

MANAGING CAPITAL INFLOWS: WHAT TOOLS TO USE?

Jonathan D. Ostry*
Research Department, IMF

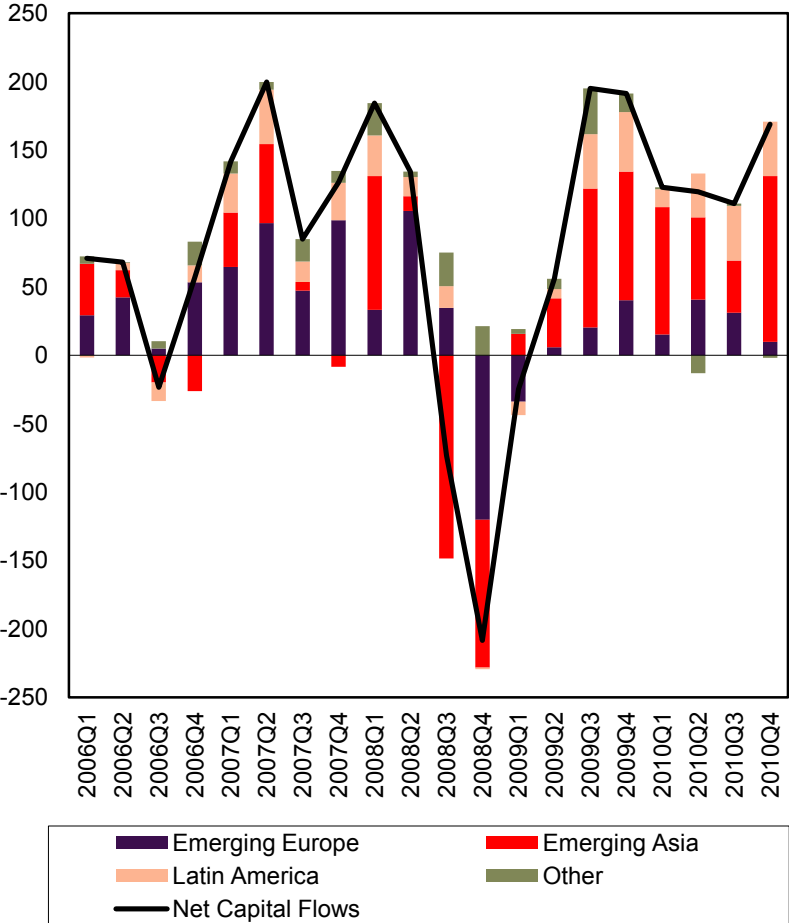
Managing Capital Flows to Emerging Markets
Rio De Janeiro

May 26-27, 2011

* The views expressed in this presentation are those of the presenter and do not necessarily represent those of the IMF or IMF policy. This presentation draws on joint work with Atish Ghosh, Karl Habermeier, Luc Laeven, Marcos Chamon, Mahvash Qureshi, and Annamaria Kokenyne.

