Booms and Banking Crisis
by Frédéric Boissay, Fabrice Collard, Frank Smets
Discussion

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October 12, 2013
Key Idea

- Build a model, explaining three facts:
  1. Banking crises are rare (every 40 years).
  2. They come with unusually deep and long recessions.
  3. They follow unusual credit booms.

  Bible, Moses: 7 good years, 7 bad years.

- Mechanism: banks in a basic DSGE model:
  - provide all firm financing (“capital stock”).
  - Differ in (to-firms) lending ability: interbank market.
  - Bad banks, normal times: lend to good banks, won’t cheat.
  - Bad banks, asset rich times: lend to firms or cheat.
  - Asset rich times or “savings glut”: more lending banks (“good”), but funding must be constrained (“bad”) ...
  - ... which can lead to a banking collapse: funding = 0.
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Banks

- Period $t$ assets (or equity or deposits): $a_t$.
- Lending ability $p \in [0, 1]$. Distribution $\mu(p) = p^\lambda$, $\lambda = 25$.
- Bank can
  1. Lend to other banks: get return $\rho_t$ per unit.
  2. Borrow $\Phi_t a_t$ from other banks at rate $\rho$ and lend to firms: get return $p R_t$. Net return per unit:
     \[ p R_t (1 + \Phi_t) - \rho_t \Phi_t \]
  3. Borrow $\Phi_t a_t$ from other banks and cheat (“store”).
     $\gamma = 0.95$, $\theta = 0.1$. Net return per unit:
     \[ \gamma (1 + \theta \Phi_t) \]
- Market clearing at marginal $\bar{p}_t$: compare 1. to 2.
  $\rho_t = \bar{p}_t R_t (1 + \Phi_t) - \rho_t \Phi_t$
  Low $\rho_t$: low $\bar{p}_t$. Most banks borrow (“extensive margin”)
- Incentive compatibility: compare 1. to 3. $\gamma (1 + \theta \Phi_t) \leq \rho_t$
  Low $\rho_t$: low $\Phi_t$. Low funding (“intensive margin”)
Quality distribution

Distribution $\mu(p) = p^\lambda, \lambda = 25.$
Question: are sudden booms possible?
Banking crisis and output collapse
Remarks

Good:

- Creative, elegant, simple, intuitive, plausible, gets the facts.
- This is likely to be a landmark paper!
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Food for thought:

- Banking sector is very stylized.
- Can banks get away so easily?
- Long-term relationships between banks and firms?
- Firms **must** get all their financing from banks. This is “Europe”, not the US.

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(Source: de Fiore - Uhlig (2011))

- Even in “Europe”, why can’t firms switch to bonds, if banks collapse?
- Firms: finance entire capital stock? Perhaps just: investment?
- Chari-Kehoe: earnings ("capital share") > Investment. Why are banks needed? HH?
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