Discussion of **"Borrowers in Search of Feedback: Evidence from Consumer Credit Markets"** by Inessa Liskovich & Maya Shaton

Discussion by Adair Morse University of California, Berkeley SEC Financial Regulation Conference 2017

Preamble

- The idea of feedback is excellent.
 - We know a little about consumer experience and learning
 - Lusardi & Tufano, Souleles and coauthors, Age of Reason paper, etc
 - But the literature on discovery/feedback is thin
 - Some work on search and matching in markets emerging
- I have some major issues with how the authors interpret the setup.
- Then, I want to come back to the idea of feedback and how the authors might use the data in way that would be more convincing (at least to me)

Overview

Following change to assignment of interest rates

- Number of applications drops
- Acceptance rate is higher
- Ending interest rate is higher
- Default is not higher (although the high risk tests could be done with a bit more refinement)
- ... (more in two slides)
- Much of this is not new. Let me start with laying out novelty here.
- An existing literature takes the investor perspective, interpreting these results

Prior literature on auction switch to assignment

- Wei and Lin (2013): study Prosper's switch from auction to price assignment
 - <u>Auction</u>: interest rate price the margin when supply = demand
 - <u>Assignment</u>: a coarser system. Prosper assigns interest rate based on credit scoring
 - <u>Finding</u>: Under assignment, loans are funded with a higher probability at a higher price, with a higher default rate for high risk
- Franks, Serrano-Velarde, Sussman (2016): study SME version of this experiment for British Funding Circle
 - Finding: More accepted volume under assignment, less precise default predictions
- Interpretations are in Stiglitz Weiss framing:
 - Assignment brings an efficiency in fulfillment with a cost of pooling more borrowers and thus the price needs to be higher, leading to higher default

Novelty: Borrower behavior perspective, especially as it relates to seeking feedback

Following change to assignment of interest rates

- Number of applications drops NEW
- Acceptance rate is higher
- Ending interest rate is higher
- Default is not higher (although the high risk tests could be done with a bit more refinement)
- Among high-risk types remaining, applicants have more credit history (read: are older, implying experience) NEW

Author's story: Platform is providing less tailored feedback. Inexperienced borrowers were seeking feedback, and thus drop out.

Supporting evidence: when the auction was in place, the low experience borrowers submit lower initial rates and adjust up in subsequent listings

Novelty: Borrower behavior perspective, especially as it relates to seeking feedback

Following change to assignment of interest rates

- Number of applications drops NEW
- Acceptance rate is higher
- Ending interest rate is higher
- Default is not higher (although the high risk tests could be done with a bit more refinement)
- Among high-risk types remaining, applicants have more credit history (older, implying experience) NEW

Author's story: Platform is providing less tailored feedback. Inexperienced borrowers were seeking feedback, and thus drop out.

Emphasize: Story is that auction pricing is more tailored and that that incremental tailoring is sufficiently valuable to borrowers to make them stay away

Comment 1

- My interpretation of the two new items here is seemingly opposite of the authors
 - Number of applications drops
 - Among high-risk types remaining, applicants have more credit history (older, implying experience)

I hope I missed something here

Prosper Homepage

PROSPER

Loans made simple

- Low interest rate
- Fixed term—3 or 5 years*
- Single monthly payment
- No hidden fees or prepayment penalties

Check Your Rate

Checking your rate won't affect your credit score.

Get Your Custom Rate	
Let's Start with Your Zip Code	
ZIP Code	
Tell Us About Your Loan	
\$ Amount (\$2,000-\$35,000)	
Purpose V	
Create Your Account	
Don't worry, we won't spam you or sell your information.	
Email Address	
Create Password	
Tell Us About Yourself	
To provide you with a custom rate, we'll run a soft credit pull.	
This will not affect your credit score.	
First Name Last Name	
Home Address (123 Main St., Apt 4)	
City State ~ ZIP Code	
Employment Status V	
Individual Yearly Income	
Date of Birth (MIW/DD/YYYY)	
Checking your rate will not affect your credit score.	

