect lenders' decision, once hard financial information about credit scores, employment history, homeownership, and other financial information are taken into account. She finds evidence of a beauty effect in which attractive borrowers are more likely to get funded and pay lower rates but are not less likely to become delinquent.

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### **2.2.2 Institutional Background on peer to peer (P2P) lending.**

#### **2.2.2.1 Verification**

As described in Lin, Prabhala and Viswanathan (2009), users can join Prosper.com by providing an email address, which is verified by the website. To engage in a transaction, borrowers must reside in the U.S., have a valid social security number, a valid bank account number, a minimum F.I.C.O.(Fair Isaac Credit Organization) credit score of 520, a valid driver's license and address. The details are verified by Prosper, which also extracts a credit report from Experian, a major credit reporting agency in the U.S. Loan proceeds are credited to the bank account and funds withdrawn automatically for monthly loan repayments. Prosper lenders are also subject to verification of the social security number, driver's license number, and bank account number. To protect privacy, the true identity of borrowers and lenders is never revealed in the website. Communication occurs through usernames that are chosen when signing up.

For Zopa, in the U.K., the process is similar. It is important to note that in both platforms, as in other credit markets, it is possible for different members of the same family to open different unrelated accounts in order to secure better lending conditions through the other family members once a member defaults (spouse, significant other or elderly parents, especially). Eventually, all the accounts may default and be penalized but this remains, as in other markets, a possible strategy to delay reputation effects and maintain lending conditions.

#### **2.2.2.2 The Listing and Bidding**

Borrowers can post images and write a free-format description to accompany the listing, but neither the image nor the text is verified by the website. Both Prosper and Zopa use a time deadline to fund the listings. In Prosper, the closed auction closes as soon as the total amount bid reaches the amount sought at the borrower's asking rate. In Zopa's open format, the auction remains open even after the entire amount requested is funded for up to seven days. During this period, lenders continue to bid down the interest rate of the loan.

An important feature of online peer-to-peer lending is that an individual lender does not have to finance the entire loan request. Actually, in order to diversify the investments in the risky peer-to-peer (P2P) market, lenders/investors often choose amounts as low as \$50 or even \$25 per listing. In Prosper.com, if the loan has not yet been funded 100%, the ongoing interest rate will be the borrower's asking rate, even if the lenders' minimum rate is lower. Once the auction ends, if the loan is not fully funded, the auction is deemed to have failed and no funds are transferred.

#### **2.2.2.3 Post-Bidding, Funding and Repayment**

Once the listing is closed, the platform staff reviews the closing terms and sometimes additional documentation is required from borrowers. Once the review process is completed, funds are collected from the winning bidders' accounts and transferred to the borrower's account after deducting fees up to 2% of the loan amount. Loans on Prosper have repayments in equated monthly instalments. The monthly repayment is automatically deducted from a borrower's bank account and distributed to lenders' Prosper accounts. If the monthly payment is made in time, the loan status for that month is considered current. If a monthly bill is not paid, the loan status will be changed to "late", "1 month late", "2

months late”, etc. If a loan is late for 2 months or more, it is sent to a collection agency. Lenders on Prosper must agree that the proceeds of the collection represent the full settlement of loans. Delinquencies are reported to the credit report agencies and can affect borrower’s credit score (Lin et al. 2009).

### 3. Data, Hypothesis and Methodology

#### 3.1 Data Samples

The hand collected sample consists of 300 Prosper and 300 Zopa loan requests in different stages of completion. The information in both platforms was randomly observed in February 2011. Certain loan and borrower characteristics are either identical or comparable in both platforms. These common characteristics include a unique loan identification number, lender’s location and platform join date, borrower’s name, credit rating and platform join date, loan amount in US dollars, maturity in days, interest rate, purpose, time left and loan request fulfilment progress. For a full list of collected variables see table 1.

