Data

We analyze all financial lending transactions on Prosper.com between January 2006 and March 2012. Over our time period, 29,494 borrowers posted 236,409 proposals to which 65,756 lenders made 9,702,242 loans. Prosper.com brings together crowds of would be borrowers and lenders from around the world and is based in the U.S. Borrowers and lenders sign up for memberships. On the platform, the lending process begins when a borrower asks for a loan at a target amount and interest rate (a.k.a a "campaign"). Lenders can decide to fund any fraction of the overall loan amount requested. This is done through a bidding process where lenders pledge to fund any fraction of the requested loan based on their assessment of the loan's reward of interest vs. the borrower's risk on creditworthiness. In institutions of lending such as banks, loan officers may be required to have formal college training in an economic related area and receive special training to increase the chances that they make reliably accurate loan decisions (http://study.com/loan_officer_training.html). Bank loan officers base their estimates of a borrower's creditworthiness on credit scores, debt-to-equity, collateral, and their personal relationship with the his or her A borrower's creditworthiness. The crowd of lenders makes their lending decisions with information only on credit-rating and debt-to-equity ratio. Because of the size of the platform it is unlikely that lenders know borrowers personally or borrower's networks except in special cases (CITE Friends on Prosper paper) and because no collateral is pledged by borrowers as surety of repayment, lenders carry the entire risk of default associated with their portion of the loan. Finally, because loans are divided into smaller pieces spread across many lenders (i.e., loans are "syndicated"), the loan decisions are inherently a collective decision.

Measures

We have two outcome variables drawn from financial lending research ([Abdou2011. CITE). Good lending decisions occur if creditworthy borrowers receive funds and non-creditworthy borrowers are denied funds. Creditworthy borrowers are those whose risk of default relative to reward is low. High risk borrowers have low credit-rating/large loans and low risk borrower have high credit-rating/large loans. Between these end points are hybrids of medium risk. Borrowers with low credit-rating/small loans or high credit rating/small loans. Each of the four categories has an associated base rate of predictability. A test of collective intelligence' accuracy is whether crowds can predict funding and default better than expected by the base rate. To construct categories of risk vs. reward, we grouped loan decisions into four categories:. (1) High risk loans involve decisions about lending big amounts to borrowers with bad credit-ratings. (2) Medium-high risk involves decision about lending big amounts to borrowers with good credit. (3) Medium-low risk involves decision about lending small amounts to borrowers with bad credit. (4) Low risk loans involve decisions about lending small amounts to borrowers with good credit. Good and bad credit was defined by borrowers credit rating, which is quantified in 7 typical categories AA (best credit, 6%), A (6.62%), B (9.44%), C (14.62%), D

(17.12%), E (16.14%), and HR (high-risk, 29.99%) (for data descriptives, see text and table in the SI). Big and small loan sizes defined as being above or below the medium of loan size distribution found in our data.

Data and sampling details

The data we use compiles lending activity on Prosper.com from January 2006 to March 2012. As part of their efforts to make data available for academic and investor research, Prosper.com was allowing public access of their data on a weekly basis. The data contain the entirety of their trading volume, complete with listings, bids, successes and failures. The only information not released were sensitive personal information such as SSNs and Federal Credit Histories for confidentiality reasons. After a data breach in 2012, Prosper decided to stop releasing data.

On Prosper, borrowing and lending occurs as follows: borrowers post their project proposals online and ask for a loan with a target principle between $1,000 and $25,000 at a target interest rate. Any lender can offer to fund any fraction of the requested amount at any interest rate. Each lender makes an offer of *x* amount of principle at *y* rate based on its own criteria of creditworthiness and carries the entire risk of default associated with their portion of the loan. A loan is issued only if the borrower manages to raise her target amount. For example, a borrower could post a proposal for a debt reduction loan of $10,000 at 7% interest rate. Any lender can propose to lend any portion of the requested $10,000 asking for at most 7% interest rate. If more lenders are interested in a project than would be required to cover the target amount, those asking for the lowest interest rates service the loan. This gives rise to a bidding situation where lenders try to maximize their gain while assuring their participation in a loan. Note that this Dutch auction format was alive only until December 2010, after which interest rates were determined by Prosper.

We observed 65,756 lenders bidding on 236,409 projects posted by 129,494 borrowers. The total requested funds were nearly $1.8 billion ($1,775,419,649) of which the amount loaned was $319 million ($319,065,143) spread over 51,673 loans. This pattern of lending suggests that loans are made selectively. 21.92% of the projects were funded. Equally important, of the funded loans with known repayment outcome, 65.44% were repaid, 10.32% defaulted, while 24.23% were labelled charge-off, i.e. Prosper deemed that the debt was unlikely to be collected. The default rate of AA loans, which are more likely to qualify for traditional sources of lending, is 5.20% (and another 10.5% are charged-off). By contrast, bank lending officers with presumably formal training and more detailed background data have a default rate between 1.5% and 7.4% on diverse types of loans during the same time period (see `http://www.federalreserve.gov/releases/chargeoff/delallsa.htm`). This suggests that collectively lenders do significantly better than chance in identifying good credit risks and have a non-negligible success rate when compared to trained experts.

