Supervisory incentives in a banking union

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Disclaimer

The views expressed in this discussion are my own and do not necessarily coincide with those of Banca d'Italia

The paper

Motivation

- Under the new Banking Union in Europe supranational authorities will take supervisory/resolution decisions
- Yet, they will rely (to some extent/at least in the transition/for some banks) on national authorities information

Question

- What are the effects of a hub-and-spokes supervisory architecture if the objectives of the national & supranational authorities differ?

Main result

- If the central authority is tougher than the local one, the latter may reduce information collection and banks may end up taking more risk

My discussion

- Illustrate (some of the) ideas/results in simpler version of the model

Comments

- Non observability of bank capital
- Central supervisor or independent resolution authority?
- Implications for SSM
- Conclusions

The simplified model

Bank

- Capital k, deposits $1 - k$, & risky project with payoff $R(\underline{q}) > 0$ with prob q
- Makes (unobservable) risk choice q

Local supervisor

- Can exert (unobservable) effort e to collect information on q
- Conditional on obtaining information can intervene the bank at a cost A_L

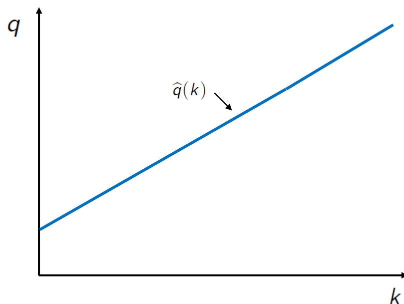
Two departures from model in the paper

- Supervisor observes k at initial date (unobservable in the paper)
- Information collection cost is linear in effort: de (quadradic in the paper)

Bank's laissez-faire risk taking decision

Suppose no threat of intervention

- Debt funding creates risk-shifting incentives
- Bank chooses project with success probability $\widehat{q}(\underset{+}{k})$



Supervisory intervention decision

- Upon observing q supervisor looks at intervention gains:

$$I(\underline{q}, \underline{A_L}) := \left[q^{FB} R(q^{FB}) - A_L \right] - qR(q)$$

- The supervisor intervenes iff

$$I(q, A_L) > 0 \Leftrightarrow q < \widetilde{q}$$

- [$\widetilde{q}$: intervention threshold]

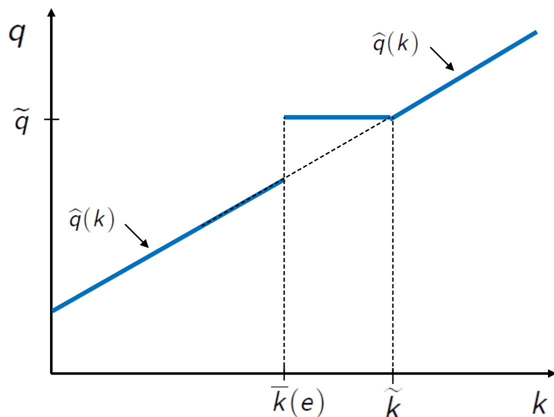
Bank's risk taking decision with supervision

Suppose supervisor exerts effort $e > 0$

- Bank's risk choice between
  1. $\widehat{q}(k) \longrightarrow$ intervention with prob e if $\widehat{q}(k) < \widetilde{q}$
  2. $\widetilde{q} \longrightarrow$ never intervention

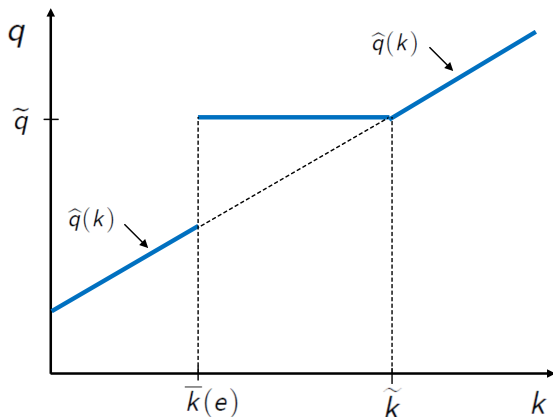
Banks' risk taking decisions with supervision

- Three regions in bank's optimal risk decisions (low e)



Banks' risk taking decisions with supervision

- Three regions in bank's optimal risk decisions (high e)



Equilibrium

High capital bank ($k \geq k'$): no ex-ante gains from intervention if bank chooses $\widehat{q}(k)$

- Supervisor exerts no effort $e = 0$ and bank chooses $\widehat{q}(k)$
  - [Threshold k' satisfies $I(\widehat{q}(k'), A_L) = d$]

Low capital bank ($k < k'$): ex-ante gains from intervention if bank chooses $\widehat{q}(k)$