**Table 1: List of collected variables**

<b>Prosper</b>	<b>Zopa</b>
<i>Borrower data</i>	
Credit rating (5 best)	Credit rating (5 best)
Join date	Join date
Location	Affordability
	Stability
	Monthly income
	Monthly expenses
<i>Loan data</i>	
Amount	Amount
Purpose	Purpose
Interest rate	Interest rate
Maturity	Maturity
Fulfilment progress	Fulfilment progress
End date	End date
Estimated loss	Status
Family and friends involved	Picture
<i>Lender data</i>	
Location	Location
Join date	Join date

In both platforms, the borrower’s join date is used to determine borrower experience, which equals the number of days between the listing date of the loan and the date the borrower joined the platform. Unlike Zopa, which reports active, fully funded and accepted, not accepted and not funded loan requests, observations from the Prosper platform are all active.

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As commented previously, interest rate treatment differs in Prosper vs. Zopa. In Zopa, the interest rate is flexible throughout the bidding process. In Prosper, however, interest rates are predetermined and do not change during the bidding of each individual loan. More specifically, when a listing is made on Prosper, the platform sets a rate based on loan and borrower characteristics, while in Zopa the borrower sets a preferred listing rate. Zopa lenders then bid the lowest interest rate they would accept to lend to that particular loan. Even after the loan is 100% funded, lenders can continue to make bids, up until the listing's end date. The platform then systematically funds the loan starting with the lowest interest rates proposed, and the interest rate variable is then reported as a weighted average of all the individual partial loans made to towards that particular loan application.

The platforms provide lender information, such as lender join date and location. For Prosper, these variables are recorded in the sample for the top five lenders of each listing, to determine if location or experience played a significant role in the loan's success. On the Zopa platform, the borrower's monthly income and expenses are provided, as well as affordability and stability ratings from 0 to 5 (best). Affordability refers to the borrower's ability to pay for the loan after paying for his or her previous credit commitments and cost of living expenses. Stability refers to the borrower's job continuity and home-ownership status. In consequence, for example, borrowers with a stable job and who own a home have higher stability ratings than those who do not.

After recording the mentioned variables over a month-long time span, successful loans are defined as loans which are bid on most rapidly, since these are presumed to be the highest in demand by the lenders. Furthermore, and in order to measure the speed with which loan requests are fulfilled, a continuous and a binary instrumental variable are used. The continuous variable is the ratio of the percentage of the loan that has received funding divided by the time left. The binary variable takes a value of 1 when a loan request is likely to be successful because the percentage of the loan that has received funding is of less than 60% with more than 7 days left, or more than 60% has been funded with less than 5 days left.

Finally, since Prosper and Zopa provide equivalent but different credit rating scales and equivalent but not risk indicative loan purpose information, two conversion scales are applied. As indicated in Table 2, the Prosper letter ratings (from AA to E) are converted into the 0 to 5 (best) scale used in Zopa. Table 3 classifies the 16 different loan purposes stated by borrowers in both platforms into three different measures of urgency. The most urgent loans are coded as those intended to consolidate debt, pay taxes or school tuition. A medium urgency code value is given to those loans intended to cover business and home improvements costs, cars and motorcycles, as well as home down-payments. The least urgent loans are coded as those to cover jewellery, vacations, land investments and wedding expenses.

**Table 2: Credit score coding**

Letter	Coded
AA	5
A	4
B	3
C	2
D	1
E	0
HR	0



**Table 3: Loan purpose coding**

Loan Purpose	Code
Debt	1
Tax bill	1
School fees	1
Business use	2
Repairs	2
Car	2
Motorbike	2
House deposit	2
Home	2
Electronic goods	3
Jewellery	3
Holiday	3
Holiday home	3
Land purchase	3
Solar panels	3
Wedding expenses	3

## 3.2 Hypothesis and Methodology

As the first study –to our knowledge- to examine simultaneously peer-to-peer lending in two different countries, we first compare summary statistics. If lending in U.S. Prosper and U.K. Zopa differ, it could be because of differences in loan, lender and borrower characteristics, not because of differences in the process followed by loan applications. Second, there could be differences in the likelihood of successful loan applications or in the speed at which loans are fulfilled due to platform set up and country differences. Third, the inclusion of a picture or photograph could influence the progress or loan percentage funded at any time.

