Discussion of "The Equilibrium Effects of Asymmetric Information: Evidence from Consumer Credit Markets"

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Consumer Credit Setting in Chile

- Non-housing consumer credit is supplied by banks and non-banks (mainly retailers)
  - Banks total loans is about 5X larger than non-bank total loans.
  - But number of department store borrowers is about 3X the number of bank borrowers.
  - Non-bank credit is significantly more expensive (45% vs 15-30% interest rate).
- Information set depends on the lender type:
  - Banks know borrowers' total bank borrowing, bank delinquencies, and only delinquency status of non-bank loans.
  - Non-banks only know the delinquency status of the borrowers.
  - There is no information on borrowers' interest rates.
- Bank loans are significantly safer than non-bank loans:
  - 3% default rate for bank loans vs. 14% for all loans.
  - Information sharing setting can be partly responsible for cream-skimming of more credit-worthy borrowers by banks.

The Policy Change

- Removal of the aggregate delinquency flag for people with loans in delinquency less than $5k.
- After the policy change:
  - Banks could not observe if the borrower had any delinquent non-bank loans
  - Non-banks did not have any information.
- Default flag for 17% of borrowers with positive bank borrowing (sample of analysis) is removed.
  - If one looks at the entire sample, default flag of more than 30% of borrowers is removed.

This Paper: Empirical Facts

- Confirms the finding of previous papers: default flag removal results in relative increase of total new borrowing by past defaulters.
  - However, this could be either because past defaulters borrowed more or because safe borrowers borrowed less.
- The paper, very intuitively, builds a (RFT) model of default with and without default flag to estimate the change in predicted default as a result of flag removal for different borrowers. Details
  - People with small change in predicted default serve as control group.
    - This consists of the safest borrowers and the riskiest borrowers.
  - People with intermediate level of risk and with past default increased significantly their total amount of new borrowing (and most probably, cost of borrowing for them declined significantly).
  - The reverse is true for people with intermediate level of risk but without any prior default.

This Paper: Welfare Calculation

- Adverse selection induces under-provision of credit to both high-risk and low-risk type borrowers.
- Going from two separate equilibrium to a pooling equilibrium (as a result of delinquency flag removal) increases welfare for high-risk borrowers and decreases welfare for low-risk borrowers.
- In a setting a la Einav et al. (2010), aggregate welfare effect is a function of:
  - demand elasticity of the two types
  - marginal cost of credit provision to the two types
- Assuming linear demand curves for the two types and linear average cost curve, aggregate welfare change is a function of 5 parameters that can be estimated from equilibrium cost and quantities in the separating equilibriums and in the pooling equilibrium.

Comment I: The Policy Change and the Change in the Competitive Landscape

- Although the default flag is removed, banks can still use their own internal assessment of borrowers.
  - This is even more true if the policy change was announced in advance.
- Therefore, borrowing from a new lender after the policy change could be a signal of low credit-worthiness.
- This, in turn, results in an increase in the mark-ups charged by the original banks.
- The change in each bank's monopoly power is exactly a function of the value of the delinquency flag for that borrower (i.e. the exposure measure in the paper).

Comment I: The Policy Change and the Change in the Competitive Landscape

- Therefore, high exposure borrowers' interest rates may increase not only because they are subsidizing low exposure borrowers but also because banks are charging them higher mark-ups.
- To the extent that banks increased their mark-ups, the policy was even more welfare deteriorating.
- Any data on how often borrowers borrowed from their existing banks and how it changed before and after the policy could clarify this point.
- This change in mark-ups is less of an issue in studies with individual level variation in flag removal.
  - Because the new bank cannot distinguish between borrowers who are shopping for better rates and borrowers for whom the default flag is just removed.

Comment II: The Policy Change and its Impact on Bank vs. Non-bank Borrowing Composition

- Default flag was significantly more informative for non-bank lenders because:
  - Non-bank borrowers were much riskier, with default rates as high as 30%.
  - This was the only information shared by non-banks.
  - Perhaps non-bank lenders (retailers) have less repeated interaction with borrowers.
- This should make non-bank lenders as a whole less competitive.
  - Some support by the data if you look at change in number or amount of loans from non-banks.
- On one hand, pool of borrowers from non-banks should become more risky. On the other hand, risky borrowers with previous delinquencies can pool themselves into other risky borrowers without previous delinquencies more easily.

Comment II: The Policy Change and its Impact on Bank vs. Non-bank Borrowing Composition

- My guess:
  - Very risky borrowers with default flag increased their borrowing from non-banks
  - Borrowers with intermediate level of risk with default flag reduced their borrowing from non-banks.
  - Borrowers without default flag but with intermediate level of risk (i.e. high bank exposure group) reduced borrowing from non-banks.
- An idea to test the composition effect:
  - Construct a similar exposure measure for non-banks (based on information available to non-banks with and without the delinquency flag)
  - Show the bank borrowing result for high and low *non-bank exposure* groups (while controlling for bank-exposure).
- Implication: High-bank-exposure group's total borrowing (from banks and non-banks) declined even more $\Rightarrow$Policy was even more welfare deteriorating.

Comment III: Is Einav-Finkelstein-Cullen (2010) Framework Applicable to this Setting?

