Discussion of "Capital Regulation in a Macroeconomic Model with Three Layers of Default" by Clerc, Derviz, Mendicino, Moyen, Nikolov, Stracca and Suarez

Galo Nuño

European Central Bank

ESSIM, Roda de Bara, May 2014

How should macroprudential policies be conducted?

- "Hot topic" in macroeconomics. Relevant policy question
  - MiPru policies alone may not be enough $\rightarrow$ need to understand general equilibrium effects

- This paper: DSGE model with financial frictions to analyze MaPru policies
  - Optimal policy in steady-state
  - The policy instrument here is a capital ratio that affects the whole banking sector.

Which is the rationale for MaPru policies in the model?

Two distortions:

1. CSV: bankruptcy costs with non-state contingent debt
2. Deposit insurance

$\rightarrow$ **Main result: optimal level of bank capital requirements of 11% (business loans) and 7% (mortgages)**

Comments

1. On the general approach

2. On the particular model

3. On the welfare analysis

How should MaPru policies be analyzed?

Three important dimensions

1. Linear/steady-state general equilibrium effects
   1.1 Ex. This paper or Moro and Nuño (2014)

2. Non-linear feedback effects (endogenous crisis/volatility)
   2.1 Ex. Brunnermeier and Sannikov (2014), He and Kishnamurthy (2013), Boissay, Collard and Smets (2013)

3. Networks and cascade effects
   3.1 Ex. Elliot, Golub and Jackson (2014)

Is leverage constant in the data?

- Not in the US, according to the FoF data. See Adrian and Shin (2010)
- Procyclical leverage due to VaR: Adrian and Shin (2014). general equilibrium in Nuño and Thomas (2013) and Adrian and Boyarchenko (2013).
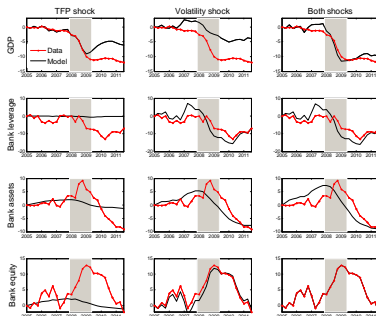

Figure: Historical and model-generated series for GDP and bank balance sheet variables
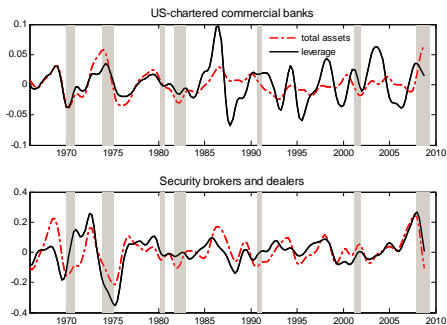
More on leverage

Figure: Cyclical components of intermediary leverage and total assets

Source: US Flow of Funds. See Data Appendix for details. Leverage and Total assets have been logged and detrended with a bandpass filter that preserves cycles of 6 to 32 quarters (lag length of 12 quarters). Shaded areas represent NBER-dated recessions.

Other comments on the model

- Entrepreneurs and bankers living 2 periods

- No long-term debt

- No shadow-banking (2 sectors?)

- Calibration (especially of χ^e and χ^b)
    - Estimation?

Welfare analysis

- Dynamic welfare
    - Trade-off average consumption (leisure) - volatility

- Possibility of no dynamic equilibrium

- Is the model constrained efficient? $\rightarrow$ Ramsey problem

Example

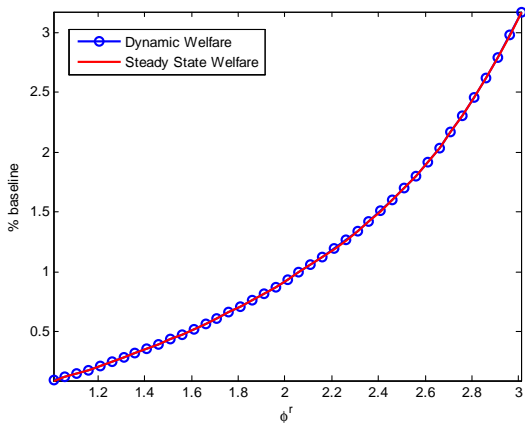## Moro and Nuño (2014): regulated and unregulated banking

Figure: Percentage deviations of welfare in the two-sector with respect to the one-sector model.

Conclusions

- Relevant question, well-crafted model

- But, does the financial system work like that?