In Zopa, borrowers choose whether or not to include images – generic, personal photos, pictures – to provide additional information about them or the purpose of the loan. The intention is to reduce information asymmetries and increase loan success, but lenders could make biased decisions based on gender, race, religion and other traits for which there is previous evidence of lending discrimination.

Following the univariate analysis performed through summary statistics, a multivariate analysis composed of general OLS and probit regressions is conducted. The regressions study the lending process in both platforms, separately and simultaneously, examining the determinants potential loan speed and their effect on loan fulfilment success.

## 4. Analysis of Results

### 4.1 Summary Statistics

Tables 4 and 5 present the summary statistics for the hand collected and constructed variables in the Prosper and Zopa sample datasets. These statistics include the mean, median, maximum and minimum values of variables that are common or unique for Prosper and Zopa. Results anticipate, before the regression analysis, significant differences between Prosper and Zopa.

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Prosper and Zopa present statistically different loan amounts, maturities, interest rates, ratings and borrower's time experience in the platform. These are the majority of the most basic loan characteristics, common in the study to both platforms, and traditionally used in the literature as risk measures. More specifically, Prosper presents significantly smaller loan amounts, significantly shorter loan maturities, significantly lower borrower credit ratings, significantly shorter borrower experience in the platform and significantly higher interest rates.

**Table 4: Prosper Summary Statistics**

	Mean	Median	Maximum	Minimum
Loan amount	10610	8000+	125000	2000
Loan maturity	39.84*	36	60	12
Purpose urgency	1.44*	1*	3	1
Interest rate (%)	17.58*	17.13*	29.57	0
Credit rating	2.36*	2*	5	1
Time left	6.18	6	11	1
Borrower experience	91.87*	11*	2449	0
Progress (%)	41.47*	37	99	1
Progress > 50% (%)	8.3*			
Number of lenders	73.46	58	324	2
Biggest bid	381.05	200.17	5000	25
Smallest bid	25.58	25	200	25
Local lenders (%)	19.33			

\* Statistically different from Zopa at 0.05 level

+ Statistically different from Zopa at 0.1 level

**Table 5: Zopa Summary Statistics**

	Mean	Median	Maximum	Minimum
Loan amount (\$)	11326.5	9946.84	24590.8	6.5
Loan maturity	44.38	36	602	12
Purpose urgency	1.61	2	3	1
Interest rate (%)	12.48	9.84	100	1
Credit rating	2.98	3	5	1
Time left	134.8	0	403	0
Borrower experience	358.99	355	2202	0
Progress (%)	96.1	100	100	0
Progress > 50% (%)	0.67			
Stability	2.39	2	5	0
Affordability	2.73	3	5	0

Overall, the interpretation of the results could be that although significantly different, loan amounts and maturities are not particularly high in either of the platforms, averaging around \$10,000 and 3 years. Credit ratings are about one point lower in Prosper than in Zopa, for a scale of 0 to 5 (best). Thus, joint with the shorter borrower experience and therefore records in Prosper, it seems plausible for interest rates in Prosper to be significantly higher, of about 17%, than the average of the rates lenders charge on Zopa of mostly around 10 to 12%.

Besides the information common to both platforms, the summary statistics also provide some additional information on the size of individual lending (biggest bid and smallest bid). The loan funding by lender ranges in Prosper from \$25 to \$5,000 with an average of about

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\$300, a very limited amount. In consequence, and although the size of the loan applications is small, Prosper lists about 60 lenders per application, with around 20 percent of the lenders residents in the same U.S. state as the loan applicant. These figures are highly indicative of the superior risk of the loans, but also great diversification or pooling within the investors' portfolio, which should result in relatively competitive rates.

In terms of Zopa's unique variables, and as expected during a crisis, the loan applicants have average median credit scores and affordability measures, but their stability score median is lower than the average scale measure. This could be the result of changing jobs during the past three years, following lay-offs, or temporary unemployment. Unfortunately, and even if the applicant continues to pay credit card balances fully and on time, changing jobs, or selling a house at a loss affect short term borrowing, even if long term rates should stay favourable – if going back to school following a lay-off for example.

