Discussion of

"Measuring the Welfare Cost of Asymmetric Information
in Consumer Credit Markets"

by DeFusco, Tang, and Yannelis (2022)

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Summary of the paper

- Two parts
    1. a conceptual framework for analyzing welfare in consumer credit markets
    2. an application using a RCT conducted by a Chinese online lending platform

- The framework
    - closely follow Einav, Finkelstein, and Cullen (2010; EFC henceoforth)
    - nontrivial modifications tailored to the consumer credit market

- The RCT
    - different rates offered to two randomized groups of borrowers
    - use differential take-up and charge-off rates to back out the demand, average cost, and marginal cost curves (sufficient statistics for welfare analysis)
    - apply the estimated curves to the framework to find a small welfare loss despite a large price distortion

My take

- An important paper conducting welfare analysis in a big and important market

- The proposed framework is a clever extension of the EFC framework
  - but care must be taken in applying this framework to other settings

- The RCT is as clean as you can get
  - but some results are at odds with intuition and several issues are worth clarifying

Comment 1: the framework

- Firms cannot discriminate among consumers and set a uniform price

- Firms' MC is increasing (decreasing) in price (quantity)
  - adverse selection and moral hazard

- In a competitive equilibrium:
  - efficient allocation: price = MC (*E*)
  - equilibrium allocation: price = AV (*C*)
  - welfare loss: the shaded area

- The three curves (demand, AC, MC) are sufficient statistics for welfare analysis
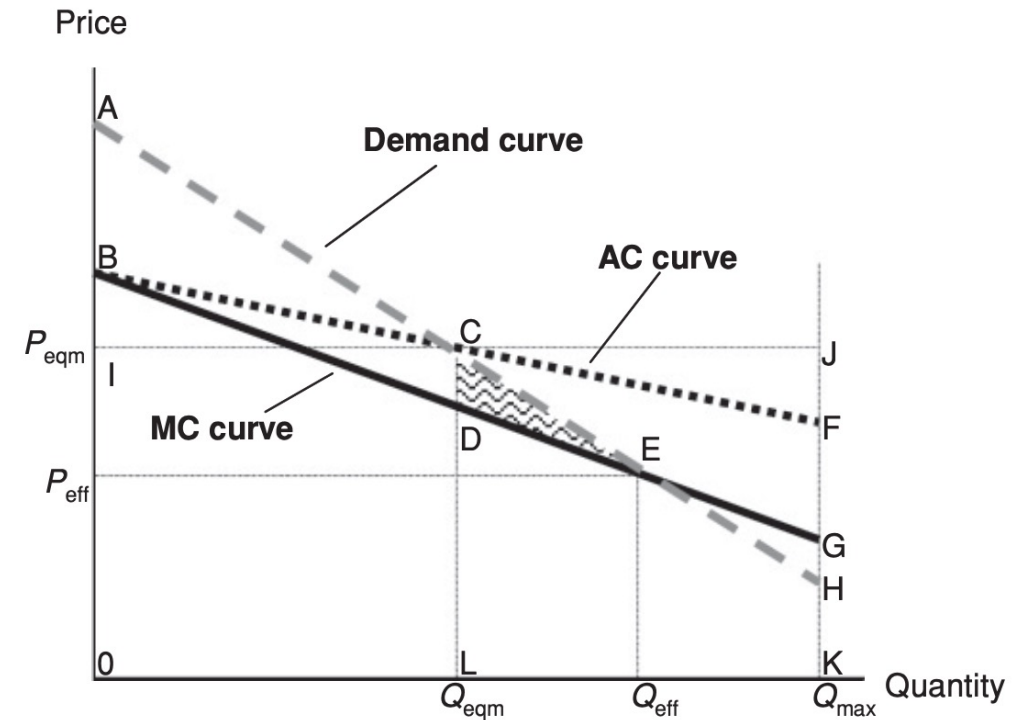
Nontrivial modifications/extensions

1. Price ≠ willingness to pay
   - some consumers may expect to themselves to default
   - a modified demand curve

2. Under adverse selection
   - estimated welfare loss is an upper bound

Bottomline:
- A useful framework for conducting welfare analysis in consumer credit markets

Limitations of the EFC framework

- According to EFC

  "[T]he chief limitation …is that our analysis …is limited to the cost associated with inefficient pricing of a fixed (and observed) set of contracts. Our approach therefore does not allow us to capture the welfare loss that adverse selection may create by distorting the set of contracts offered, which in many settings could be large."

  "[I]t is best suited to settings in which the market or public policy response to asymmetric information will primarily manifest itself through pricing of observed contracts rather than other aspects of contract design."

  "[O]ur approach cannot accommodate a market or policy response that leads to the introduction of new contracts, which were not previously observed."

