Capital Controls and Monetary Policy Autonomy in a Small Open Economy
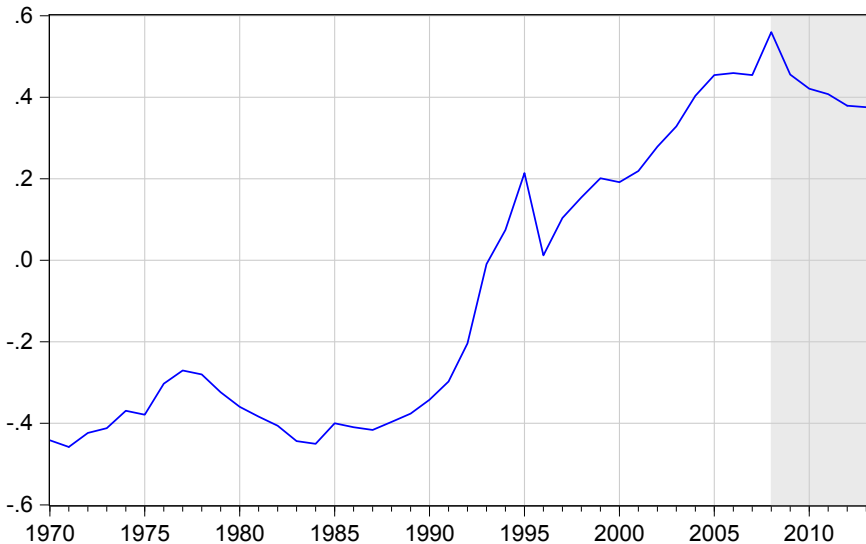by Scott Davis and Ignacio Presno

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Globalization in the Aftermath of the Crisis
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Capital controls in the aftermath of the crisis

Chinn-Ito Index (Avg. across 182 countries)

Capital controls in the aftermath of the crisis

- Before Great Recession the consensus was toward open capital markets, and policy followed
- After the crisis policy has retrenched, and economic consensus has followed
- Paper belongs to recent growing literature making a case for capital controls

Outline

- Brief review of the general case for capital controls
- The specific case of this paper, through the lens of a reduced form model
- Some additional remarks

A brief primer on capital controls

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- Capital controls restrict (or tax) inter-temporal, inter-national trade
- In partial equilibrium: unequivocally undesirable unless there are direct externalities on foreign asset holdings (Panama)
- In general equilibrium, not so clear. Change in prices induced by restriction might increase welfare of country which imposes them, in two ways
  - Price (interest rates, terms of trade) changes transfer resources from trading partners (Akin to optimal tariff argument, see, for example, Costinot, Lorenzoni and Werning, 2013, Heathcote and Perri, 2016)
  - Price dynamics ameliorate on an existing friction

This paper

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- Mundellian argument: when monetary policy is independent (flex exchange rate) capital controls not needed to achieve first best

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- What if additional friction (borrowing constraint) is present, and monetary policy cannot correct both frictions?
- Capital controls is a way to engineer price changes (price of capital), to reduce the impact of the second friction (borrowing constraint)
- The case for capital controls can also be made under flex exchange rate
- Capital controls reduces the friction and help monetary policy autonomy, i.e. they let monetary policy take care of its main objective

A reduced form model

In period 0, Households have endowment y that can allocate to domestic or foreign investment, b and b^*, with real returns r and r^*.

$$1 = y = b + b^*$$

In period 1 households enjoys utility from returns in both bonds

$$U(b, b^*) = \frac{[(1+r)b]^\alpha}{\alpha} + \frac{[(1+r^*-\tau)b^* + T^*]^\alpha}{\alpha} - \phi r^2 + B\chi$$

$$0 < \alpha < 1$$

plus transfers

$$T^* = \tau b^*$$

Policies

$$U(b, b^*) = \frac{[(1+r)b]^\alpha}{\alpha} + \frac{[(1+r^*-\tau)b^* + T^*]^\alpha}{\alpha} - \phi r^2 + B\chi$$
$$0 < \alpha < 1$$

- Real return r, but at a utility cost ϕr^2, reduced form for monetary policy via nominal interest rule, partially adjusting inflation and inflation costs

