Discussion of “The Coexistence of Money and Credit as a Means of Payment” by Sébastien Lotz and Cathy Zhang

Ed Nosal
Federal Reserve Bank of Chicago

The Economics of Payments VII Conference
Federal Reserve Bank of Boston
April 3-4, 2014
monetary theory, kiyotaki and wright (1989)

- explicitly model trading frictions
  - lack of commitment, asymmetric information
- institutions, e.g., money, arise to overcome frictions
- trading frictions make it hard for credit and banking emerge
  - if agents anonymous, a creditor will always default on debt
Coexistence of money and credit

- Models in the spirit of this paper: Nosal and Rocheteau (2011)
  - Sometimes agent is anonymous $\rightarrow$ transact with money
  - Other times agent is not $\rightarrow$ transact with credit
  - Money is costly to hold

1. Short-term & long-term partnerships
2. Costly record keeping 1
3. Costly record keeping 2
short-term & long-term partnerships

• short-term match: buyer and seller will not meet again
• long-term match: buyer and seller will meet again (with positive probability)

1. short term match: trade mediated by money
2. long-term match: trade mediated by credit
   • reputational equilibrium, $q \leq q^*$
   • endogenous debt limit

• buyer always holds money
  • trades with either money or credit
costly record keeping

- buyer pays $\gamma$ to record transaction
  - once trade recorded, perfectly enforceable
- buyer receives preference shocks $\varepsilon \in [0, \bar{\varepsilon}]$
  - (efficient) consumption increasing in shock

1. if $\varepsilon$ “small” not worth paying for credit
   - use money
2. if $\varepsilon$ “big” pay $\gamma$ for credit
   - since contract enforceable, $q_{\varepsilon} = q_{\varepsilon}^*$
costly record keeping 1, cont’d

- buyer always holds money
  - trades with either money or credit
    - money used for small purchase
    - credit used for large purchases
costly record keeping 2

• seller pays $\gamma$ to record transaction
  • once trade recorded, perfectly enforceable
  • credit trade always has $q = q^*$

• if inflation not too high $\rightarrow$ multiple equilibria (strategic complementaries)
  • pure monetary equilibrium
  • pure credit equilibrium
  • money and credit equilibrium

• equilibrium can be inefficient
costly record keeping 2, cont’d

- money and credit equilibrium
  - increase inflation, more trades are credit
  - decrease record keeping cost, more trades are credit
  - buyers always hold money
    - trade with either money or credit
costly record keeping model 2 w/o perfectly enforceable contracts
  • endogenous debt limit
for sure, analysis is interesting
what does endogenous debt limit buy us?
endogenous debt limit

- many results from costly record keeping model 2 are the same
- some new results:
  1. credit trade \( q \leq q^* \)
     - \( q < q^* \) → endogenous debt limit “bites”
  2. buyer may use money and credit to buy \( q \)
  3. with perfect (costless) record keeping money and credit cannot coexist
- all theoretically interesting
  - but do new results help explain some puzzle out there?
last slide

- Lotz and Zhang endogenize debt limit
- Analysis and results are interesting
- Must clearly explain how their approach improves our understanding of payments over a model where debt repayment is perfectly enforced.