Technology-Enabled Disruption: Credit Markets

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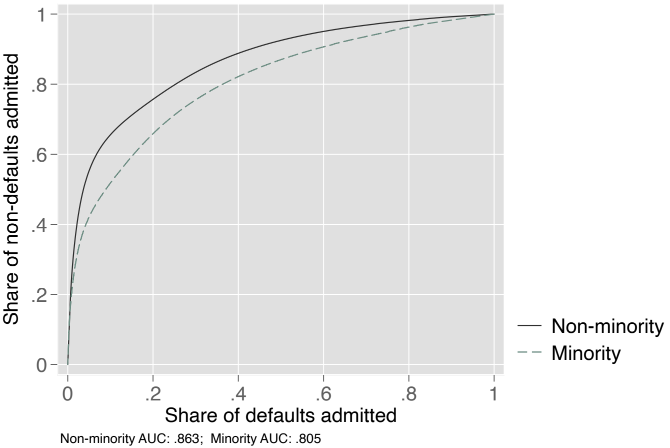
Chicago Booth

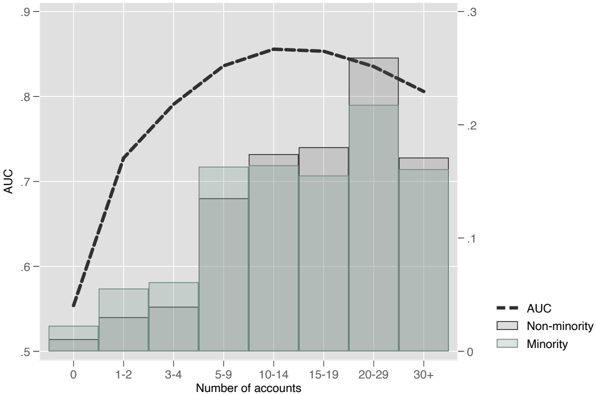
Data and Inequality in Credit Markets

- A leading **constraint on innovation** in consumer credit: *fairness concerns*
- "The world does not start fair" (Hazlitt, 1830)
- When are there **tradeoffs** between **innovation** and **fairness** in consumer credit? What to do about these?



Source: Blattner and Nelson (2024)

Data and Inequality in Credit Markets



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- Credit scores' exhibit lower predictive power for minority loan applicants
- This gap is substantially (50%) explained by *data inequality*
  - e.g., thinner credit files
- Solutions?
  - More/less data?
  - More/less advanced models?

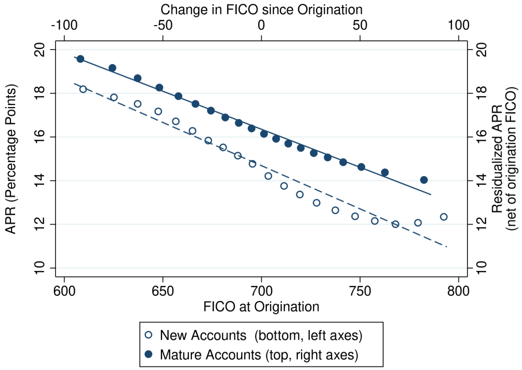
Less Data? Less Advanced Models?

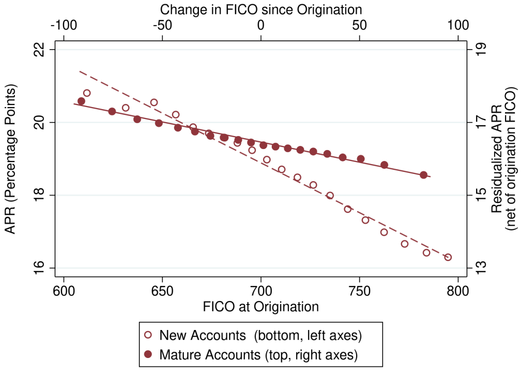
Prominent example of "less data" and "less advanced models": **2009 Credit CARD Act**

- Substantial restrictions on changing interest rates over the life of a credit card contract
- Complementary restrictions on behavior-contingent fees
- Upshot: pricing becomes less responsive to new information revealed over time

2009 Credit CARD Act

Credit card pricing becomes less responsive to *emergent* default risk:

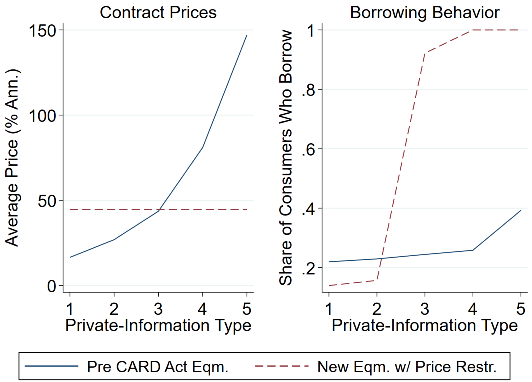




Source: Nelson (2023)

2009 Credit CARD Act

Pricing also becomes less responsive to *private* information (e.g., purchase patterns, some repayment behavior, retention offers). The market **partially "unravels"** (Akerlof, 1970):

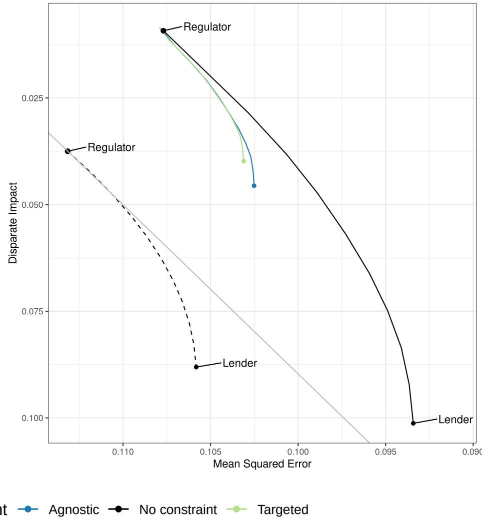


Source: Nelson (2023)

More Data? More Advanced Models?

- Both **regulator** (concerned more about fairness) and **lender** (concerned about model efficiency) **benefit from more advanced models**

- **Explainer tools** can be targeted to constrain "how hard the model works" for different objectives
  - *without* constraining output



Source: Blattner, Nelson, and Spiess (2024)