When you click "Check Your Rate", you get to this slide.

Information collected:

- zip code
- desired loan amount
- purpose
- employment status
- income
- date of birth
- authorization to pull credit score

Then you get loan offers **before** you **decide if you want to apply**.

Application

• After submitting, Prosper then goes through a formal underwriting, about which, they say,

What Is The Loan Review Process? How Long Does It Take?

The underwriting and verification process (loan review process) helps protect investors by verifying the information you provided when you registered and created your borrower listing. Prosper must complete the underwriting and verification process before your loan can be originated.

Prosper has the right to verify at any time the accuracy of all statements and information you provided when you registered and created your listing. Prosper may ask you to upload supporting documentation or may call your bank or employer for verification. If Prosper needs documentation from you, you will be contacted after your listing is created. The underwriting and verification process is usually completed in seven business days or less. Any requested documentation must be provided within that period.

Application: Selection is surely at play

- All of this means that the people in the sample are a filtered group of those who have
 - Already seen the information on pricing and
 - Chosen to apply given the feedback
- This selected sample is very different form the full sample in the auction sample, who get no information about pricing until the auction happens
- The set has already removed those that took the feedback early on and left

Application: Selection explains results?

For example, the author's main finding:

"This change [moving from auction to fixed price] resulted in an instant decrease in the amount of tailored feedback available to market participants. We find that less experienced households immediately and disproportionately exit the market and the response is concentrated among higher risk households...."

Punchline then is about "enabling less experienced households to more easily learn about their credit market options."

<u>My interpretation</u>: In new regime, some less experienced borrowers learn that they face a high interest rate before applying and simply do not apply.

Comment 2

Is it necessarily the case that an auction provides more tailored information?

- Both pricing mechanisms provide immediately information of credit price
 - Thus, the tailoring the authors have in mind is more long-term
 - The auction price is surely more individualized, to a degree, but <u>is it biased</u>:
- Connections in the platform can provide misinformation, unless the connections put skin in the game. (<u>Freedman and Jin, 2014</u>)
- Narratives are also deceptive:
 - <u>Herzenstein, Sonenshein and Dholakia (2011)</u> study individuals using identify claims to influence lenders
 - Trustworthy and successful improve financing terms,
 - But no effect in default... narratives can bias investors? (troubling)
 - Also see <u>Gao and Lin (2012)</u> for more on deceit
- Photos as well: <u>Ravina</u> on incorrect pricing of beauty.

Comment 3: Back to Big Picture

Idea of feedback is really very important

- E.g., success of bankrate.com and why Propser's homepage is "check your rate"
- What I like most in the paper is the dynamics of "start rate" and "final rate" when the auction process was still in play
 - Never seen those data used (I think)

Suggestions

Suggestion 1

Do more analysis on the internalization of information by inexperienced

- What kind of experiences or financial conditions is the "sufficient statistic" for the effect of inexperience on interest rate differences between start and final?
- Great to see much more analysis on this aspect, in all the dimensions of the data... DTI, other debt balances, homeownership etc.
- Reminds me of Lusardi Tufano on debt experience, "Age of Reason", etc.

Suggestions

Suggestion 2

Study those who are rejected on either side of your experiment and reapply.

- Selection is still at work, but here you would not be interpreting the selection
- For instance: for those after the change to price buckets, study those who apply and are rejected and then reapply.
- They are rejected for reasons that come up validating the income or other information in the screen I had earlier in the slides
- Do they take this feedback and adjust anything in their profile?
- Is this adjustment process different compared to those rejected under the auction system
- Putting the two sets of rejects reapplies together could be very insightful about Reactions to Feedback, not just feedback

Conclusion

- There is a very valuable paper in the wings here
- I very much appreciate the authors' originality here, but unless I am wrong in my comment 1, I think the data are working against the current question
- But again... Extremely important that we continue to learn about both sides of behavior on these platforms, and the authors here are one of the first to make us ponder borrower interactions with platforms.
 - No doubt, they will grab credit for that!