Open Banking: Credit Market Competition When Borrowers Own the Data

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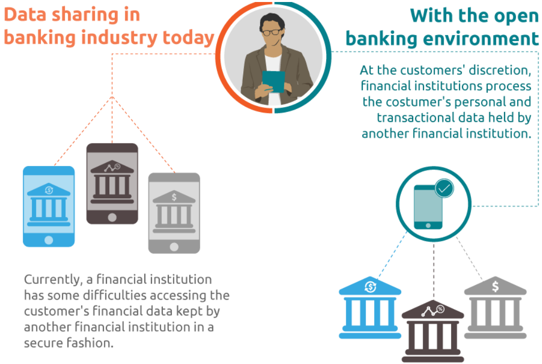
Open Banking

Open bank data upon customer's consent



- EU, UK, Brazil: government-led; mandate banks to enable data sharing with opt-in/opt-out feature
  - Brazil to be completed by Sept 2022
- U.S., market driven: UltraFICO, Capital One and Plaid, Stripe "Financial Connections". *CFPB timeline, 2024.*

This Paper: Welfare Implications

Credit market competition (Broecker 90; Hauswald and Marquez 03)

- Lenders with asymmetric screening abilities, that could be affected by borrowers' data sharing

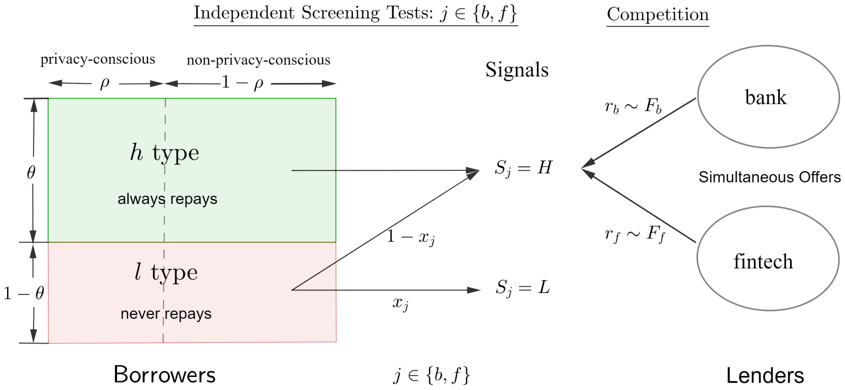
Welfare implications on borrowers

- "Voluntary" feature, opt-in/opt-out feature

But, all borrowers could be worse off despite voluntary sign-up

- Equilibrium credit quality inference; opt-out $\neq$ no open banking (Milgrom 81)
- Conditions for perverse effect; Robustness on fintech affinities, multiple fintechs, market-led approach

Model Scheme



Before open banking: $x_f < x_b$

After open banking, on a borrower who signs up: $x'_f > x_b$

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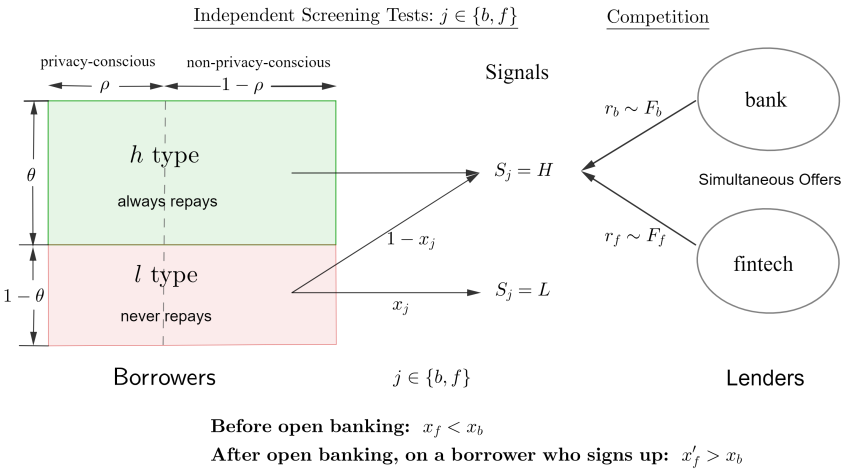

- **Winner's curse**. Mixed-strategy eqm.
  - Weak lender (fintech) randomly withdraws upon good signal H

