# Discussion "Loan Contracting in the Presence of Usury Limits: Evidence from Automobile Lending" by Melzer and Schroeder Discussant: Andres Liberman (NYU)

HF Conference NYU 2017

February 24, 2017

## Summary of the paper

- Paper studies the effect of interest rate caps in the US used cars market
- Binding rate caps lead to:
  - no effect on borrowing at the extensive margin
  - substitution from non-dealer to dealer financing
  - and contracts adjust to higher LTV (particularly for low credit score borrowers), lower maturity, higher monthly payments

#### Broad theme

- ► How do market participants react to restrictions in the contracting environment?
  - Change other contract terms (regulatory whac-a-mole)
  - ► Reduce trade
  - Vertical integration

## Main takeaways

- Regulatory whac-a-mole with a twist: suppliers that cannot change other contract terms lose market share
  - Provides a rationale for vertical integration, i.e. auto dealers or department stores that provide credit
    - Suggestion: focus on this. Why are auto dealers able to do this and not banks? What is special about used car market (competition, information, market power, etc)? Is there a broader economic insight that can emerge from the characteristics of this market?
- ▶ Welfare: here paper is much less clear. What is special about contract terms in the post period?

#### Comments

- ▶ Interesting idea
- ▶ Sheds light on an important subprime credit market in the US
- Policy implications
- Two comments
  - Empirical implementation
  - Interpretation

### Idealized setting

- We want to measure the effects of interest rate caps on the used car market and on car loan contracts
- Suppose we had the best possible data and the best possible experiment. What would it look like?
  - Micro-level data on used-car buyers
  - ► Time 0: rate cap of e.g. 20% on all credit transactions for a randomly selected group of individuals, the Treated group
  - Compare take-up, contract terms, and credit outcomes for Treated group, before and after cap, relative to unaffected Control group (potentially GE effects?)
- Unfair, but RCT gold standard should guide evaluation of empirical implementation

## What does the paper do?

- Some states have rate caps ("usury limits")
- Extensive margin: compare distribution of car loans by credit score across both states (no difference, or even slightly more low score borrowers in capped states); more dealer financing
  - Event study: Arkansas relaxed rate cap in 2009, find no difference in extensive margin and increase in loan size (approx 5%)
- These are equilibrium outcomes (in both credit and used car markets), but OK, consistent with a small but noticeable effect of rate caps at the intensive margin

## What does the paper do?

- ▶ Relative to RCT: state is not randomly assigned, BUT:
  - extensive literature based on this variation, and
  - paper's story of shift in the suppliers makes sense; its also consistent with Zinman (2010) study of rate caps in Oregon
- Suggestion: implement transparently as a diff-in-diffs (Treated and Control, pretrends, observables ex ante, etc)

# What does the paper do? (2)

- Now, focus on contract terms
- Define Binding (loan level) as a dummy that equals one if interest rate is equal to state cap
- Want to regress contract terms on Binding, and assign a causal interpretation
- Problem: reverse causality
  - ▶ Binding itself is a function of contract terms

# What does the paper do? (3)

- ► Solution: instrument for *Binding* with state-level dummy for rate cap and level of rate cap
- ► This is a little bit unclear: why not call it an IV?
- Assume that conditional on observables, whether loan is issued in state with cap as well as level of rate cap are exogenous to everything but rate cap
  - ▶ Is the assumption plausible? What drives state-level caps? What about the IO of the used car dealer sector across states?
  - We need to see first stage. Is it powerful?
- Again, why not start by simply comparing contracts across states (not instrumenting)?

#### Interpretation

- ► Results: lower rates, higher loan to value, lower maturity, no difference in value, higher monthly payment
- ► Empirically: much harder to assign everything to causal effect of rate caps
  - ► At the very least we need more evidence (in the lines of previous slide) to help convince this is the case (what about comparing state borders?)
- Moreover, theory offers no guidance. What makes one contract term (loan amount) marginal? Is this the cheapest adjustment?

#### Conclusion

- Interesting paper
- Made me think about org. form in used car market, a topic for which empirical evidence has largely consisted of case studies
- Learn about market for used cars
- ▶ Idea seems novel and interesting, but ultimately impact depends on strength of evidence and empirical implementation
  - ▶ I would focus on comparisons across states (forget the IV), and try to argue that other differences are unlikely to explain results

### **Thanks**

Thank you!

#### Other comments

- ► The sample is selected not only due to inclusion in Equifax, but also because you condition on dealer x month x lender x credit score bins with at most one observation. These must be very small dealers
- ► (I think) Not enough clusters to do state-level (page 14)