

Discussion of Financial Intermediation, Exchange Rates, and Unconventional Policy in an Open Economy

Emine Boz

International Monetary Fund

November 2013

The views expressed here should not be interpreted as reflecting the views of the International Monetary Fund.

What does the paper do?

- 2-period, 2-good, deterministic model
- Households: consume profits from firms and banks
- Firms:
 - Produce using capital
 - Fund capital purchases through endowment and loans

$$\frac{QK}{S} = L + T_f + \frac{N_f}{S}$$

- Cannot borrow from anyone other than banks
- At the background, there is production of capital: $K = \kappa I_H^\gamma I_F^{1-\gamma}$

What does the paper do?

- Banks:
 - Only agents that can borrow at international capital markets:

$$L = D + T_b + \frac{N_b}{S}$$

- They face a collateral constraint (CC)

$$\pi^b = RL - R^*D \geq \theta RL$$

- A standard CC: Debt $\leq \kappa$ (value of assets)
- Rewrite the CC in this model so that it looks more standard:

$$\frac{D}{R^*} \leq (1 - \theta) \frac{L}{R}$$

- The author's assumed CC is the same as the standard CC.

What does the paper do?

- Bottomline: When the CC binds, the banks cannot borrow the efficient amount from abroad, cannot lend to the firms the efficient level at the efficient price, and RER is undervalued
- Policy: Anything that relaxes the CC helps
 - Redistribute: Take from firms and give to banks
 - Government credit programs
 - Exchange market intervention

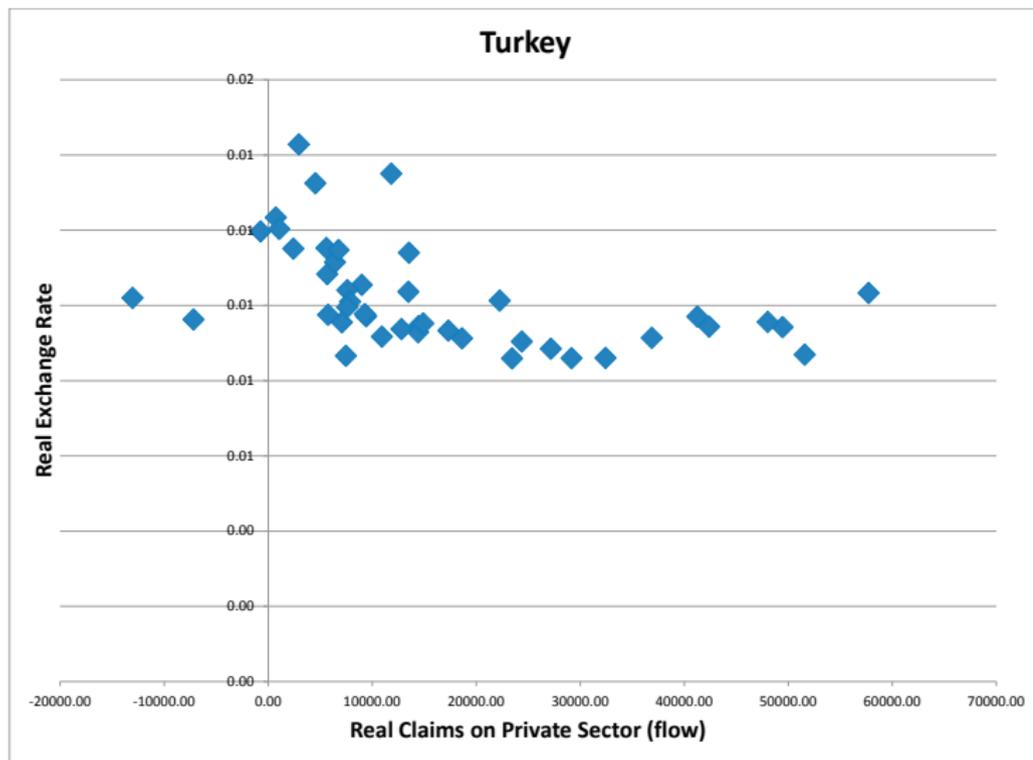
Remarks: What's new?

