### Discussion of:

### FinTech Credit and Service Quality

### by Yi Huang, Chen Lin, Zixia Sheng, Lai Wei

#### Matteo Crosignani Federal Reserve Board

#### SFS Cavalcade (Yale)

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Disclaimer: The views expressed in this discussion are solely the responsibility of the author and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or of anyone else associated with the Federal Reserve System.

# This Paper

Effect of credit access on the service quality of small businesses

### - Service quality

- · Data from Alibaba's largest retail small business platform
- · 1.7m active merchants from Nov14 to Jun15

#### - Identification

- · Credit provided by Ant Financial, large fintech company
- · Use of proprietary scoring mode + cutoff rule
- $\Rightarrow$  Fuzzy RD design
- Small businesses
  - · Very small firms, unlikely (show this!) to get bank financing

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# Fuzzy RD Design

- Merchants screened for eligibility based criteria, e.g. in business for  $\geq$  3 mo., limited sales volatility, no history of misconduct
- Ant Financial proprietary credit scoring model
  - · Credit score is a continuous function of firm characteristics
  - · Each score corresponds to a certain level of credit risk
  - · Range [380,680], regularly updated
  - $\cdot$  Firm > 480 has a 30% higher prob. of getting a credit line



# Firms Don't Optimize Around the Cutoff



- Density around the 480 cutoff is balanced
- Ant Financial does not inform firms of their credit scores nor share the specific algorithms governing the score
- Credit score is a continuous function of firm characteristics, so these characteristics do not jump around the cutoff (**show this!**)

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# #1 Effect on Product Rating



- Avg service rating from 0.54 to 0.56
- Significant, based on quadratic line with 95% c.i.
- Access to credit leads to +0.05 in the [0,1] product quality rating

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- But regressions are based on interval [460,500]

## #2 Effect on Consigment Rating



- Access to credit leads to +0.05 in the [0,1] consignment rating (timeliness of shipping and proper handling of the consignment)

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### #3 Effect on Service Rating



- Access to credit leads to +0.05 in the [0,1] service rating (communication efficiency b/w the salesperson and customers)

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## Convincing Identification, Unclear Economics

- Convincing identification and empirical work
  - Score updated monthly, but "usually stable": more details on firms that are both treatment and control over time
  - LHS variables measured at t + 1 (table 10 goes till t + 3), but investment in quality might take some time
- Why focus on quality?
  - Motivatied using marketing literature "Under the new business model that centers on customers, attracting initial sales and boosting immediate profits may no longer be the prioritized goals; instead, firms may find it optimal to invest in service quality"
  - · Just another type of (non-pledgeable) investment?
  - · Is it positive NPV? Check ex-post performance

## Big Data and Fintech Credit to Micro Firms

### - Ant Financial

- · Most valuable fintech firm in the world (valued \$150bn)
- · Fintech arm of Alibaba
  - 10m active sellers and 454m active buyers per year
  - 97% of the merchants employ less than 5 workers

### - Data Used by Ant Financial (including Alibaba's data!)

- "user credit history, behavioral preferences, identity characteristics, social connections, credit card payments, online shopping payments, wealth management, utility payments, house rental information, relocation records, and social relationships." (www.antfin.com)
- · Loans takes 4 minutes to be approved.
- Is Ant Financial Better than a Bank?
  - · Better data, better screening technology, less regulated
  - Unclear incentives if merchant is in distress (Alibaba provides credit to merchant that sell... through Alibaba)

## Heterogeneous Responses of Firms

Very speculative discussion of heterogeneous responses of firms

### 1) Effects are stronger in competitive industries

- "If fintech credit credit helps relax the financial constraints of online merchants, the effect should be larger in industries where competition is more intensive"
- "As competition lowers profit margins for firms, they experience negative liquidity shocks and may be less incentivized to invest in product and service quality"
- But competition might force firns to provide good quality

### 2) Similar effects in areas with high Vs. low bank penetration

- "FinTech credit plays more of a supplementary than substitutional role to the traditional lending market"
- "It serves the clients that are nevertheless not optimal for banks to provide services for"
- Why are these projects/firms not "optimal" for banks?

### Overall

- Careful execution and identification
- Fascinating empirical setting
- Potential to shed light on the future architecture the credit markets... another paper?

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