

# Capital controls, macroprudential measures and monetary policy interactions in an emerging economy.

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# Motivation of the Paper

- After a number of emerging economies' financial crises, views on **capital control** have been significantly changed.
  - **Capital control** can be **beneficial** as it can prevent financial crises.
- **IMF (2012)** recommended some form of capital control to emerging economies for financial stability.

# Motivation of the Paper

- Jeanne and Korinek (2010) and Bianchi (2011) find that due to **pecuniary externalities**, capital control or macro-prudential policy can be **welfare improving** by reducing the likelihood of “**Sudden Stops**” crises.
- Rey (2015) argues that to implement **independent** monetary policy, emerging economies also need to implement some form of **capital control**.
  - Capital flows to emerging economies are **mainly driven** by U.S. monetary policy.

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# Main Question and Findings

- This paper focuses on how **macro-prudential or capital control policy** complements **monetary policy of emerging economies** in the face of foreign interest rate shock around the **steady state**.
  - Which policy (macro-prudential or capital control policy) is better when used in conjunction with monetary policy ?
- **Key Finding: capital control is a better policy instrument** than macro-prudential policy in the face of the **foreign interest rate shock**.

- $i_t^{US} \uparrow \rightarrow$  Emerging Economies' Exchange Rate  $\downarrow$  :
- Currency Depreciation has two effects:
  - $\pi_t^{Em} \uparrow$  (assuming that perfect exchange rate pass-through)
  - For the banks with foreign-currency external debt:
    - the real burden of debt  $\uparrow \rightarrow$  net-worth of banks  $\downarrow \rightarrow$  aggregate credit supply  $\downarrow$  so negatively affect  $y^{EM}$

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# Monetary Policy With Capital Control

- Capital control in the form of tax on foreign debt can **counteract the effect** of a decrease in the burden of foreign currency debt.
  - **less tax on foreign borrowing** in the face of the foreign interest rate hike.
  - Bank's net-worth does **not** decrease as much with currency depreciation.
- Then, Monetary authority can implement **more aggressive** monetary policy than **in the absence of** capital control.
  - It can **specifically target** and **counteract** the effect of the change in the burden of foreign currency borrowing.
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- A New-Keynesian small open economy model with two financial frictions:
- Banking Sector: Gertler and Karadi (2011).
  - Currency depreciation leads to a decrease in overall credit supply through a higher burden of foreign currency debt.
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- Capital Control: tax on foreign borrowing.
- Macro-prudential policy: limits the leverage ratio of bank.
- Monetary policy: Standard Taylor rule

# Mechanism of the Model

- Foreign interest rate shocks ( $i_t^{US} \uparrow$ )  $\rightarrow$  ER depreciation.
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# Mechanism of the Model

- Counter-cyclical tax on foreign currency borrowing (capital control) can counteract the effect of currency depreciation.
  - Since capital control specifically **targets the foreign borrowing**, this well complements the monetary policy. (**Key Finding of the Paper**).
  - Macro-prudential policy is less useful as it only reduces overall borrowing of the economy regardless of residency of lenders.

- Very timely and interesting paper.

1) Exchange rate movements are a key driver of fluctuations of the model.

- But....
- **perfect** exchange rate pass-through.
- **All the external debt** is assumed to be foreign currency denominated.
  - Du et al (2016) show that a growing number of emerging economies issue local-currency debt (especially Brasil)
- These two assumptions might **overestimate** the effect of the foreign interest rate shock as well as the **benefits of capital control**.
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- 2) Exchange rate movements and associated change in the real value of foreign-currency debt are the key.
- But....
  - Not very clear about how exchange rates are determined (UIP does not hold in this model.)
  - Not very clear about how foreign currency debt  $d_t^*$  is determined.
  - Minor points: this economy is not allowed to save in international financial markets. ( $d_t^* > 0$ ).

### 3) Bank's Key Financial Friction:

①  $\theta(b) = \theta_0(1 + \frac{\theta_1}{2}(\frac{rer_t d_t^*(b)}{I_t^e(b)})^2)$ : as the **fraction of foreign debt increases, the less amount of credit** the bank can supply.

- ① Why?: Any micro-foundation ?
- ② Is it True ? : any empirical support ?

- ① [4)] What are the **distortions** caused by macro-prudential and capital controls?
- Jeanne and Korinek (2010), Bianchi (2011) show that macro-prudential and capital controls are welfare-improving as those **policy prevents the likelihood of financial crises**.
    - During **normal** times, those policies are **not** welfare-enhancing.
  - In this paper, the model is simulated around the **steady state**, which is far away from the crises states. In this case, distortions caused by two financial regulations can be **as big as their benefits**.
    - Probably that is why **no macro-prudential policy is optimal** in the face of **foreign interest rate shock** in the paper.
  - Be more clear about the tradeoff of each policy (macro-prudential and capital control policy).
  - Finally, what are the optimal policy if the model economy faces **all the different types of shocks altogether**?

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