Predatory Lending in a Rational World

Philip Bond, David Musto and
Bilge Yılmaz

Predatory lending

- What is predatory lending?
  - A loan that the lender knows makes the borrower worse off
- How can this arise if everyone is rational?
  - Creditors know more about income prospects of borrowers
- Why should we care?
  - Inefficiency
  - Perverse effects on wealth distribution

Model

- Potential borrower seeks a loan of size L.
  - Loan will generate gross non-monetary benefit of L+S
- Loan is collateralized by the borrower's house
  - H is the house value
  - H-X is the liquidation value
- Borrower has stochastic future income
  - Prior belief: y=I with probability p and 0 otherwise

Timeline: Monopoly case

- Lender receives a (noisy) signal about future income:
  - $b \rightarrow p_b$ or $g \rightarrow p_g$
- Lender chooses a face value F to offer
- Borrower accepts or rejects the loan offer
- Income is realized
  - If the loan is not fully paid, house is foreclosed

Example

- X : foreclosure costs = 16,
- S : surplus due to lending = 52,
- L : loan amount = 90,
- I : high income level = 200

- $p = 0.75$, $p_g = 1$, $p_b = 0.5$

- Two cases:
  - Low collateral: H = 16
  - High collateral: H = 109

Low collateral: H = 16

- Lender pools and offers F = 184 → Uninformed borrower is indifferent
  - No loan = 16 + 0.75(200) = 166
  - Loan = 90 + 52 + 0.75(16 + 16) = 166
- Type g is worse off:
  - No loan = 16 + 200 = 216
  - Loan = 90 + 52 + 16 + 16 = 174
- Type b is better off:
  - No loan = 16 + 0.5(200) = 116
  - Loan = 90 + 52 + 0.5(16 + 16) = 158
- Lender is better off:
  - No loan = 0
  - Loan to bad type = 0.5(184) – 90 = 2
  - Loan (average) = 0.75(184) – 90 = 48

Low collateral: H = 16, S=7

- Lender pools and offers F = 124 → Uninformed borrower is indifferent
  - No loan = 16 + 0.75(200) = 166
  - Loan = 90 + 7 + 0.75(16 + 76) = 166
- Type g is worse off:
  - No loan = 16 + 200 = 216
  - Loan = 90 + 7 + 16 + 76 = 189
- Type b is better off:
  - No loan = 16 + 0.5(200) = 116
  - Loan = 90 + 7 + 0.5(16 + 76) = 143
- Lender deviates:
  - No loan = 0
  - Loan = 0.75(124) – 90 = 3
  - Loan to bad type = 0.5(124) – 90 = - 38

High collateral: H = 109, S=7

- Lender pools and offers F = 93 → Uninformed borrower is indifferent
  - No loan = 109 + 0.75(200) = 259
  - Loan = 90 + 7 + 0.75(109 + 107) = 259
- Type g is better off:
  - No loan = 109 + 200 = 309
  - Loan = 90 + 7 + 109 + 107 = 313
- Type b is worse off:
  - No loan = 109 + 0.5(200) = 209
  - Loan = 90 + 7 + 0.5(109 + 107) = 205
  - Socially inefficient = $X(1-p_b) = 0.5(16) > 7 = S$
- Lender is better off:
  - Loan to bad type = 93 – 90 = 3

When is predatory lending more relevant?

- High collateral value
- Monopolistic lending
- Lender is more informed
- Home improvement loans

Competition

- n lenders with identical signals compete
  - Simultaneous offers
  - If the accepted loan is offered by m lenders, each offer is successful with probability 1/m
- **Result**: Predatory lending persists if
  - It is socially inefficient to lend to bad prospects, and
  - The loan is fully collateralized

Back to the example: H = 109

- F = 90 → Lenders are indifferent given L = F
- F = 90 → Uninformed borrower is better off
  - No loan = 109 + 0.75(200) = 259
  - Loan = 90 + 7 + 0.75(109 + 110) = 261.25 > 259
- Type g is better off:
  - No loan = 109 + 200 = 309
  - Loan = 90 + 7 + 109 + 110 = 316
- Type b is worse off:
  - No loan = 109 + 0.5(200) = 209
  - Loan = 90 + 7 + 0.5(109 + 110) = 206.5

Policy Experiments

- Interest-rate constraints
  - Mostly good; breaks down pooling equilibrium that supports predatory lending
- The Community Reinvestment Act (CRA)
  - Mostly good; increases competition
- The Equal Credit Opportunity Act (ECOA)
  - Bad? Forces pooling equilibrium that supports predatory lending

Concluding Remarks

- Predatory lending is more likely when
  - Lending is uncompetitive
  - Lender is better informed
  - Collateral value is large
- Predatory lending may have more perverse effects when:
  - Collateral value is large
  - Home improvement loans
- Policy experiments