Macrofinancial Feedback, Bank Stress testing and Capital Surcharges

discussant: L. Pelizzon

Paper Overview

Objective:

- Develop a **parsimonious** model that captures:

1. the dynamic relationship between bank capital, financial conditions, and GDP growth,
2. quantifies the causal impact of shocks to bank capital on the future distribution of financial conditions and future downside risks to GDP growth,
3. estimates macrofinancial feedback effects

=> to calibrate a countercyclical capital buffer (CCyB) to account for vulnerabilities in the context of bank stress tests

Question

- Stress tests are used to assess if banks have enough capital to stand stressful financial conditions
  - Problem: stress tests are largely static, based on a micro-prudential perspective and do not include feedback effects

- What type of stress tests should we set up to assess if the CCyB is enough to provide the “right capital” to banks to avoid credit booms and bursts?

Methodology

- Top-down stress testing model
- Reduced-form model with contemporaneous and lagged interactions that capture the dynamic relationship (conditional joint distribution) between three variables:
  - Bank capital (profits and losses over RWA), index of financial conditions and GDP growth
- Propose a methodology to use the stress testing framework to calibrate the CCyB by linking the macrofinancial feedback to cyclical vulnerabilities using the Growth-at-Risk framework: Growth-at-Risk Gap (GaR gap)

Paper Overview

Main Results:

- Feedbacks effects are relevant
- GaR gap shows more time variation than the credit gap, with cycles at a higher frequency than the business cycle
- CCyB should be 210bp for the median and 510 bp for the 5th percentile

Comments

Very interesting paper!

- Good idea to look to the feedbacks dynamic
- Interesting results

Comments: causality

Key driver of the results is the estimation of the interactions among the three variables: bank profits, financial conditions and GDP growth.

The authors claim to capture "contemporaneous granger causality", in reality the model captures the Conditional Joint Distribution? Conditional correlation?

The authors use Caselli et al. (2020) approach and these authors never use the word "causality" in their paper..

Comments: causality

The authors use the Granger causality to assess the lead-lag relationship between pairs of the three variables and extend this pecking order to contemporaneous relationships.

What are the statistical and justifications for this assumption (i.e. GC drives the contemporaneous relationships)?

Comments: causality

- *The "temporal causality" the authors capture could be simply due to the different nature/frequency of the variables considered.*

- *Financial conditions is a forward looking variable (but for this reason is not "causing" accounting bank profits or GDP growth, but only anticipate that in the future GDP or accounting bank profits would increase).*

- *So the model is capturing some "regularity" (conditional correlations?) among these variables, but not causality,*
  - *Be careful in reading the predictions of the model.*

- *The economic intuition of who is influencing whom (casuality) is not clear*

Comments

- The pecking order of how the three variables interacts (from the Granger causality analysis) might be simply due to the frequency that characterize these variables, rather than causality.

- *Why aren't you using nowcasting GDP growth information?*
- *Any "space" for using analyst predictions for banks' profits?*

Comments

- The method is largely based on quantile regression where estimation errors are large due to the low number of observation present in the different quantiles.
- How robust are your results to estimation errors?

- How different would be the results if the interaction among the three variables is estimated using:
  - simple VAR?
  - structural VAR?
  - Bayesian VAR?

Comments

- *The analysis has been performed using a sample period where there was a lot of monetary and public interventions.*
  - *How is the reduced form model capturing them?*
  - *Are you assuming that Monetary Policies and Fiscal Policies would be the same to justify your results for stress test scenarios in the future?*

- *The dynamic that comes up from your model seems to suggest that, under CCyB, bank capital requirements should be changed quite often. However, bank capital is sticky (we realized it even more during the COVID-19 pandemic)*
  - *Having a CCyB rule that changes the capital requirements frequently might create ex-ante a lot of uncertainty for banks, and ex-post banks will not use this buffer capacity by increasing lending in economic downturn*
  - *Therefore, it is not a good approach the one you suggested.*

Very interesting paper!

Enjoy reading it!