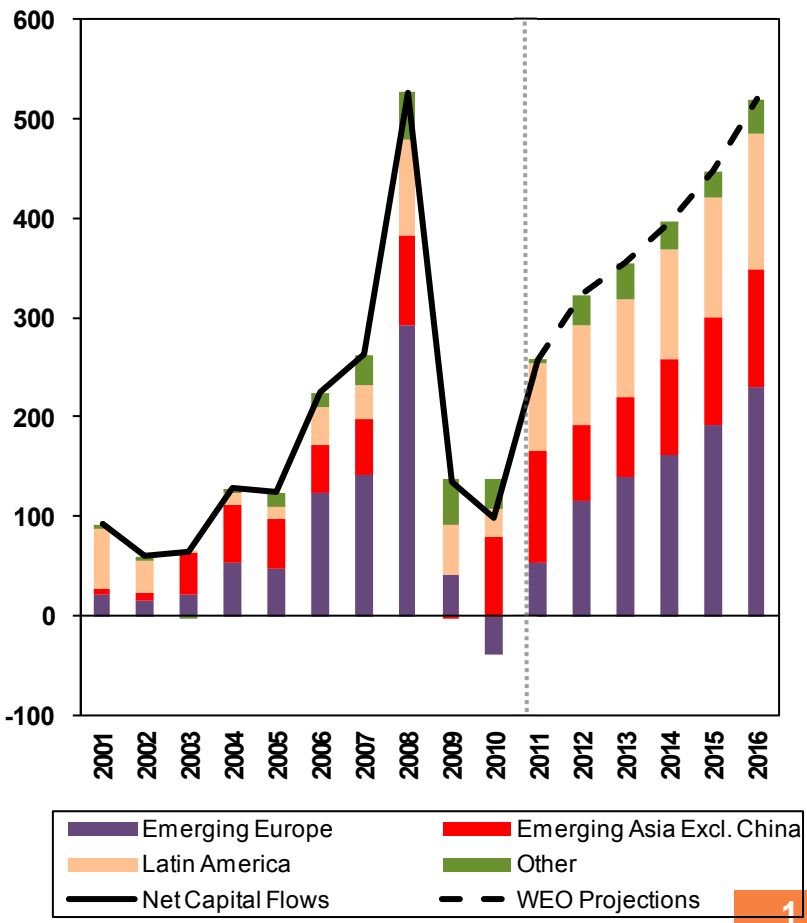
Capital Inflows: Recovery or Historic Surge?

Net Quarterly Capital Flows into EMEs, 2006Q1-10Q4 (billions of US dollars)










Source: International Financial Statistics.

Net Annual Capital Flows into EMEs, 2001-2016 (billions of US dollars)

