

Bank Recapitalizations, Credit Supply, and the Transmission of Monetary Policy

by M. Mink, S. Pool

discussion by Andrea Gerali

DNB Annual Research Conference
Amsterdam, 13th November 2018

This paper

- Studies the effect of a **government intervention** aimed at **restoring banks' ability to repay deposits** (bank recapitalization) **after a crisis**
- Uses a **DSGE** model with a **banking sector** subject to a binding **capital requirement**
- Part of a growing literature studying the interaction btw **bank regulation** (capital and liquidity requirements), **monetary policy** and the **macroeconomy**

Main contribution

- Paper shows that - in the model - recapitalization policies affect the supply of credit, the transmission of monetary policy and welfare in non-trivial ways:
 - A delayed recapitalization is beneficial **before** a crisis while an immediate one has advantages **in its aftermath**.
 - A delayed recapitalization **weakens** the transmission of MP impulses to **inflation** in the interim period.
 - In this environment **raising bank equity** requirements might have **negative** welfare effects

Plan of the discussion

- I find hard to understand some features of the model environment
- My comments are mainly suggestions in this direction
- Questions I want to investigate:
 - How **robust/generalizable** are the insights we derive from the model?
 - Does the model environment have all the **moving wheels** needed to address the question of interest?
 - Conversely, what are the **crucial ingredients** in the current setting that drive the results?

Frictionless banking model

- Deposits and Bank equity are perfect substitute:
- ... pinned down only by κ : $D_t = (1 - \kappa)L_t$, $E_t = \kappa L_t$
- $R^D = R^E = R^L$ all rates are equal
- Banks are only a veil
- HH's save via a nominal bond whose real returns are linked to return to capital:

$$\frac{R^D}{E_t(\pi_{t+1})} = E_t\{MPK_{t+1} + 1 - \delta\}$$

- Textbook "sticky price" model ...
- with a somewhat unusual "Loan-In-advance" constraint:

$$K_t \equiv L_t \quad \forall t$$

Bank Equity & recapitalization

- Contrary to the literature, here **Bank equity = Outside equity**
- It can be raised indefinitely at no additional cost wrt bank deposits
- Then, a gov.n.t intervention is introduced in this economy:
- «a transfer to make sure that banks fully repay its depositors»:
$$S_{t+1} = \max\left(0; \frac{R_t^D}{\pi_{t+1}} D_t - \frac{R_t^L}{\pi_{t+1}} L_t - \Pi_{t+1}^K\right)$$
- 1) Deposits become «insured» while **equity** is not: to me this is more a Deposit insurance scheme!
- 2) Why? there is no distortion to cure in this economy!
- Bank recapitalizations are simply a state-contingent transfer (implicit subsidy) to banks ... paid lump-sum by hh's

Bank Equity vs Deposits

- Both seem to be «equally **risky**» assets for investors (claims on stochastic returns to K) w/o Bank Recap.
- Or equally **riskless**? paper not clear on this
- But after gov.n.t intervention **R^E should be greater than R^D** as deposits have become riskless!
- Not so in this model. What contractual settings can support this setup?
- Does Equity work as a loss-absorption device? Not clear
- Related: does its level diminish the probability of a crisis?
- In general, difficult to reconcile the narrative in the paper with the trade-offs and moving wheels that are actually present in the model

Welfare statements

- Authors compare outcomes under Bank Recap with the frictionless (no-banking) case to make welfare statements
- Not clear what is the first best in this environment
- If no-banking is best, this means that government should be prohibit from embarking in Bank Recap!
- Probably there is moral hazard, or price externality or another not-modelled market failure, in the background as rationale for equity requirements
- I think those need to be taken upfront and modelled explicitly in order to make valid welfare statements
- Actually deposit insurance is the main real-life reason, so...

A suggestion

- The «immediate recap» model is a nice way to introduce «Deposit insurance» into an otherwise standard DSGE
- This introduces moral hazard (banks want to hold too little Equity) as a rationale for minimum equity requirements
- Next turn Equity into a loss-absorption device, i.e a residual claim to the value of the Bank: $E_{t+1} = \min(0; E_t + \Pi_{t+1}^B)$
- Price it accordingly: $r_t^E = \int_{-\infty}^{\bar{z}} (-1) f(z) dz + \int_{\bar{z}}^{\infty} \frac{E_{t+1} - E_t}{E_t} f(z) dz$
with $\bar{z} \equiv \{z: s. t. \Pi_{t+1}^B(z) = -E_t\}$
- Now you have a nice environment in which to study Bank recapitalizations and Equity requirements

Conclusion

- I actually enjoyed reading the paper and learned new things along the way
- The exercise is definitely worth-pursuing and can shed light on the role of bank capital and equity requirements
- ... as well as the trade-offs btw banking policies, on one side, and macroeconomic stabilization on the other
- Look for generalizable (i.e. robust) lessons that transcend the particular lab/model you worked with

THANKS