



The Wisdom of Crowdfunding

JUANJUAN ZHANG
MIT SLOAN SCHOOL OF MANAGEMENT

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Microloans, also known as microfinancing, peer-to-peer lending, and crowdfunding, started out as a means for individuals, such as impoverished borrowers who lack collateral and underprivileged women in third world countries, to provide for themselves. The way microloan markets operate is quite straightforward. There are no banks. Interested individuals come together on a microloan platform and directly borrow and lend with each other.

During the recent global slowdown, the application of microloans expanded to fill the void created by banks' increased fiscal conservatism. In its current form, microfinance not only provides borrowers with access to capital, but also serves as an investment vehicle for individuals without substantial means.

New research into one large microloan market demonstrates that disadvantaged people can be quite successful in obtaining loans this way, and that a behavior known as *herding* can help lenders identify which borrowers are the best risks.

From Lun Hui to Prosper.com

Concepts relating to microloans can be traced back to the 4th century, when the first private credit union, called "lun hui," was founded in China.¹ In the West, the idea surfaced in the 18th century, when Jonathan Swift created the Irish Loan Funds.

In fact, microlending has been practiced for centuries all over the world, as demonstrated by "susus" in Ghana, "chit funds" in India, "tandas" in Mexico, and "pansanaku" in Bolivia. Modern applications emerged in the 1970s, the Grameen Bank in Bangladesh being the most prominent example.²

As with much else, microlending truly blossomed when the Internet connected people in ways never before possible. Many web-

sites now exist to match lenders with all sorts of borrowers, whether they be businesses, charities, artists, or just individuals who need liquidity.³ In fact, with the help of the Internet, microloans are projected to reach \$5 billion by 2013.⁴

Such growth calls for more research on how efficiently microloan markets allocate capital. After all, individual lenders may lack access to the same credit-screening machinery available to institutional lenders, and borrowers seeking alternative funding sources may be at higher risk for default. The question becomes, are individuals able to make wise lending decisions in a microloan market?

To help answer that question, I conducted a long-term field study with Peng Liu of Cornell University on one version of microlending, using data from a web company called Prosper.com.

The company opened to the public in February 2006 and quickly grew to become the largest microloan market in the United States. By September 2011, Prosper.com had registered 1.13 million members and posted more than \$256 million in loans. The study tracked a random sample of 49,693 borrower listings. For each listing, the borrower's characteristics were recorded and funding progress was monitored.

Whenever a borrower requests a loan on Prosper.com, she must create a listing that specifies the amount requested, the maximum interest rate she is willing to pay, the purpose of the loan, and her credit profile, including an official credit grade assigned by Prosper based on her Experian Scorex PLUS credit score. Additionally, the borrower may list any endorsements from other Prosper members, may provide her Prosper group membership, and may upload a personal photo. A lender then decides whether, and by what amount, to fund a listing. Only a fully funded listing is regarded as a loan. The loan is

unsecured and is to be paid back over 36 months.

The functioning of Prosper differs from traditional bank-mediated financial markets in three important ways. First, Prosper represents a high-risk, high-return investment platform. In our sample, on average, borrowers are willing to pay an interest rate of 17.7 percent. Fifty-two percent of borrowers are associated with a high-risk credit grade (which corresponds to an Experian Scorex PLUS credit score lower than 560).

Second, some lenders may have private information about a borrower's creditworthiness. For example, a Prosper borrower claimed in her statement that she was "still making payments every month," yet there was a past judgment on her credit report. She requested lenders to contact her "because of some of what is going on." By calling this borrower or acquiring information about her through Prosper user groups, a Prosper lender might find out that she received a poor credit grade because of nonrecurring circumstances, or that she had made solid plans on how to pay her debt back on time. The lender could thus gain some private information about how much trust to give the borrower.

A final difference from traditional bank lending is that a Prosper borrower is typically funded by multiple lenders, with each lender's decisions (including the timing and amount) publicized on the website.

Herding among Lenders

Interestingly, those features of Prosper give rise to imitative lending behaviors among the lenders—herding. Potential lenders consider that predecessors' lending decisions are justified by private information—gleaned, for example, from a phone call to the woman with the past judgment to assess her creditworthiness. So they decide that imitating predecessors' decisions would be a wise investment strategy. This herding effect is so prominent that a powerful indicator of a borrower's funding success is her first-day funding outcome—borrowers who ended up being fully funded would have raised \$2,095 on day one on average, whereas those who failed to be fully funded would raise only \$44.

The most striking finding, however, is that lenders seem to be savvy enough to know *when* to follow the herd. Here is how it works. Suppose two borrowers both raised \$1,000 on day one. The first borrower has an AA credit grade, and the second a high-risk credit grade, but they are otherwise similar. From a subsequent lender's perspective, first-day lenders do not need to rely on favorable private information to justify funding an AA borrower. However, if first-day lenders are willing to fund a high-risk borrower, it is likely that someone studied the borrower and discovered the particulars of her high-risk situation and determined that she is actually trustworthy. The same \$1,000 would then carry more information, which leads to a more influential herd that subsequent borrowers are likely to follow.

Indeed, we find that Prosper lenders are more inclined to herd on well-funded listings with obvious defects like poor credit grades and higher debt-to-income ratios.

Assessing Funding Outcomes

The findings are reassuring. Although individual lenders do not have the credit-assessment capability of banks, they do have a powerful investment tool they can resort to—observations of others' lending decisions. They wisely choose when to follow the herd and, in doing so, incorporate others' private information into their actions. Most significantly, this decision strategy actually leads to good investment outcomes. Tracking the performance of loans in our sample, we find that a higher herding momentum on a loan is associated with a lower default rate, after controlling for other loan characteristics.

On top of the question we set out to answer, an interesting fact that arose from this research is that disadvantaged borrowers fared well on Prosper. Intuition would suggest that borrowers with poor credit histories or higher debt ratios would not get funded, as crowds would flock to the safer options and riskier listings would struggle to gain traction.

However, our research demonstrates that individual investors are able to analyze each borrower's situation separately and take the time to investigate the reasons that have led to the borrower's current predicament. An institutional lender is unlikely to allocate resources for such personal analysis. Once early lenders make an investment in a listing, subsequent lenders are able to read a sign of trust into that action. In short, when lenders invest time up front, they in effect lend more than money to a disadvantaged borrower: they lend credibility.

As a financial tool, microlending is still relatively young, but there are indications that it will have a significant influence in the development of important sectors within both developed and underdeveloped nations. If harnessed properly, microlending is likely to pick up some of the slack from conventional banks postrecession and become a powerful tool to spur growth and eliminate inequality.

Juanjuan Zhang is *Class of 1948 Career Development Professor and associate professor of marketing at the MIT Sloan School of Management*. Contact her at jjzhang@mit.edu.

Endnotes

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- 3 A. Agrawal, C. Catalini, and A. Goldfarb, "Friends, Family, and the Flat World: The Geography of Crowdfunding" (working paper, University of Toronto, 2011).
- 4 S. Nance-Nash, "Peering into the Peer-to-Peer Lending Boom," *Daily Finance*, February 13, 2011.