The Impact of Open Banking

Open banking

- When a borrower signs up, $x_f \nearrow x_f' > x_b$

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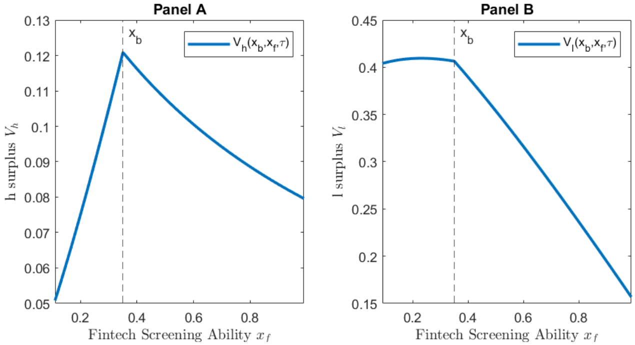
Mandatory sign-up benchmark: borrower surplus



- Informational effect: *Base* $\min\{x_b, x_f\} \uparrow \Rightarrow V_h \uparrow$ while $V_l \downarrow$
- Strategic effect: *Gap* $|x_b - x_f| \uparrow$, stronger winner's curse & less competition $\Rightarrow V_h \downarrow$ and $V_l \downarrow$

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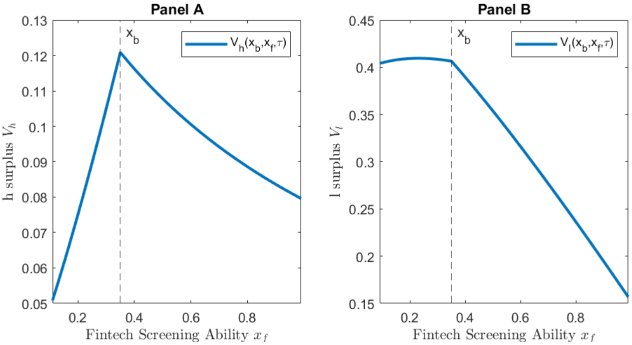

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Proposition: Mandatory sign-up, all borrowers hurt with sufficiently large x_f'

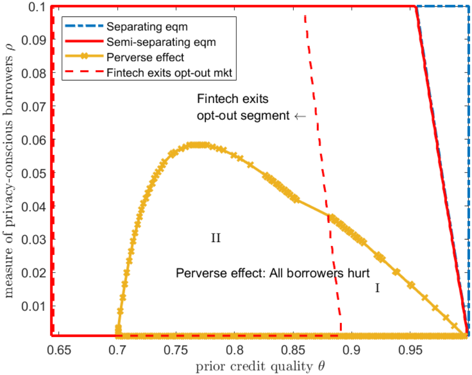
Voluntary Sign-up Equilibrium

Voluntary opt-in/opt-out does not solve the problem

Voluntary sign-up equilibrium

- Trivial equilibrium: nobody signs up
- **Proposition:** Unique non-trivial equilibrium. All non-privacy-consciousness *h*-type sign up
  - *h*-type have stronger incentive to sign up than *l*-type
  - Equilibrium credit quality inference
- All borrowers could become strictly worse off (*vs.* no open banking)
  - Opt-out $\neq$ no open-banking: unfavorable inference
  - Opt-in: softened competition

When does Perverse Effect Arise?



Parameters: $x_b = 0.4$, $x_f = 0.35$, $x_{f'} = 0.8$, $\bar{r} = 0.36$.

- **Perverse effect** may arise when equilibrium is semi-separating (some l-type opt in)
  - Small ρ (privacy-cons.): SMB loans
  - θ (quality): II, fintech rejects a borrower who opts out
- Privacy-conscious borrowers always suffer

Discussions

Fintech affinity

- Fast service, precision marketing: "captured customers"
- Perverse effect is more likely: affinity complements enhanced screening

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  - One bank, two fintechs—Big-tech and fintech startup: perverse effect.

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Short-run vs Long-run

- Fintech lender's leapfrog more likely in the short run
- Long run: banks catching up in technology
  - IT investment: Stulz (2022), He, Jiang, Xu and Yin (2021)
  - Acquisition: Carlini, Del Gaudio, Porzio and Previtali (2022)

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Laissez-Faire approach to open banking

- Bank “sells” customers’ data to fintech (take-it-or-leave-it)$\rightarrow$competition
- Perverse effect is more likely: Data sale (OB) happens exactly when lender asymmetry widens

Conclusion and Future Work

- Voluntary data sharing of open banking is not a silver bullet for consumer protection
  - Fostered competition benefits Fintech typically, though **borrowers can be all strictly worse off despite voluntary sign-up**
  - Rich forms of information externality with profound welfare implications
- Leveling the play field. Policy design to fine tune data sharing
- Fintech in E-Commerce platforms and traditional banks
  - "Open platform" to level the playing field?