

# **A Global Framework for Volatile Flows?\***

Manuel Ramos-Francia  
Vice-Governor, Member of the Board  
Banco de México

**70 Years After Bretton Woods:  
Managing the Interconnectedness of the World Economy  
Cusco, Peru  
July 21-22, 2014**

\* The opinions expressed in this presentation are exclusively the responsibility of the discussant and do not necessarily reflect the point of view of the Banco de México.

# Introduction

- There is an ongoing lively **debate** on capital flows, given the *unconventional monetary policies* set in place in many AEs.
- The IMF has published two working papers: Ostry et al. (2010)<sup>1/</sup> and IMF (2012)<sup>2/</sup>. In a nutshell, they see **capital controls** strictly as a **complementary** policy tool.
- Broadly speaking, they recommend that if authorities detect **macroeconomic risks** accumulating, they should respond as follows:
  - ✓ *Allow for the ER to appreciate.*
  - ✓ *Accumulate reserves.*
  - ✓ *Intervene in the ER market.*
  - ✓ *Relax monetary and tighten fiscal policies.*
- If all these are exhausted, only then use **capital controls**.

1/ Ostry et al. (2010). "Capital inflows: The role of controls." Staff Position Notes. IMF.

2/ IMF (2012). "The Liberalization and Management of Capital Flows - An Institutional View." IMF Policy Paper.

# Main Externalities

- Two main externalities are mostly mentioned. **First**, the unprecedented **unconventional monetary policies (UMPs)** in advanced economies. One of the channels through which UMPs work is an ER channel. *Currency wars? Competitive devaluation? Competitive easing?*
- **Second**, some EMEs that are recipients of capital flows have implemented **capital controls**. Such controls can **deflect capital flows** towards other economies, specially to those with no controls in place. Additionally, they can lead to policy uncertainty.
- As a first corollary, while individually **capital controls** might be sensible, **multilaterally**, they might be **detrimental**.

# Enforceability Issues

- History shows that **capital controls** can be circumvented; i.e., they have large **enforceability problems**.
  - ✓ *Authorities do not have the tools to properly enforce **capital controls** on the **shadow banking system**.*
  - ✓ *Global firms can (under or over) **invoice** their financial transactions **abroad**.*
  - ✓ *Financial institutions are able to **triangulate operations**. In the case of subsidiaries, they can register operations in their home banks' books.*

Indeed, most economic agents might have as an objective to **sidestep capital controls**.

- Thus, there is a large **risk of over-stating** their **efficacy**.

# Recent K Controls Literature

- In Farhi and Werning (2013)<sup>1/</sup>, assuming a sudden stop, **capital controls** are subsidies on inflows and taxes on outflows, **ameliorating** the ER's depreciation, interest rate increase, CA reversal, and consumption drop. Thus, **capital controls** smooth the stabilization.
- In Bengui and Bianchi (2014)<sup>2/</sup> households can be subject to a **credit constraint**. Thus, their access to credit depends on the value of their current income. If sufficient debt accrues and a sudden stop hits, the contraction of capital flows and the depreciation of the real ER feed each other through the credit constraint. The **pecuniary externality** can be corrected with **capital controls**.
- Yet, in their model they cannot be enforced on a fraction of agents. As the regulation is tightened, the unregulated agents take on more debt (i.e., leakages). The planner can't control the unregulated agents, but does account for the leakages, i.e., for the second externality. **Capital controls** are welfare-improving, but their cost falls on the regulated fraction and the benefits on both.

1/ Werning, I. and E. Farhi (2013). "Dilemma not Trilemma? Capital Controls and Exchange Rates with Volatile Capital Flows."

2/ Bengui and Bianchi (2014). "Capital Flow Management when Capital Controls Leak." Draft Version

# Recent **K Controls** Literature: An Example

- Korinek and Sandri (2013)<sup>1/</sup> also use **pecuniary externalities** to motivate the use of **capital controls**, a paper we'll explore briefly. It studies how such externalities lead to financial amplification in a SOE. **Capital controls** and macro-prudential policy are **Pigouvian taxes** in their model.
- Their **central finding** is that both **capital controls** and macroprudential policies are necessary in EMEs that are at risk of contractionary ER depreciations.
- In their model, borrowers are financially constrained and do not **internalize** the effect their decisions have on the relative price of the non-tradable good (i.e., the real exchange rate).
- In contrast, savers are not financially constrained. Foreigners borrow/save and buy/sell the tradable good with domestic agents.