### 4.2 Regression Analysis

The multivariate study consists of a series of general OLS and probit regressions. Table 6 presents the results of the analysis that considers simultaneously Prosper and Zopa loan listings. Table 7 examines Prosper separately, and Tables 8 and 9 examine Zopa. For the simultaneous study of both platforms, the regression series use the two speed measures described in the data section. These variables are the percentage of loan funded relative to days left to investors variable, and the binary success variable. This success variable has value of 1 when the loan is funded over 60% with less than 5 days left, or less than 60% with more than a week left. The reason for this choice of time horizons is that the listings observed in February 2011 are active for about two weeks. In addition, the ProsperZopa variable that takes value of 1 if the loan information is collected from Prosper and 0 if collected from Zopa.

**Table 6: Lending Speed on Prosper & Zopa**

	Likely to be completed
ProsperZopa	-2.98 (-7.63)
Loan amount	-0.01 (-1.96)
Loan maturity	-0.01 (-0.1)
Loan purpose urgency	0.38 (2.28)
Borrower experience	0.01 (0.39)
Credit rating	0.48 (0.59)
Constant	2.33 (4.32)
R square (%)	42.18

Table 6 regression series confirms, as expected, that larger loans take longer to be funded and that Zopa loans are more likely to be fully funded, since a good proportion of the listings correspond to fully funded and already accepted loans. Interestingly, less urgent loan purposes also take longer to be funded. This result leads to several interpretations of investor decision making. Investors may be less inclined to fund loans

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that do not serve a higher social calling, such a vacation instead of debt consolidation, taxes or school tuition. On the other hand, investors could be less attracted to loan purposes that would be related to individuals with higher credit scores and lower interest rates.

**Table 7: Lending in Prosper**

	Progress > 50% /days left	Number of lenders
Interest rate/credit	0.2 (2.48)	12.58 (6.47)
Local lenders	-0.12 (-0.08)	
Loan amount	-0.01 (-2.92)	0.01 (4.12)
Loan maturity	-0.07 (-0.95)	0.48 (0.17)
Loan purpose urgent	1.37 (1.11)	2.79 (0.44)
Borrower experience	0.01 (0.52)	0.01 (0.72)
Number of lenders	0.15 (5.51)	
Avg. exp. of biggest five lenders	0.01 (0.12)	
Constant	-3.11 (-0.69)	9.39 (0.55)
R square (%)	41.93	48.31

As indicated in Table 7, Prosper loans are filled more quickly as the loan size decreases and the number of lenders increases. Interestingly, higher rates seem to speed up the lending process. This result is consistent with those presented in Table 6 for both platforms considered simultaneously. Although loans are unsecured, investor diversification is high and the Prosper site offers high risk-return tradeoffs. Furthermore, the number of lenders increases with bigger loan sizes, lower estimated losses, and higher ratings.

Finally, tables 8 and 9 introduce some interesting findings within Zopa. Since a significant number of listings correspond to fully funded and accepted loans, the analysis focuses on the auctioned interest rate. The regression series examines the determinants of the difference between the average rate offered by the lenders and the rate the borrower suggested at the beginning of the process.

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**Table 8: Lending in Zopa – Completed & Accepted Loans**

	Rate adjustment
Loan amount	0.01 (6.95)
Loan maturity	0.08 (7.68)
Loan purpose urgency	-0.51 (-2.61)
Borrower experience	0.01 (1.5)
Credit rating	-0.31 (-1.93)
Experience	0.01 (2.31)
Picture	-0.44 (-1.61)
Constant	6.14 (7.69)
R square (%)	63.19

Not surprisingly, for accepted loans reported in Table 8, bigger loans, longer maturities, lower ratings and more urgent loan purposes involve extra risk that leads investors to raise the rates with respect to the investor's suggested rates. Interestingly, longer borrower experience on the site leads to higher rates, most likely related to higher credit risk. After all, borrowers that need to borrow from social lending platforms may not be insolvent, but clearly have a significant liquidity problem and, therefore, are willing to pay significant interest rates on their loans.

