Money and Banking in a New Keynesian Model M. Piazzesi C. Rogers M. Schneider

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This paper

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- ► Caveat: still feature fundamental weakness of baseline NK model, i.e., excess reliance on intertemporal channel

Focus: model with banks

▶ Distinction: inside money (banks deposits) vs outside money (reserves)

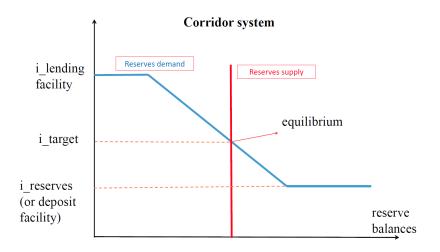
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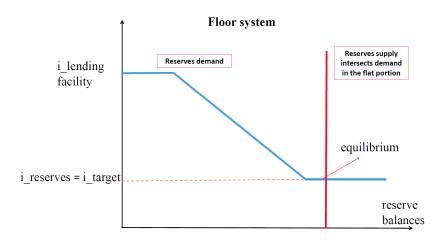
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Traditional corridor system





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Modelling the transmission mechanism: banks deposits

Banks deposit rates

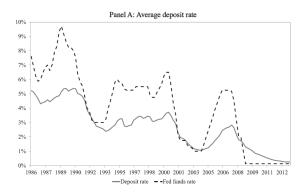
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- (Banks) Deposit channel of monetary policy
- ▶ Drachsel et al. (2016): 100 bp increase in FFR → Spread with deposit rate increases by 54bp



Model with banks and floor system

In the model deposit spread and policy spread are proportional

$$\underbrace{i_t^S - i_t^D}_{\text{deposit}} = \mu \cdot \underbrace{\left(i_t^S - i_t^M\right)}_{\substack{\text{policy} \\ \text{spread}}}$$

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Weakened transmission mechanism: a necessary feature of money and banking in the NK model?

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► Low pass-through on banks deposit rates: can be rationalized with "customer base motive" → profit smoothing (deep habits on deposits, eg, Polo 2019)

$$\uparrow$$
 i_{policy} : if $\uparrow i_D \rightarrow \downarrow$ current profits

- $\uparrow~i_{policy}:~if~\downarrow i_D \rightarrow~\downarrow$ current and future customer base
- ▶ In equilibrium: low pass-through on i_D + **outflow** of **deposits**

► Banks substitute deposit with bonds (at higher cost)

$$\rightarrow$$
 $\uparrow i_{bonds}$

▶ $\uparrow i_{bonds} \rightarrow \uparrow i_{mortgage} \rightarrow \downarrow$ borrowers spending (high MPC)

→ Amplification

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- 3. Want to match low pass through to banks deposit rate (X)
- Want NK model 2.0 to rely less on intertemporal substitution. → (2) does not necessarily imply a weakened transmission mechanism

Conclusions

- Great paper!
- ▶ Lots of food for thought
- Needed a stylized modeling of banks in baseline NK model
- ► Still some way to go in modeling the **monetary transmission** mechanism in full