- My takeaways
  1. the set of contracts should be limited (e.g., insurance contracts, used cars, annuities)
  2. price should be the main margin through which asymmetric information manifests itself

Features of the consumer credit market

1. Price (interest rate) is possibly *a* main margin, but other margins also matter greatly
   - loan amount, maturity, and other clauses

2. Availability of many other contracts
   - bank loans, consumer credit from Bigtech, P2P, informal lending (especially in China)

- Therefore:
  - I would like to know more about the type of consumer credit market that meets the EFC conditions
  - I would be more cautious about making statements like "*the approach we use is general and can be applied to any credit market*" unless the above concern can be fully addressed

- Looking ahead: a potential venue for the next paper (e.g., Einav et al. 2021 have some excellent suggestions on how to endogenize contract attributes)

Comment 2: the RCT

- Among those who applied for a loan, half get a high rate and half get a low rate
  - rate has three components: baseline rate, risk premium, and origination fee
  - treatment: on risk premium and origination fee
  - high: 36%; low: 21.5%
  - randomization is as clean as you can get

- Results
  - low demand elasticity: a 10 p.p. increase in interest rates decreases the take-up rate by 4.3 p.p.
  - a small welfare loss largely due to this low demand elasticity

- I find the empirical setting neat and the analysis competent
  - but I also these results puzzling and difficult to interpret

P1: Why are consumers willing to take loans at the rate of 35%?

1. There are thousands of other platforms out there offering apparently a much lower rate

2. The rate of 35% of almost 20% higher than the Wenzhou index (the private lending rate)
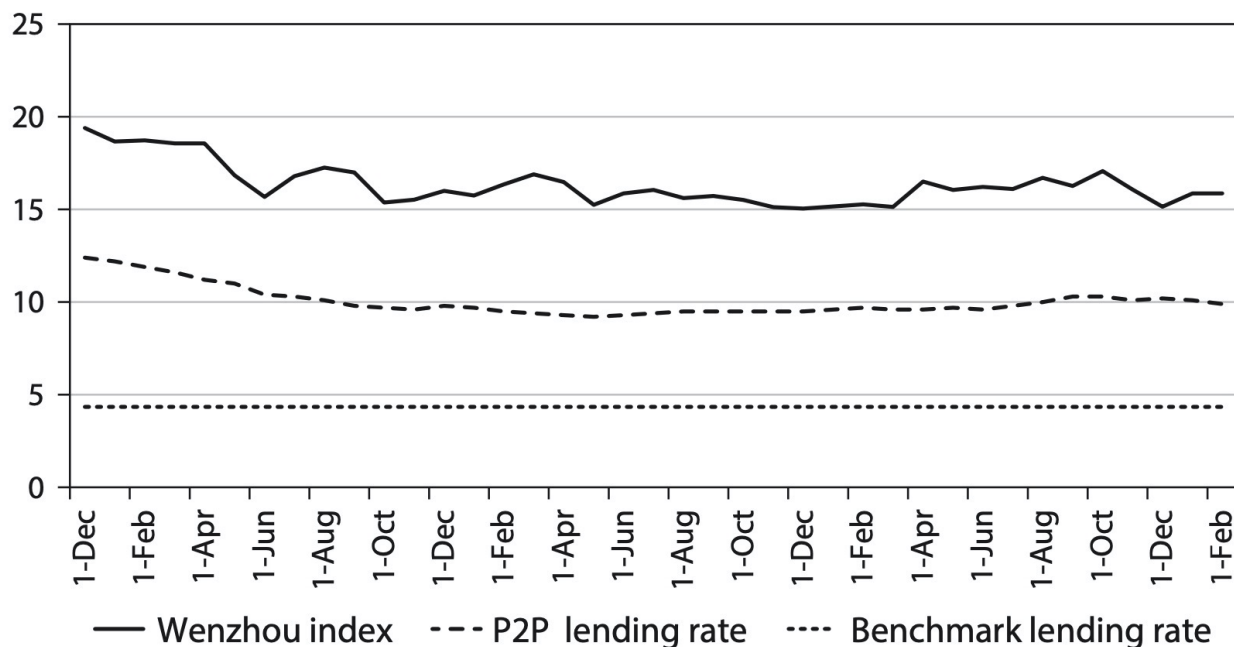
P2: Why is the demand elasticity to interest rates so low?

- The low demand elasticity is surprising

- If we extrapolate these numbers based on a linear demand curve, it would suggest that even at the rate of 110%, around 23% of the applicants will still take the loan

- Are Chinese consumers not responsive to interest rates?
  - doesn't seem so
  - Alipay users respond very quickly to interest rate changes (1% increase in interest rates raises money demand by 76%)

Possible reasons

1. The group of applicants is quite special (issues of selection)
   - possibly denied by other fintech platforms
   - possibly very much liquidity-constrained
   - possibly have a very low level of financial literacy

2. The design of the platform is not very transparent
   - fee structure is shrouded and not easily detected by applicants (Gabaix and Laibson, 2006)
   - explains the high take-up rate *and* the low sensitivity
   - different implications for welfare analysis

- In both cases, it seems to me that in analyzing consumer welfare in the credit market, it is first-order to take household mistakes and biases seriously

At a higher level

- When doing normative analysis, we take "revealed preferences" as given
  - choice reflects preferences

- In the consumer credit market, cases of "mistakes" abound

- A potential direction of future research is to incorporate behavioral biases into consumer decisions
  - detachment between choice and preferences

- It would also be interesting to think about welfare analysis when consumers are less than fully rational
  - e.g., compare the welfare loss due to adverse selection with the loss due to biases and mistakes

Conclusion

- The paper is tackling an important question in consumer credit market with a powerful toolkit borrowed from the health insurance literature

- The framework is neat and useful, but demands caution when applied to different credit markets

- The empirical design is clean and thoughtful, but there are some puzzles yet to be addressed

- Opens up several directions for future research