- Capital controls, τ, distorts the choice between domestic and foreign bonds

- Investment in domestic bond yields an extra (external) return $B\chi$ (reduced form for investment in domestic bonds relaxing borrowing constraint)
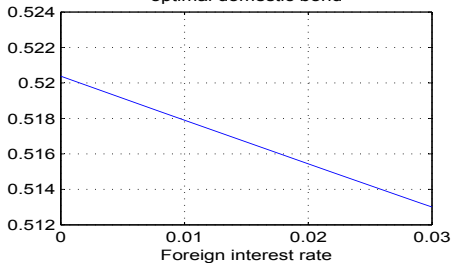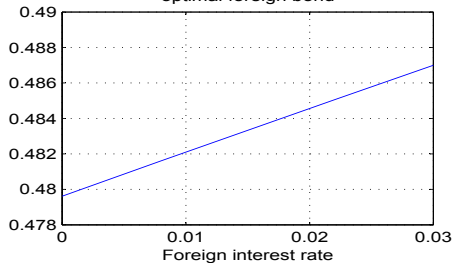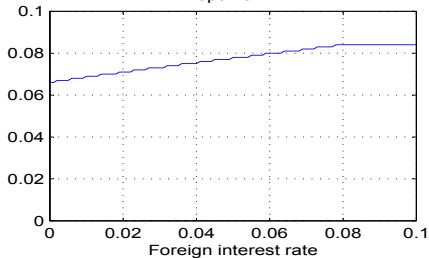
Case 1. No externality from domestic bonds
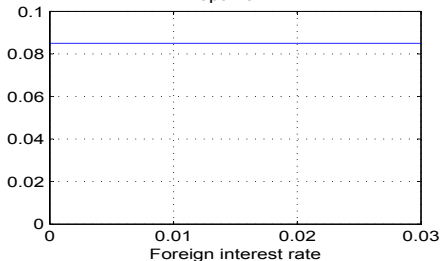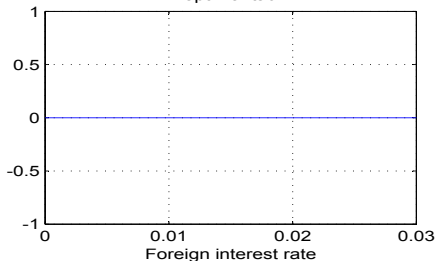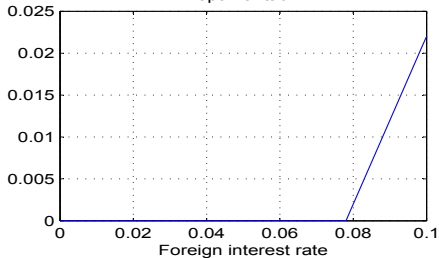
Case 1. No externality from domestic bonds

- As foreign interest rate rises, private agents hold more foreign bonds
- Without externality that does not affect welfare
- Monetary policy not affected by foreign rates
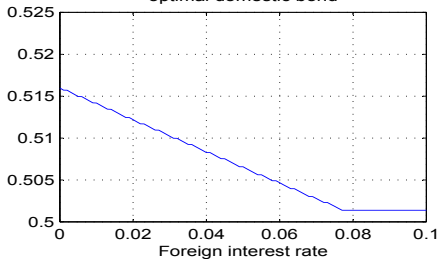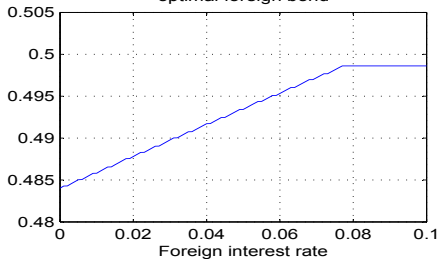
Case 2. Externality

Case 1. Externality

- As foreign interest rate rises, private agents hold more foreign bonds
- This reduces welfare and initially monetary authority respond to increase in foreign rate by raising domestic rate (lost of monetary independence)
- As foreign rates increase further the inflation distortion becomes too big, and monetary authority finds it optimal to use capital controls

Summarizing

- Even when monetary authority can set interest rate freely, inflows or outflows of capital might create economic conditions that are not easily dealt with monetary response, and require capital controls

Remark 1. Linearity

- Paper solves for optimal policy assuming collateral constraint of entrepreneurs is binding, and linearizing around that point
- OK to assess impact of foreign rate shocks, not so clear for policy
- Well known that linear models can yield misleading welfare results. Easy to solve, use higher order approx

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- Paper solves for optimal policy assuming collateral constraint of entrepreneurs is binding, and linearizing around that point
- OK to assess impact of foreign rate shocks, not so clear for policy
- Well known that linear models can yield misleading welfare results. Easy to solve, use higher order approx
- Policy finds optimal capital controls are symmetric, i.e. capital controls increase both in response to capital inflows and outflows
- Not sure whether this result is consistent with the economics of the model
- When capital leaves (foreign rate increases) constraint more binding, want to impose capital controls
- When capital flows in (foreign rate falls), constraint less binding, not clear want controls
- Solution? Solve the model using occasional bing constraints (OCCBIN, Jacoviello, 2015)

Remark 2. Second best

- Are capital controls the best way of dealing with this issue?
- Since the key friction is that borrowing for investment restricted, can the friction be addressed more directly (for example by subsidizing investment)
- A bit unfair, as many papers on capital controls have this feature.
- A notable exception is Martin and Taddei (JIE 2012) which consider private information friction and show this friction manifests itself exactly in international misallocation, hence capital controls most direct tool to address friction

Remark 3. Small v/s Large economy

- The paper focuses on small open economy which has no impact on trading partner
- Would the case for capital controls stand in the case of two large trading partners (say U.S. and Europe)?
- In this case capital controls affect affect global interest rates. Unilateral incentives to impose CC increase, and but now (for the same reason) CC have a (negative) impact on trading partner
- Capital controls might be unilaterally but not globally desirable

Conclusions

- Interesting and novel paper on a topical issue
- It provides a simple formal modelling of a case for capital controls, that captures a concern that is often mentioned when capital controls are invoked/imposed in the real world