- Emphasis on *leverage* vs *net worth* effect of RER on loan supply
- Combine banks' BC and a binding CC:

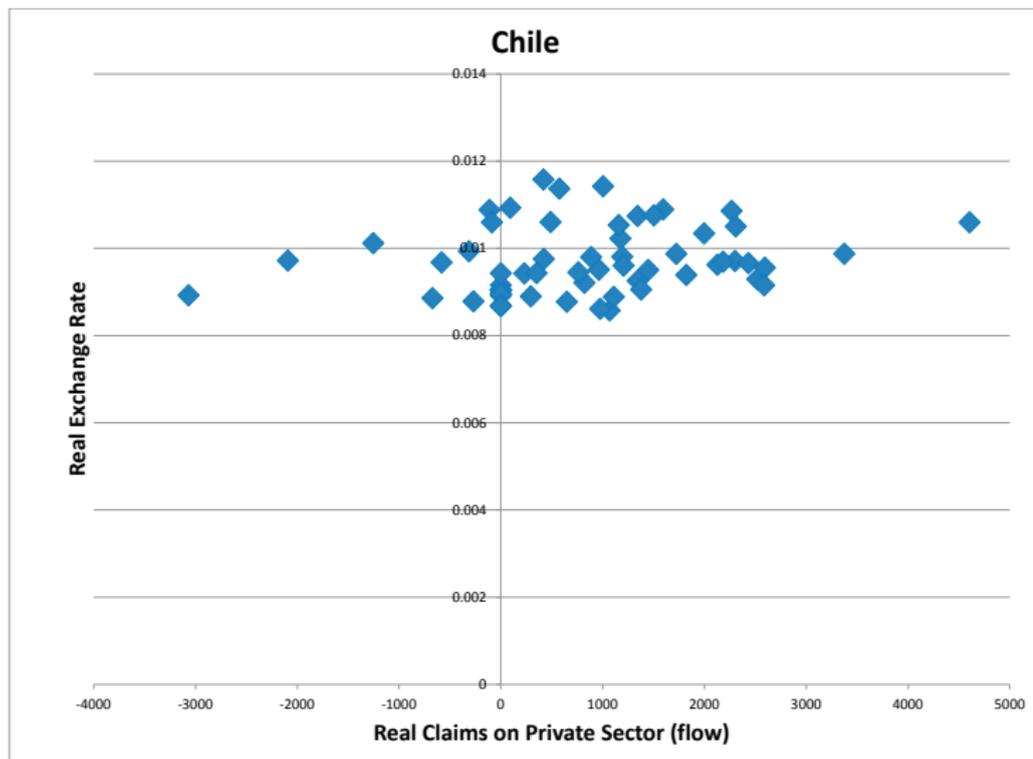
$$L = \underbrace{\frac{R}{\theta}}_{\text{leverage}} \underbrace{\left[T_b + \frac{N_b}{S} \right]}_{\text{NW}}$$

- In any setting where R is an endogenous eqm object that clears the domestic loan market, the leverage effect will be present
- Similarly, any model that assumes some non-tradable endowment for the bank will have the net worth effect

Remarks: Loans and RER in the Data



Remarks: Loans and RER in the Data



Remarks: Deterministic Model

- Need to capture cases where there is uncertainty about whether the CC is going to bind in the future or not
 - Here it either *always* or *never* binds
 - The economy is either permanently at the efficient investment/production level with the “right” RER or there is underinvestment and the RER is undervalued
 - Cannot talk about *ex-ante* vs *ex-post* policies

- Which friction do you believe in?
 - Everything but banks' borrowing from abroad works perfectly
 - Any capital injection of the government to the banks is guaranteed to boost lending to firms that is also guaranteed to be invested in productive capital
 - But what if...
 - ... banks do not to lend?
 - ... firms do not invest?
 - ... the same reason that makes the CC bind for the banks also tightens a similar constraint for the government?