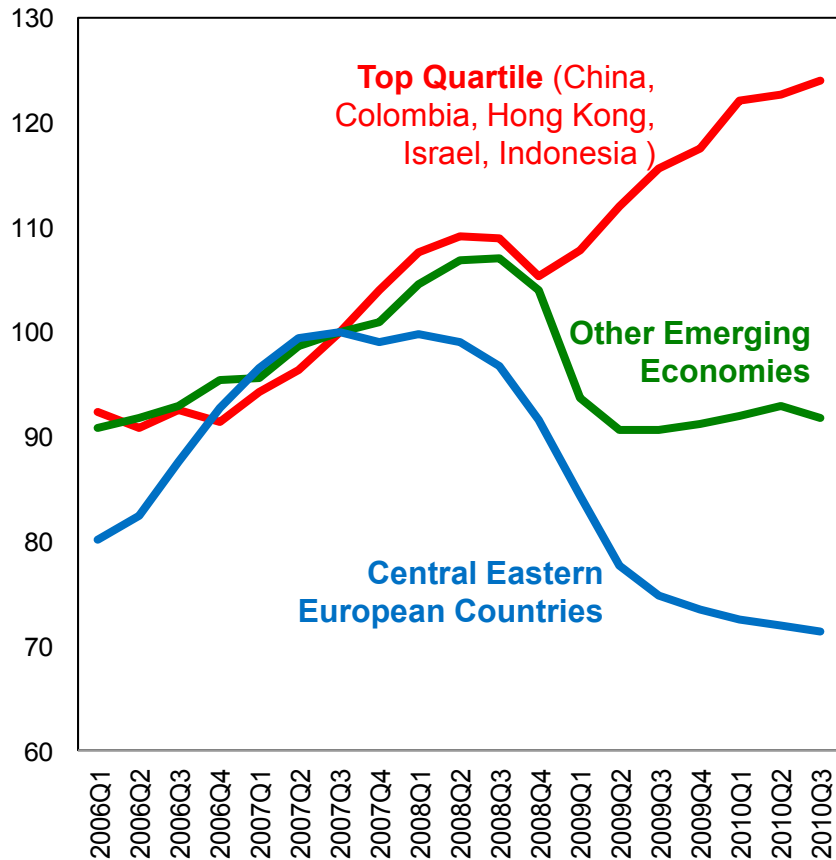


Inflation and Credit Growth: Selected Cases

	Magnitude of Net Inflows Percent of GDP (2009Q3-2010Q2)	Composition of Net Inflows Red = Portfolio flows, Orange = Other flows, Green = FDI	Inflation Percent y/y, (2010M6-2010M12)	Real Credit Growth Percent y/y, (2010M6-2010M12)
Brazil	6.2		5.0	12.9
Indonesia	2.6		6.2	9.2
Korea	1.9		3.3	0.4
Peru	5.9		2.1	9.3
South Africa	6.6		3.6	-0.1
Thailand	5.0		3.1	4.3
Turkey	6.9		7.9	21.4

Are New Bubbles Emerging in EMs?

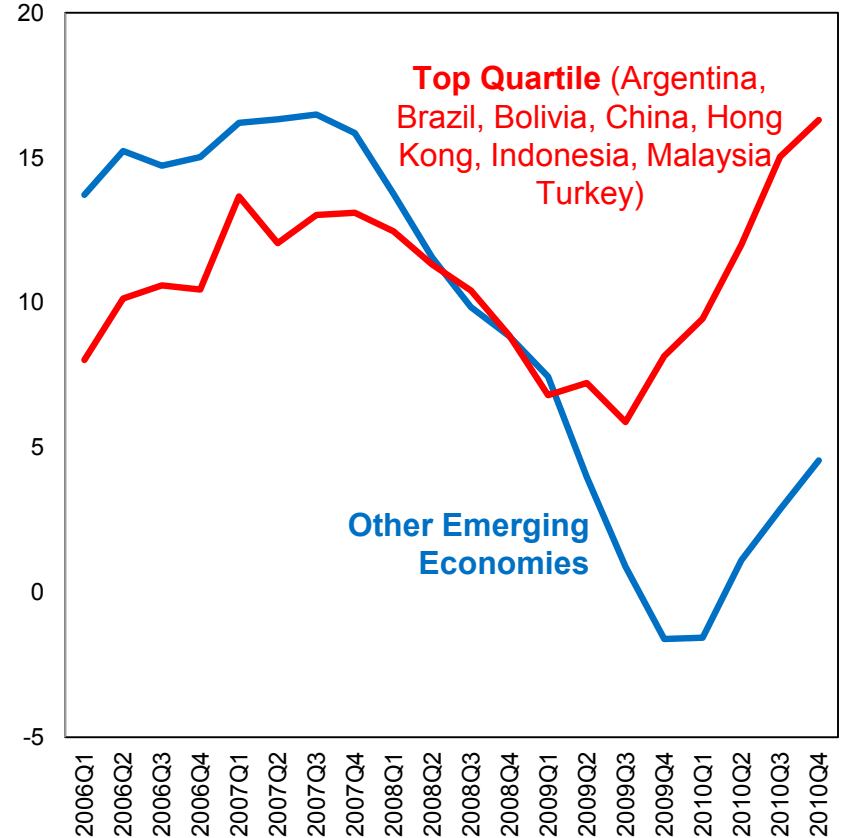
Real House Prices



Note: Non-weighted averages of the real house price index. 2007Q3 is set to equal 100.

Source: OECD, Global Property Data, Haver Analytics and national sources.

Real Credit to the Private Sector



Note: Non-weighted averages of the annual growth of real private credit. (in percent). The group of "other emerging economies" lies below the 75th percentile of the distribution of the 2010Q1-2010Q4 average of the annual growth of real domestic credit to the private sector.

Source: IMF, International Financial Statistics.