In Zopa, posting a picture apparently helps somehow, but the number of loan requests with photo is too low for the result to be reliable. In terms of the images, it is important also to note that most of them are generic, adding little information about the borrower or the purpose of the loan.

Table 9 reports the study of the 53 Zopa listings out of 300 that are not accepted. The final average rate proposed by the lenders that was not accepted by the borrowers increases, as the rest of the Zopa sample, with loan size and maturity. Future research will address the borrower's decision to accept or not the loan with the interest rates as set by the lenders. Finally, as a side note, the study of Active loans and Not funded loans is inconclusive.

**Table 9: Lending in Zopa – Not Accepted Loans**

	Rate adjustment
Loan amount	0.01 (3.85)
Loan maturity	0.1 (4.73)
Loan purpose urgency	-0.32 (-0.83)
Experience*affordability	-0.01 (-1.12)
Picture	0.66 (1.13)
Borrower Experience	0.01 (0.15)
Constant	5.58 (4.91)
R square (%)	50.49

## 5. Summary and Conclusions

This paper examines social or peer to peer lending in two platforms, Prosper in the United States and Zopa in the United Kingdom. The sample consists of 600 random loan requests - 300 in each platform – in different stages of fulfilment during the month of February 2011. The differences between both platforms are evidenced in the summary statistics and then analysed further in a series of regression analysis.

Common characteristics such as loan amount, maturity, and interest rate, as well as credit rating and platform experience of the borrower – measured as time since joining the platform- differ significantly between the Prosper and Zopa samples. More specifically, Prosper presents significantly smaller loan amounts, significantly shorter loan maturities, significantly lower borrower credit ratings, significantly shorter borrower experience in the platform and significantly higher interest rates. However, in general, loan amounts and maturities are not particularly high in either of the platforms, averaging around \$10,000 and 3 years. Furthermore, since the credit rating of Prosper borrowers is not much lower than that of Zopa borrowers, the shorter platform experience of Prosper borrowers could further explain the higher loan rates in Prosper.

In general, higher loan amounts and loan purposes that may be related to higher credit risk slow down the lending speed on both shores. On the other side of the spectrum, the safest loans are also funded more slowly, most likely because returns on lender investment are also lower and therefore, less attractive.

In Prosper, the percentage of loan that gets funding with respect to days left to bid increases with credit ratings and interest rates and decreases with estimated losses. In addition, the number of lenders increases with higher credit ratings and loan sizes. This suggests that lenders use rules of thumb for diversification purposes, with maximum amounts to be bought per loan and using caution with lower rated loans.

Within Zopa, fulfilled and accepted loan requests show increasing rates with bigger loans, longer maturities, and higher credit risk as measured by lower ratings and loan purposes. On the other hand, loans whose conditions are not accepted by the borrower have lender

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proposed rates that are increasingly higher with respect to those proposed by the borrowers as loans get bigger and maturities longer.

Overall, evidence suggests that there are commonalities by also significant differences between the Prosper platform in the U.S. and Zopa in the U.K. The different measures of the speed with which the funding takes place emphasize the importance of credit risk and the likely use of rules of thumb by retail lenders in both platforms. Lenders are aware of the unprotected nature of their lending. The peer-to-peer loans are not secured by collateral, or the Federal Deposit Insurance Corporation (FDIC) in the case of the U.S., and online disclaimers warn about the mere broker, intermediary, nature of the platforms, without assuming any responsibility for investor losses. In consequence, investors appear to have limits in the capital invested per loan and fund more slowly loans with lower credit ratings and loan purposes that may be related to lower credit scores. In the case of Zopa, besides lending more slowly, they also propose higher rates.

As an end note, related research is being conducted on picture effect, data samples of different year periods, follow-ups of loans overtime, investor strategies and cultural factors influencing long term returns, reputation effects, as well as the effectiveness of a fixed rate vs. rate auction.

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