<sup>1/</sup> Korinek, A. and D. Sandri (2014). "Capital Controls or Macroprudential Regulation?" Draft Version

# Recent **K Controls** Literature: An Example

- Considering the **paper's main results**:
  - i. *When the financial constraint binds, the real exchange rate is more sensitive to changes in the borrowers' endowment. Borrowers' constraints and the pecuniary externality lead to a **financial amplification mechanism**.*
  - ii. *A policy maker is able to implement the constrained planning problem's **optimal allocation** through taxes on borrowers, subsidies on savers, and lump-sum transfers to both. As borrowers sell less debt and savers buy more bonds, the excess savings are allocated abroad. Such policy makes a distinction between domestic and foreign agents' financial transactions, providing what the authors call **capital controls**.*
  - iii. *They extend the **second result under uncertainty**, with complete and incomplete markets. In the bad states the financial constraint binds. Similarly, a policy maker is able to implement the constrained planning problem's **optimal allocation**.*

# Main Issues

- The papers just referred to have academic merit, yet we believe they do not adequately deal with the problems policy makers currently face.
- Going forward in terms of policy, the first element to consider is how and when will the lift-off of short-term rates in the US take place. Having said that, we believe that some of the main problems for policy making in terms of capital flows are:
  - *First*, aggressive search for yield.
  - *Second*, there is the **size of the GAMCs**.
    - ✓ *Their size is significant, managing close to 1.5 trillion dollars in EME's, which is a large quantity compared to the size of some EME's financial markets' size.*

In short, we are reminded of an “**elephant in a pond**” type of situation.

- *Third*, GAMCs follow similar investment strategies in EME's:
  - ✓ *Much co-movement.*
  - ✓ *Use of similar risk management tools.*

# Main Issues

- **Fourth**, crowded trades.
- So what are the “elemental” issues?
  - *Taking on too much risk?*
  - *Bounded rationality?*
  - *Speculative rational bubbles?*
- **In sum**, given the way GAMCs operate you see a lot of concentration, co-movement and crowded trades, which can certainly lead to contagion and thus to a systemic risk problem for the EMEs’ asset class.
- In other words, they are prone to herd behavior and/or bounded rationality, which can lead to speculative rational bubbles and so on ...

# Empirical Evidence

- Regarding the empirical support of **capital controls** and FX interventions allow me to cite two papers:
  - ✓ *On capital controls: Rangel et al. (2012).*<sup>1/</sup>
  - ✓ *On FX interventions: García-Verdú and Ramos-Francia (2014).*<sup>2/</sup>
- Both implement event-studies to analyze how **capital controls** and **banking regulations**, and **interventions**, *respectively*, affect the risk-neutral densities of their expected exchange rates obtained from derivatives market data.
- Both papers suggest that the effects of all of these are quite limited. In the latter, we find little evidence of an effect on the exchange rates' risk-neutral densities.
- However, we find evidence that interventions which objective is to restore and/or assure the proper functioning of exchange rate markets have a **higher probability of success**.

1/ Rangel, G., et al. (2012). "Capital Controls and Exchange Rate Expectations in Emerging Markets." Banco de México, Working Paper 2012-08.

2/ García-Verdú, S. and M. Ramos-Francia (2014). "Interventions and Expected Exchange Rates in Emerging Market Economies." Banco de México, Working Paper 2014-11.

# Final Remarks

- In most policy circles, it was a foregone conclusion that **capital controls** should be avoided.
- However, in the last few years there has been an unprecedented degree of monetary policy accommodation in AEs.
- The search for yield, given the low levels of interest rates in AEs, has led to huge problems in policy making in some EMEs, where some have used **capital controls**. Of course, the EMEs' responses and fundamentals have made this situation either better or worse.
- Recently, there has been the development of a literature that uses general equilibrium models in which mainly **pecuniary externalities** are used to justify the existence of **capital controls**. We believe this literature does not deal with the main issues at hand.
- Two final thoughts:
  - ✓ *Nothing can substitute for **good macroeconomic fundamentals** and **deep markets**. There are no silver or magic bullets.*
  - ✓ *The world should advance more quickly on **cooperative/coordinated solutions**.*

**Annex of:  
A Global Framework for Volatile Flows?\***

Manuel Ramos-Francia  
Vice-Governor, Member of the Board  
Banco de México

**70 Years After Bretton Woods:  
Managing the Interconnectedness of the World Economy  
Cusco, Peru  
July 21-22, 2014**

\* The opinions expressed in this presentation are exclusively the responsibility of the discussant and do not necessarily reflect the point of view of the Banco de México.

# Recent **K Controls** Literature: An Example

Considering **Korinek and Sandri's main results**: (cont.)

- iv. They change their setup in two ways: non-tradable good is dropped and **capital** is introduced. Borrowers' linear technology is superior to savers' diminishing marginal returns technology. If borrowers are financially constrained, they reduce their capital accordingly. Capital is reallocated from borrowers to savers, sending the price down (i.e., fire sales). Since asset prices are determined solely by the borrowers' constraint, **macroprudential policies** are sufficient to get **the optimal allocation**.*

It shares some elements with Kiyotaki and Moore's *Credit cycles* model, as it contains an amplification mechanism through financial constraints and all borrowing is collateralized.<sup>1/</sup>

1/ Kiyotaki, N. and J. Moore (1997). "Credit Cycles." *Journal of Political Economy* 105 (2): pp. 211–248