Policy Responses to Capital Inflows

	Currency Appreciation	Reserve Increase	Policy Rate	Fiscal Tightening (Structural Balance)	Prudential Policies/ Capital Controls
Brazil	38.4	6.0	Raised	No	Yes
Indonesia	19.4	7.4	Unchanged	Yes	Yes
Korea	17.5	10.7	Raised	Yes	Yes
Peru	5.6	9.0	Raised	No	Yes
South Africa	41.4	2.6	Lowered	Yes	No*
Thailand	9.3	22.3	Raised	No	Yes
Turkey	6.5	1.7	Lowered	No	Yes

Notes: Currency appreciation is the percent change in the NEER since the trough of the crisis; Reserve increase is the increase in percent of GDP since the trough of the crisis; Monetary policy is the change in policy rates over 2009Q3-2010Q2; Fiscal policy is the change in cyclically adjusted fiscal stance between 2009-10.

* South Africa has liberalized capital controls on outflows in response to the surge in capital inflows.

Capital Controls, Macroeconomic and Prudential Risks

When are Capital Controls Appropriate?

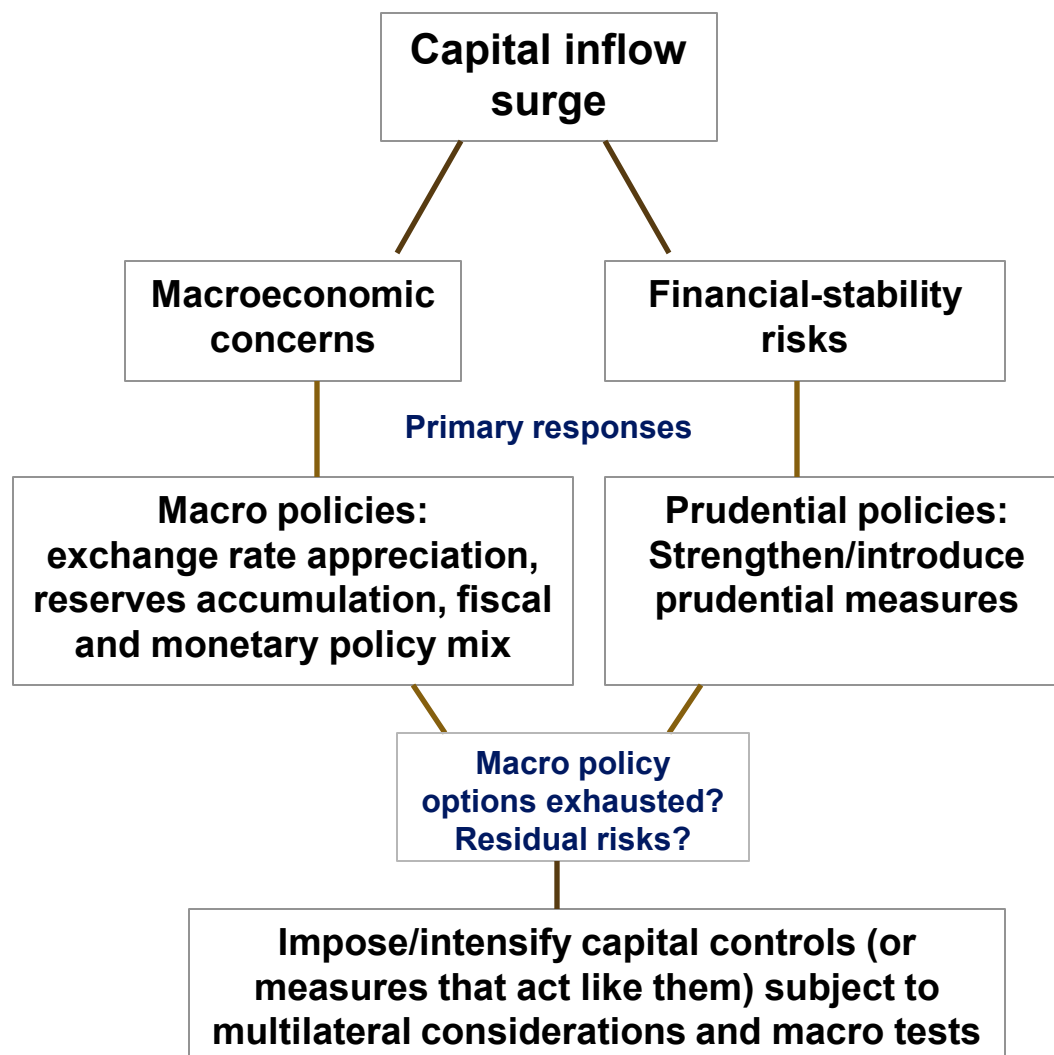
- IMF staff (Ostry et al., Feb. 2010) argued that capital controls appropriate for inclusion in the policy toolkit to address:
 - ▣ Macroeconomic risks, when
 - Currency overvalued
 - Further reserve accumulation undesirable
 - Inflation/overheating concerns
 - Limited scope for fiscal tightening
 - ▣ Financial-stability risks, when
 - Prudential framework still leaves high risk of financial fragility

