

Discussion: Liquidity Regulation, the Central Bank and the Money Market

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Contribution and policy questions

Rich framework in which a number of issues can be studied:

- ▶ Role of the central bank in case of market freezes.
- ▶ Use of the CB's interest rates or collateral framework.
- ▶ **Impact of liquidity regulation (LCR) on the money market** and demand for CB funding.
- ▶ Impact of the CB's policy and liquidity regulation on risk-taking.
- ▶ Outcome of the **non-cooperative behavior of the CB and the bank regulator**.

An ambitious framework

Ingredients:

- ▶ Interbank market with frictions, moral hazard and adverse selection.
- ▶ Central bank with a corridor system and a collateral framework.
- ▶ Asset/Liability mismatch and rationale for liquidity regulation.
- ▶ Liquidity coverage ratio as a regulatory constraint.
- ▶ Objectives of the CB and the regulator, non-cooperative interaction.

An ambitious framework

Difficult modeling choices. What to include or leave aside?

Can be streamlined / Needs more microfoundation

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Too ambitious?

Interbank market may be too complex. Simpler version:

- ▶ Borrowers need 1 to invest. Can borrow $\lambda < 1$ at R^S .
- ▶ Success probability p , private information.
- ▶ Payoff safe asset: $A - \lambda R^S - (1 - \lambda)R^U$.
- ▶ Payoff risky asset: $p(\theta - \lambda R^S - (1 - \lambda)R^U)$.
- ▶ Invest in the safe asset if and only if $p \leq p^T$:

$$p^T = \frac{A - \lambda R^S - (1 - \lambda)R^U}{\theta - \lambda R^S - (1 - \lambda)R^U} < \frac{A}{\theta} = p^*$$

- ▶ Lenders must be indifferent:

$$R^S = \mathbb{E}(p | p > p^T) R^U$$

- ▶ Already **quite complex** (Stiglitz and Weiss, 1981); see also Allen, Carletti and Gale (2009), Heider, Hoerova and Holthausen (2009).

The Central Bank

- ▶ Three unknown, two equations. CB sets R^S .
- ▶ How? Unclear that $R^S = R^{df}$.
- ▶ Possibility to borrow μ on top at R^{CB} .
- ▶ CB indirectly controls p^T and R^U : $\searrow R^{df} \Rightarrow \searrow R^S, \nearrow p^T, \searrow R^U$.
- ▶ Intervention in a market with asymmetric information cf. Philippon and Skreta (2012) and Tirole (2012).
- ▶ Trade-off: R^U close to target vs. credit risk. Note: less risk when lowering interest rates (not general).
- ▶ Begs one question: why is $\lambda + \mu \neq \lambda$?
What is the superiority of the CB here? cf. Acharya, Gromb and Yorulmazer (2012), Berentsen and Monnet (2008), Hoerova and Monnet (2014)...

Liquidity regulation

- ▶ LCR difficult to rationalize, in particular with only one maturity \neq Bech and Keister (2013).
- ▶ Here incentives to use secured funding already maximal, no impact of LCR.
- ▶ Simpler alternative: LCR introduces a wedge Δ between R^{CB} and both R^S and R^U .
- ▶ CB moves second, can compensate higher Δ with higher R^{CB} (changes the ZLB).
- ▶ Nash outcome? Depends on the objectives of the regulator.
- ▶ Natural objective: reduce the gap between p^T and p^* .
But is that liquidity regulation?
- ▶ Compare Nash and cooperative outcome, depending on objectives. See Kahn and Santos (2005).
- ▶ Deeper question on the architecture of financial regulation.

Conclusion

- ▶ Promising draft, many interesting elements.
- ▶ Framework needs **streamlining** in order to answer precise questions e.g. why is adverse selection needed?
- ▶ The existing literature could be used more, if only to avoid discussing too many problems.
- ▶ Most interesting contribution would be the **competition between the CB and the regulator**. Microfoundation challenging.