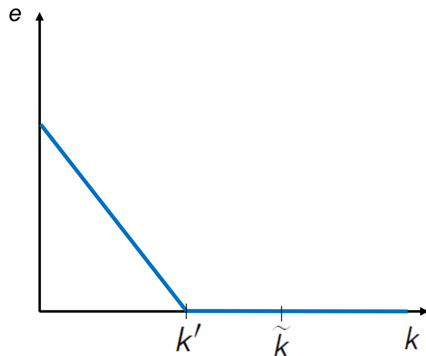
- Linearity leads to mixed strategies equilibrium
- Supervisory effort $e(\underset{-}{k})$ is st bank is indifferent between $\widehat{q}(k)$ and $\widetilde{q}$:

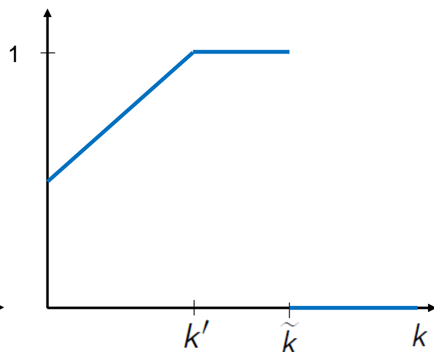
$$\Pi(\widehat{q}(k)|e(k)) = \Pi(\widetilde{q}|e = 0)$$

- Bank chooses $\widehat{q}(k)$ with prob $\lambda(\underset{+}{k})$ st supervisor is indifferent between collecting information and not

$$\lambda(k)I(\widehat{q}(k), A_L) = d$$

Graphical illustration of decisions





- [Terminology: a bank misbehaves if it chooses $\widehat{q}(k) < \widetilde{q}$]

Central tougher supervisor with local information

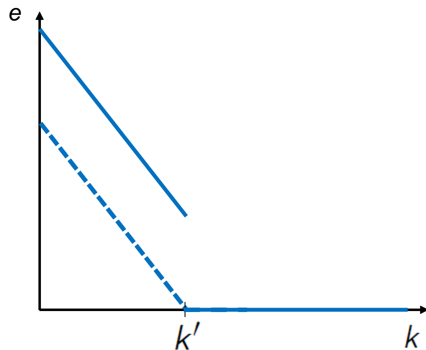
Suppose central tougher supervisor with local information ($A_C < A_L$)

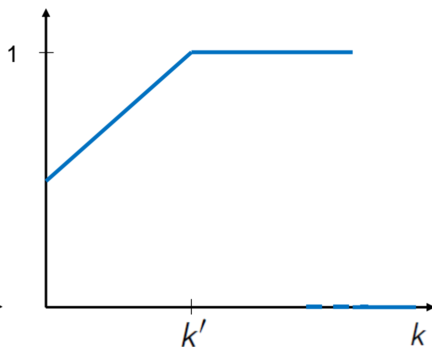
- Upon information central supervisor intervenes at higher threshold

Equilibrium effects relative to local supervisor case

- For low capital bank:
  1. Supervisory effort increases, because upon information central supervisor intervenes at a higher $\widetilde{q}$, which renders more costly for banks to comply with threshold
  2. As $\widetilde{q} \uparrow$ the risk-taking of banks that choose $\widetilde{q}$ diminishes, while the fraction of banks that misbehave is unaffected, so that average risk-taking is reduced
- For high capital bank:
  1. No effect since the local supervisor exerts no effort and the central supervisor can never intervene

Central tougher supervisor with local information: illustration





Discussion of simplified model results

- With tougher central supervisor average risk-taking never increases
- $\Rightarrow$Main result of the paper does not arise

Why?

- After observing k at the initial date the local supervisor knows if there are gains from intervening the bank should it choose laissez-faire risk

Comments: Non observability of bank capital

- In the paper bank capital *not observable* at initial date
- ⇒Local supervisor is worried central supervisor intervenes a bank (with intermediate k) for which ex-post local finds no intervention gains
- Increase of bank risk-taking with tougher central supervisor depends on non observability assumption
- The paper has to discuss this assumption
  - Unusual in the literature
  - If taken seriously leads to banks' moral hazard in k choice
- Suggestion: introduce a different assumption that creates same effect
  - Imperfect information at initial date on how costly intervening the bank would be (high vs low A banks)?

Comments: Central supervisor or independent resolution authority?

- Central supervisor cannot take decisions to affect the information choice of local supervisor
- $\Rightarrow$Central supervisor looks like independent resolution authority
- Given the information collection problem, it would be interesting to think what the central supervisor could do to improve its outcome...

Comments: Implications for SSM

- Under the SSM supervision of significant banks conducted by ECB through Joint Supervisory Teams (JST)
- Authors not very clear on their assessment of this architecture
- Should we think of JSTs a (costly way) for ECB to directly obtain information initially collected by National authorities?
- If not, so that there is some residual valuable information (in the transition/structurally) only National authorities can obtain...
- ...what should ECB do to obtain collaboration from National authorities?

Conclusion

- Very nice paper that conveys a clear non-trivial message
- Banks' risk taking may increase when supervisory decisions are transferred to a tough central supervisor that depends on local supervisory information
- Authors should discuss the importance of some of the assumptions
- The policy implications for the SSM could be sated more clearly or sharpened