Quantitative easing and quantitative tightening: the money channel

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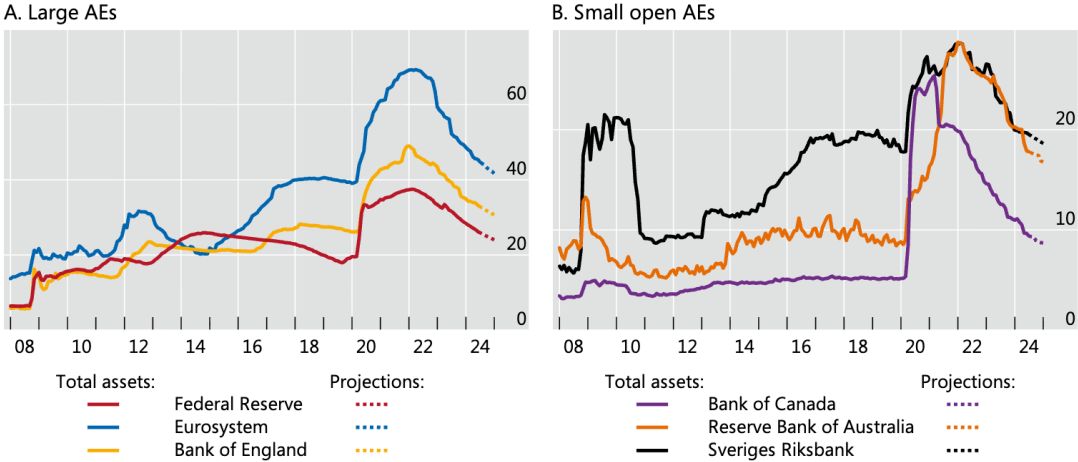
Projected central bank balance sheet trajectories in AEs

As a percentage of GDP



Source: BIS (2024).

Motivation

Balance sheet normalization and rethinking of operational frameworks raise new questions:

- How do central bank balance sheet policies transmit to the macroeconomy?
- What is the role of central bank liabilities?
- Should CBs use the quantity of reserves as an instrument?

This paper

NK-DSGE model in which banks:

- Originate deposits and are subject to withdrawal risk
- Are heterogeneous and trade with each other in an interbank market
- Hold central bank reserves to manage liquidity risk

Key takeaways:

- Quantity and distribution of reserves drive funding spreads and lending
- Policies that use quantity of reserves as an instrument can improve welfare

Core mechanism in a nutshell

Quantity and distribution of central bank reserves matter for the macroeconomy

QT/Reduction in reserves

↓

- Increases reserve scarcity, especially for *reserve-scarce* banks
- Caused by two main (reduced-form) frictions affecting banks' balance sheets:
  - Reserve scarcity cost (RSC): Raises banks' funding costs
  - Large exposure limit costs (LELC): Prevents costless redistribution of reserves

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Higher bank funding & lending rates

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Contraction in credit, money, and real activity

Main comment

The complexity of the model makes it difficult to assess the relative contribution of each channel

- The model contains a number of potentially competing frictions
- Internal identification problem: with several channels operating simultaneously, it is difficult to isolate the importance of the money channel

Key question: *How much of the action is driven by the new money channel versus the other frictions embedded in the model?*

An inventory of competing frictions

The model features at least three distinct channels affecting monetary policy transmission:

1. **The money channel**
   - **Source:** Reserve Scarcity Cost (RSC) & Large Exposure Limit Costs (LELC)
   - **Mechanism:** QT affects the cost of bank funding and interbank liquidity
2. **The portfolio cost channel**
   - **Source:** Portfolio costs on NBFI's government debt holdings
   - **Mechanism:** QT raises the privately held debt stock, pushing up real interest rates
3. **The net worth channel**
   - **Source:** Minimum Capital Adequacy Rules (MCAR) for banks and BGG-style financial accelerator for firms
   - **Mechanism:** Shocks amplified via effects on balance sheets and external finance premium

The identification problem illustrated

Consider the paper's core QT experiment, which finds a contractionary effect of reducing the quantity of central bank reserves: What drives this result?

- Is it the money channel?
  - Reserve scarcity raises bank funding costs, reducing loan supply
- Is it the portfolio cost channel?
  - A higher stock of public debt in private hands raises real rates and banks' funding costs
- Is it the net worth channel?
  - Tighter financial conditions weaken lenders' and borrowers' balance sheets, amplifying the downturn

The current draft does not allow us to disentangle these effects, making it difficult to assess the true quantitative bite of the paper's mechanism

My suggestion: isolating the mechanism

Quantitative decomposition: key policy experiments under three model specifications

1. **Benchmark:** The full model as is
2. **Counterfactual 1 (money channel only):**
   - Turn off the MCAR, the BGG financial accelerator and the portfolio costs on govt. debt
   - This would isolate the effect of the RSC and LELC frictions
3. **Counterfactual 2 (other channels only):**
   - Turn off RSC and LELC frictions
   - This would show the model's predictions using only conventional channels

$\rightarrow$ Relative importance of each friction is relevant for designing optimal policy rules!

Other comments

- **Lucas critique?** Key frictions are reduced-form relationships calibrated on recent data, which can be problematic if they are not policy-invariant
  - E.g., depositors' flightiness could depend on level of rates or soundness of banks, which themselves can be affected by CB balance sheet policies
- Paper analyzes welfare under alternative dynamic policy rules for the quantity of reserves
  - These results could be complemented with an analysis of steady-state welfare under different long-run CB balance sheet sizes
  - Interpretation: comparison across different operational frameworks

Conclusion

Important paper with a rich framework and timely contribution

- Focus on the liability side of the CB's balance sheet and the money channel is welcome
- My main suggestion is to simplify to clarify
- By quantitatively decomposing the various transmission channels, the authors could illustrate the importance of their mechanism and provide sharper policy conclusions