Open Banking: Credit Market Competition When Borrowers Own the Data

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Overview

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   - helps high-quality borrowers and hurts low-quality borrowers
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2. Voluntary disclosure by consumers: signaling

Environment

- Continuum of risk-neutral borrowers w/ heterogeneous default risks $s = h, l$
- Two risk-neutral lenders with heterogeneous screening abilities
  - Signal S_j where $P\left(S_j = H|h\right) = 1$ and $P\left(S_j = L|l\right) = x_j$ for $j = s, w$, $x_s > x_w$
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- Mixed strategy equilibrium:
  - Strong lender always makes an offer after good signal at random interest rate $\tilde{r}_s$
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  - $\tilde{r}_s > \tilde{r}_w$ in the first-order stochastic dominance sense
- Two important parameters determine competition
  - ability gap $\Delta = x_s - x_w$
  - average borrower quality $\tau = \frac{P(h)}{P(l)}$

Results

- Competition in the credit market decreases in Δ and increases in τ
- Welfare

	Industry profits	Welfare high-quality	Welfare low-quality
$\Delta \equiv x_s - x_w$	$\uparrow$	$\downarrow$	$\downarrow$
x_w	$\downarrow$	$\uparrow$	$\downarrow$
τ	$\downarrow$	$\uparrow$	$\uparrow$

- Information effect: increase in screening ability
- Strategic effect: increase in competition (affects interest rates and likelihood of loan)

Open Banking

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  - Mandatory disclosure: fixed τ
    - increases base screening ability: good for high types, bad for low types
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  - Voluntary disclosure: avg quality determined by signaling decision of tech savvy
    - market segmentation: opt-in vs opt-out
    - welfare effects depend on signaling equilibrium and on $\Delta \lesseqgtr \Delta'$

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- Other considerations: multiple intermediaries, information about preferences

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5. Mechanism goes beyond banking sector
   - Link between information and competition is not trivial

More information is not always better!