Procyclicality of Capital Requirements in a General Equilibrium Model of Liquidity Dependence

Discussion

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HKIMR/BIS Conference
“Financial Stability: Towards a Macroprudential Approach”
July 6th, 2010
Summary and main findings

• The paper studies the impact of *alternative bank capital requirements* on macroeconomic fluctuations in a general equilibrium setting.

• Central ingredients of the framework are:
  - financial intermediation subject to an agency problem, i.e. moral hazard of the entrepreneur (Holmstrom and Tirole, 1998).
  - (countercyclical) liquidity dependence among firms; i.e. firms rely more on credit lines during downturns (Schuermann, 2009).
  - banks constrained by capital requirements.
Summary and main findings (cont’d)

• The main findings suggest that, across various calibration exercises:
  • permanent higher capital requirements result in lower level of output and higher cost of capital.
  • the inclusion of bank capital requirements (Basel I and II-type) increase output volatility.
  • the magnitude of these effects is small on average but slightly larger around business-cycle peaks and troughs.
Initial comments

• Although the model incorporate various features, it is fairly stylized.

• The results for the steady state are not too informative (perhaps mechanical) since the model capture the cost aspects of bank regulation but does not include other benefit (welfare) aspects.

• The figures reported are fairly tiny:
  – On average: 0.05% (Basel I), 0.10% (Basel II)
  – Conditional (lower 99th percentile): 0.30% (Basel I), 0.61% (Basel II)
  – Statistical significance vs economic value?
Initial comments (cont’d)

• It seems that bank capital requirements do not impact dramatically on macroeconomic aggregates.

• Potential reasons:
  • The calibration of the relevant parameters may not necessarily provide the best characterization of the dynamics among the variables of interest (average vs dynamics)
  • The model may not capture some important features of financial market functioning
A suggestion

• What is the model ultimately trying to capture? The effect of bank funding conditions on aggregate/systemic liquidity conditions (and, in turn, their impact on macroeconomic aggregates)

• Does the model capture this? Yes and No.
A suggestion (cont’d)

• What is the model ultimately trying to capture? The effect of bank funding conditions on aggregate liquidity conditions (and their impact on macroeconomic aggregates)

• Does the model capture this? Yes and No.
Funding liquidity and banks’ balance sheets vulnerability

• The 2007-2009 crisis taught us some important lessons regarding what is important and what is missing in theoretical (general equilibrium) models (see Krugman, 2009; Cochrane, 2009)

• This framework does not incorporate some important features of banking systems, i.e. balance sheets adjustments and (funding) liquidity feedbacks (Adrian and Shin, 2009; Aikman et al., 2009 and the references therein)
Funding liquidity and banks’ balance sheets vulnerability (cont’d)

• Macroeconomic shocks result in adjustments to the balance sheets of financial institutions (especially via trading books and loan books due to credit losses)
  • In the model there is a maintained unidirectional causal linkage (bank capital decision $\rightarrow$ macroeconomic effect). A feedback is missing.
• The liquidity feedbacks occurring in light of these shocks entail the asset side (market liquidity risk) as well as the liability side (funding liquidity risk)
• The model is missing this part (perhaps a substantial part) of the ‘real action’.
• Furthermore, the model is a model for ‘good times’ ($\sigma_\omega = 0.44$). What are the predictions of this model in light of the recent financial crisis?
• Any role for the CB as lender of last resort?
Concluding remarks

• It is an interesting paper
• It utilizes some important findings of the literature on optimal contracts and financial intermediation in a general equilibrium setting
• It represents a good starting point for investigating the impact of alternative capital requirements on the macroeconomy
• However, more realistic features should be incorporated to capture the endogenous nature of the relationship between regulatory regimes and their macroeconomic effects.