Key Questions to be Addressed

Ostry et al. (2011) examine:

- How macroeconomic and prudential rationales for capital controls fit together?
- What are the main elements of the policy toolkit (once macro-policy space is exhausted)?
- What combination of prudential measures and controls should be deployed to address inflow-induced risks?
- How should capital controls be designed?

How do Macro and Prudential Concerns Fit Together?



How do Macro and Prudential Concerns Fit Together?

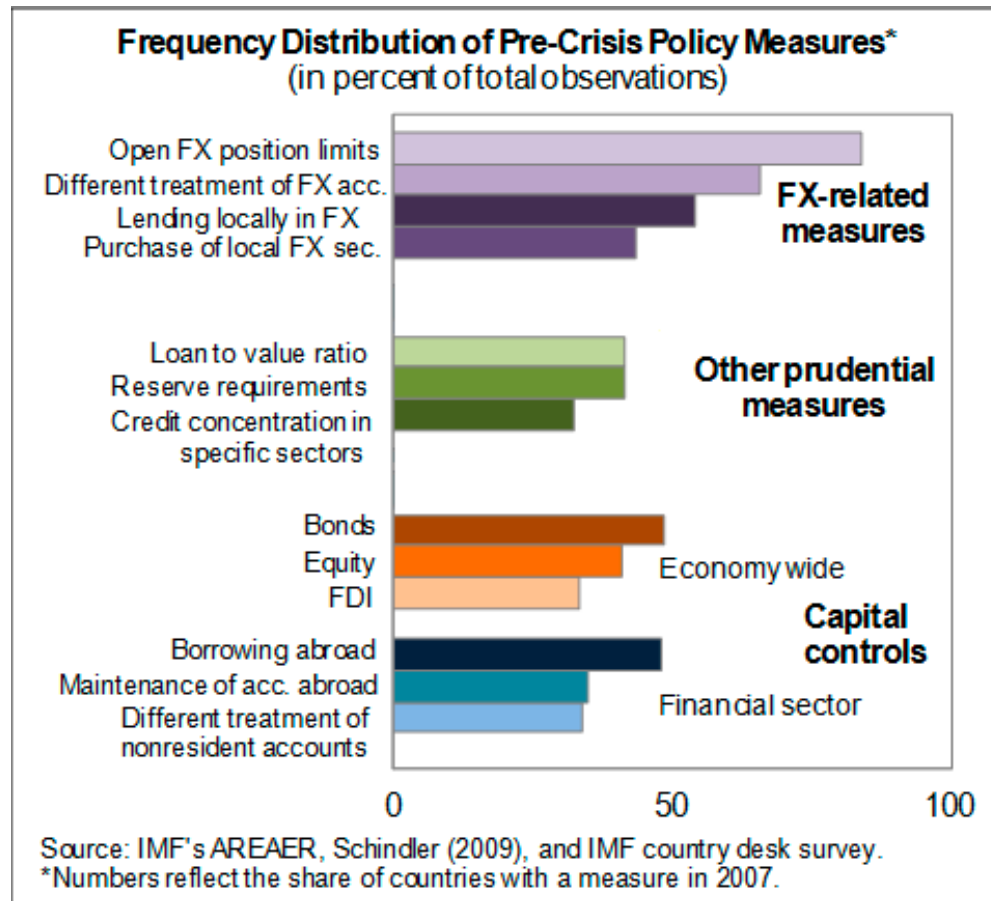
- Both macroeconomic and prudential considerations suggest that capital controls are appropriate
 - No real conflict—but possible design issues
- Macro considerations say yes, but prudential ones say no
 - No conflict of principle, but again possible conflict of design
 - Controls as transitional measure given macro policy implementation lags?
- Macro considerations say no, prudential ones say yes
 - Genuine conflict
 - Multilaterally-consistent approach implies the bar is much higher for the use of capital controls—especially broad-based controls
 - Exhaust the available macro policy space and allow exchange rate appreciation *before* tightening capital controls on inflows for prudential risks