- Einav et al. (2010) / Akerlof (1970) settings require no (endogenous) change in the set of offered contracts .
- However, banks can use different combinations of (denial policy / interest rate / quantities) to screen borrowers.
- More importantly, the policy change may induce them to change their contracts endogenously.
- While existence of fixed mark-ups is consistent with the framework in the paper, endogenous and differential change of mark-ups in response to the policy change is inconsistent with the setting.

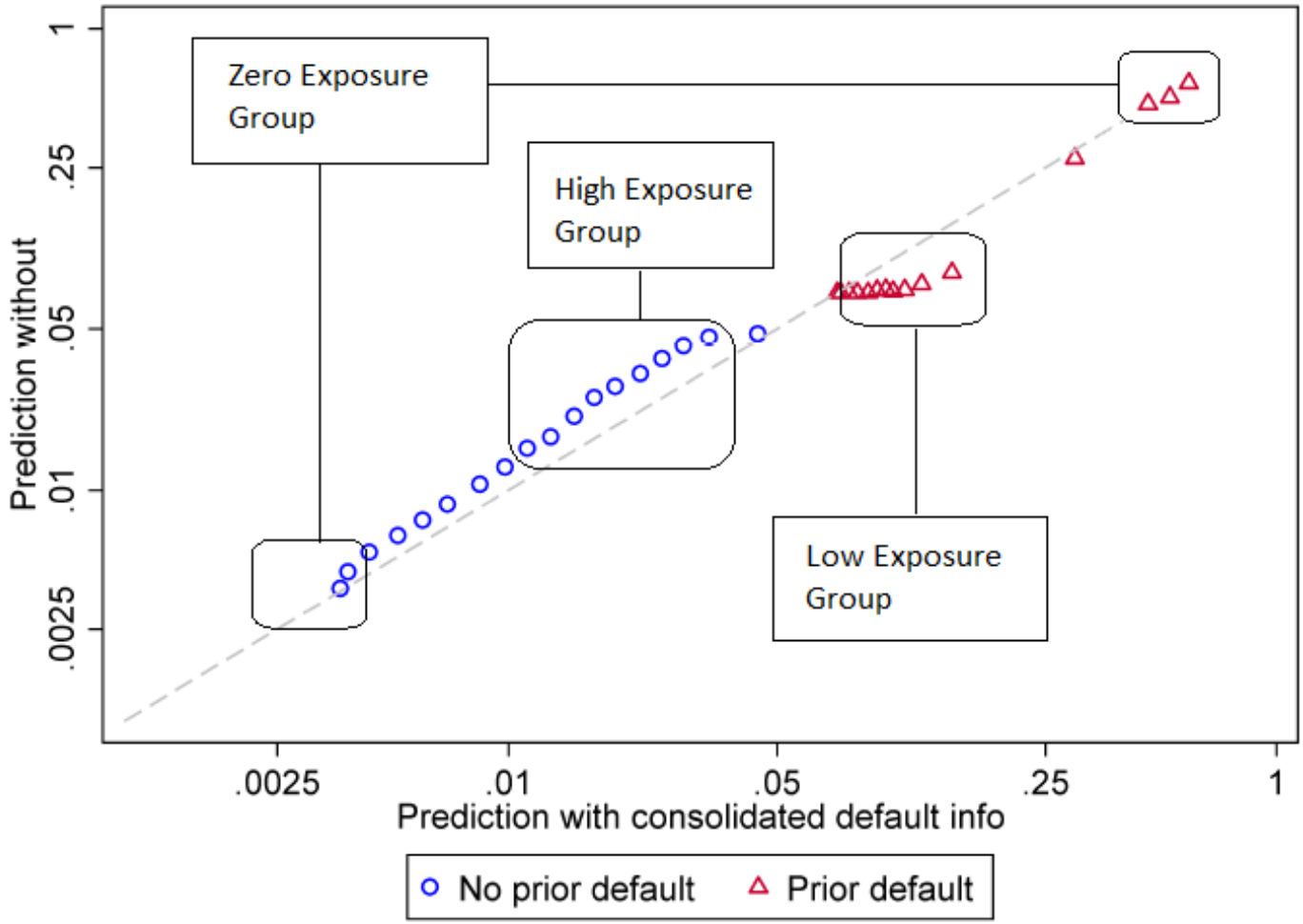
Comment III: Is Einav-Finkelstein-Cullen (2010) Framework Applicable to this Setting?

- Also, not observing the actual interest rates makes it hard to distinguish between a separating equilibrium in which banks used contract terms for screening vs a pooling equilibrium in which different borrowers chose different amount of loans.
- Idea: Try to estimate demand and supply curves based on the data before the policy change as a robustness check.
  - For example, use individual level delinquency flag removal as a price-shifter to estimate the demand for different households with different levels of predicted default.

Other Comments

- People with positive bank borrowing (i.e. sample used for the analysis) seems to be among the safest borrowers who are affected the least with the policy. Would be good to show some robustness check for a broader set of borrowers.
  - For example, new borrowers may be among the groups affected the most with the policy.
- Some of the implications of the policy change for non-banks can be tested by comparing new non-bank defaults before and after the policy change.
- Would be good to reconcile the micro-facts with aggregate numbers on consumer bank borrowing trends.
- The paper can be improved even more if you can find data on interest rates even for a subset of households.
- Overall: This is a really interesting combination of empirical facts and a smart use of variation to estimate welfare gains.

Bank Exposure Measure



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