Discussion of "Dynamic Bank Capital Requirements" by Tetiana Davydiuk

Juliane Begenau

Stanford GSB & NBER

FIRS, Barcelona 2018

Summary Goal: optimal time varying capital requirement policy

- Model
  - Households value deposits via money-in-the-utility
  - Banks operate DRTS $\Rightarrow$ implies optimal scale
  - Binding capital (leverage) requirement
    - Gov. always bails out defaulting banks
    - Households value deposits, i.e., rate lower due to MIU
  - Given bailout policy, solve for optimal cap req
  - Calibrated to annual macro aggregates 1980-2007

- Results
  - First best: lending = deposits
    procyclical & no excessive lending
  - Government guarantee leads to excessive lending
  - Optimal time varying capital requirement (Ramsey)
    Lower than in calibration & pro-cyclical

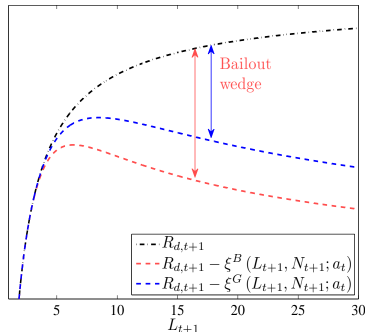
How is lending determined?

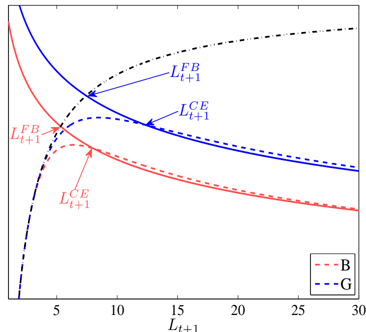
W/ bailout guarantee & w/o cap req: too much lending

less overinvestment in good times b/c high MPK

$$\text{Marginal Benefit} = \text{Marginal Cost}$$

$$= \underbrace{R^d + \zeta_t \text{L-Prem}}_{\text{Funding Costs}} - \underbrace{\text{Expected mg. loss reimbursed}}_{\text{Bailout Guarantee Benefit}}$$





Effect of higher capital requirements

- Reduced gov. bailout benefit $\Rightarrow$ decreases oversupply of loans

- Increases funding costs $\Rightarrow$ decreases supply of deposits

- Optimal Ramsey policy suggests either overborrowing not a big concern during 1980-2007 or liquidity provision too low as $\zeta_t^* < \bar{\zeta}$

- Why? I'm not sure
  - Draw Fig 3 for full model
  - Bailout wedge channel dominates funding channel (liquidity) leading to decreasing MC of loans

Understates optimal procyclicality of cap req

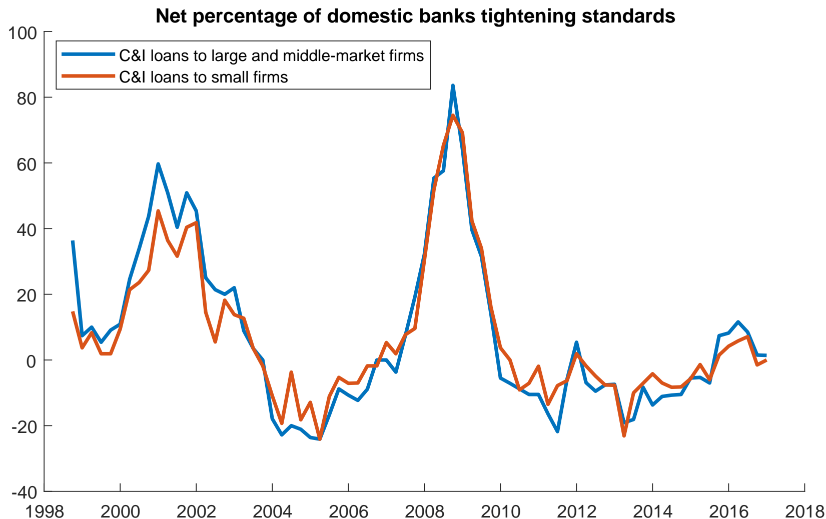
- Business cycle correlation of liquidity premium not matched
  - data = -0.21 but 0.07 in the model
  - η might be too low - however unmatched calibration target suggests η too high

  $\Rightarrow$ means recessions liquidity premium does not fall which would have indicated the rule to lower cap req

- w/o cap requirement less overlending during booms
  - marginal productivity of loans procyclical $\Rightarrow$ means gap to correct is smaller in booms
  - evidence: agg. marginal productivity higher, but marginal borrower often of lower quality

  - Quantitative model effect dampened b/c loans effectively long term

Lending Standards: Survey of loan officers



No role for equity

- No role for equity in the model (common in the literature) - except for correcting excessive lending due to government subsidy

- Standard finance model introduce costs of financial distress
  $\Rightarrow$ privately optimal to keep some equity on balance sheet
  $\Rightarrow$ w/o optimal range of capital requirement lower
- Private costs of financial distress for banks not entirely absent despite bailout
  - Bailout can imply restrictions on equity payout, loss of franchise value, reputation, legal costs
  - Also: inefficient incentives generated by cap req (empirical evidence e.g., Blattner)

- Without a positive role for equity - optimal level of equity likely to be lower

In sum

- Nice & tractable paper on a relevant question
- Suggestions
  - Check quantitative implications
  - Role of equity even in the presence of government guarantees