The Policy Toolkit

What's in the Toolbox?

- FX-related prudential measures
 - ▣ Discriminate according to the currency, not the residency, of the flow
 - ▣ Applied to regulated financial institutions, primarily banks
 - ▣ Examples: limits on banks' open FX position (as a proportion of their capital), and limits on FX lending by domestic banks (or higher capital requirements)
- Other prudential measures
 - ▣ Reduce systemic risk without discriminating based on residency/currency
 - ▣ Examples: LTV ratios, limits on credit growth and sectoral lending, dynamic loan-loss provisions, and counter-cyclical capital requirements
- Capital controls
 - ▣ Discriminate between residents and non-residents in cross-border capital movements (OECD Code of Liberalization of Capital Movements, 2009)
 - ▣ Economy-wide or sector specific (usually the financial sector) or industry specific
 - ▣ Cover all flows, or target specific types (debt, equity, FDI; short vs. long-term)
 - ▣ Examples: taxes, URRs, licensing requirements, and outright limits or bans

How Common are the Measures?



Recent Examples of Measures

FX-related measures

- Reserve requirements on foreign currency deposits (Peru)
- Limits on banks FX derivative positions in percent of bank capital (Korea)
- Capital requirements for FX loans (Peru)
- Limits on banks net open FX positions (Peru)
- Limits on ratio of banks FX loans and securities to FX borrowing (Korea)

Other prudential measures

- Reserve requirements for local currency deposits (Brazil, Turkey)
- LTV ratios (Korea, Peru, Thailand, Turkey)
- Levy on interest from consumer loans (Turkey)
- Capital requirements for specific loans (Brazil)

Capital controls

- Tax on equity and bond inflows (Brazil)
- Fee on NR purchases of central bank paper (Peru)
- Reserve requirements on NR deposits (Peru)