There are two key variables of success on Prosper. The first considers the borrower's success. It can be quantified as the probability that their project raises the target amount, i.e. is funded. The second is the lender's success. It can be quantified as the probability that the project is repaid.

Table S1: Data descriptives

	Funded	Not funded
Percentage	21.92%	78.08%
Top 3 borrower states	California (15.24%) Illinois (6.24%) Texas (6.22%)	California (15.41%) Florida (7.30%) Georgia (6.13%)
Top credit grades	C (19.58%) D (17.83%) B (15.23%) AA (12.24%) HR (12.15%) A (11.59%) E (11.38%)	HR (35.00%) E (17.48%) D (16.92%) C (13.23%) B (7.82%) A (5.23%) AA (4.24%)
	Repaid	Not repaid
Percentage	65.44%	34.56%
Top 3 borrower states	California (16.34%) Georgia (6.51%) Illinois (6.45%)	California (18.73%) Georgia (8.60%) Illinois (7.57%)
Top credit grades	C (19.77%) D (17.11%) B (16.36%) AA (16.26%) A (13.82%) E (9.18%) HR (7.50%)	HR (20.20%) C (19.30%) D (19.19%) E (15.25%) B (13.29%) A (7.65%) AA (5.12%)

Figure. S1 depicts randomly chosen trajectories of successful as well as failed campaigns and indicates that the distribution of bid amounts and inter-bid times are the two complementary components of this dynamics. While there are common trends in the fundraising dynamics of successful campaigns like a steep increase in the raised capital shortly after launching, campaigns remain unique in the way they arrive to the desired funds. Typically, within a week campaigns need to raise 100% of the sought capital to succeed. Loans usually consist of small chunks (the median contribution is $50) and are raised in short inter-bid times (the median is less than 10 minutes).

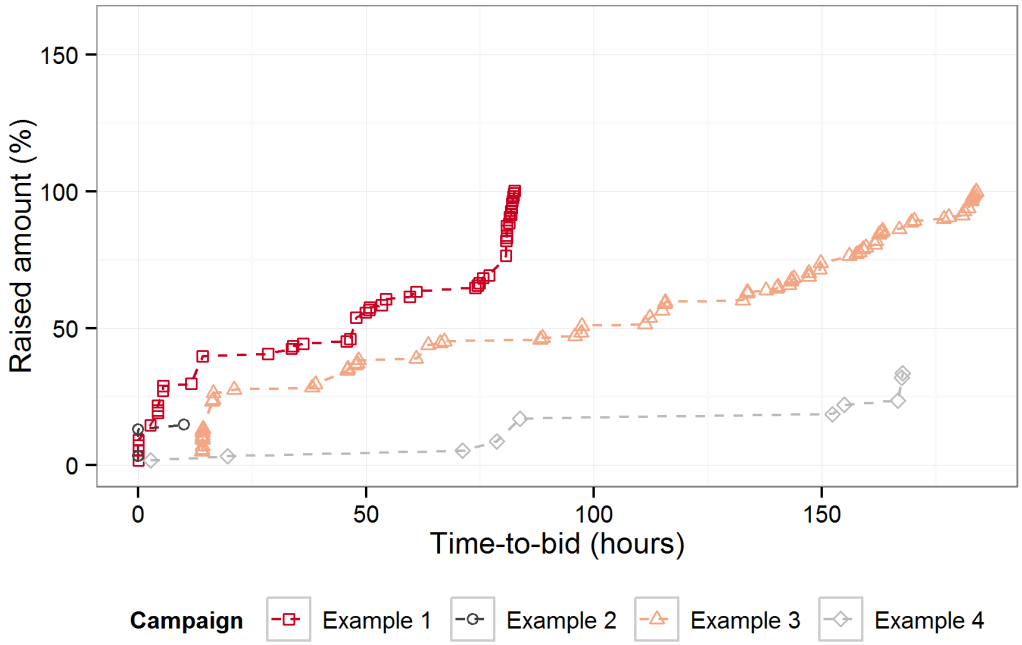

Figure S1: **Evolution of campaigns on *Prosper.com***. The raised capital as the percentage of the target amount is shown in function of time for both successful and unsuccessful campaigns (depicted in tones of red and grey, respectively). While there are common trends in the fundraising dynamics of successful campaigns like a steep increase in the raised capital shortly after launching, campaigns remain unique in the way they arrive to the desired funds. Typically, campaigns need to raise the sought capital within a week to succeed.