Issues in Classifying Instruments

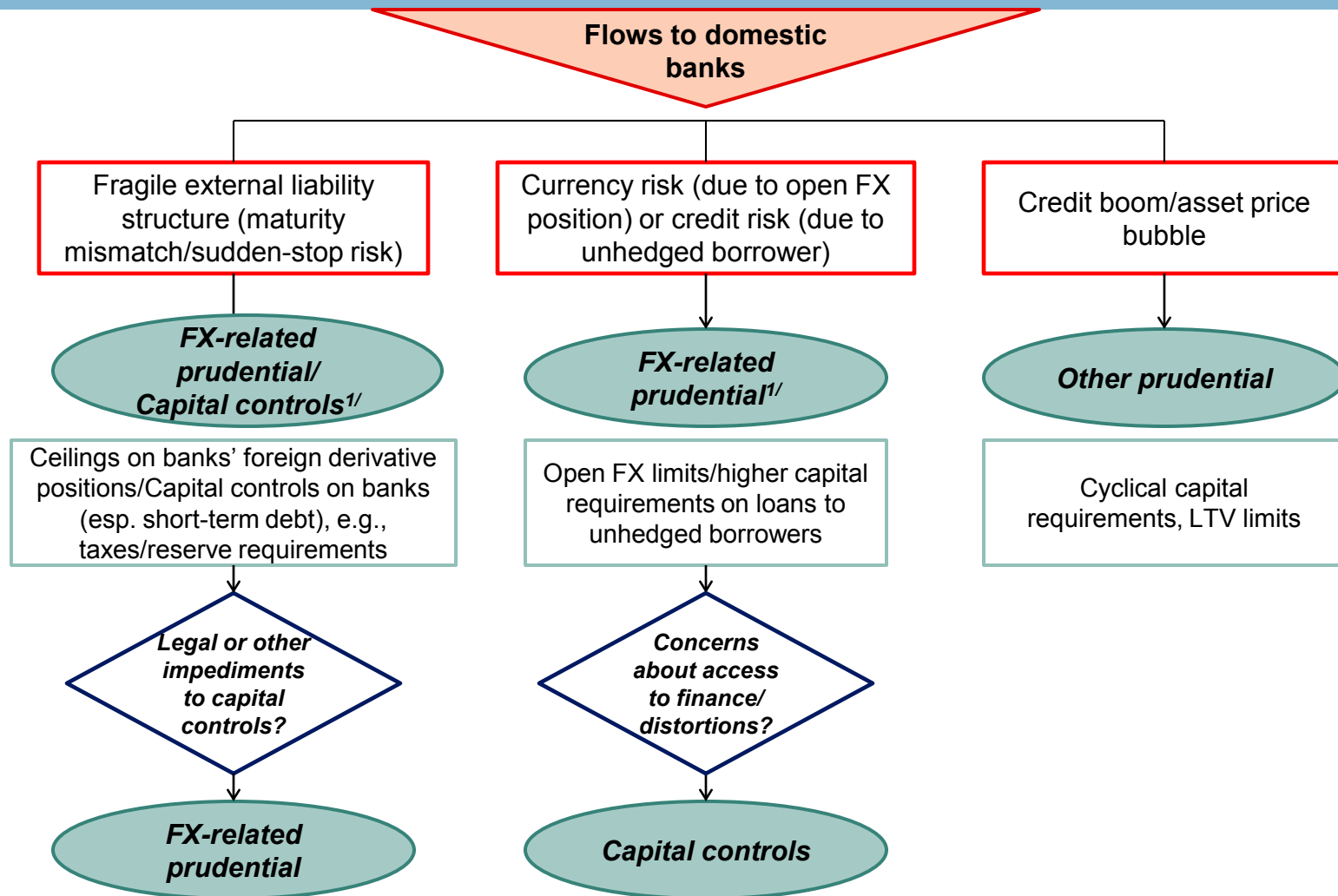
- De jure prudential tools may operate like capital controls
 - A regulation differentiating based on the currency of denomination may operate like a capital control to the degree that most FX liabilities are to nonresidents
 - A measure that requires banks to pay a tax on their non-core liabilities could well in practice operate just like a capital control if most of the funding that banks receive comes from abroad
 - A regulation discouraging FX lending to unhedged borrowers may act as a capital control (reduce inflow) or prudential measure (change currency composition of foreign liabilities). Difficult to tell at implementation stage
- De jure capital controls may have primarily prudential intent (e.g. differential reserve requirements by residence of liability)
- Fine line between FX-related and other prudential measures (e.g. differential LTV ratio by currency of denomination)

Alternative Classification

- Capital Flow Management Measures (CFMs)—measures designed to influence capital flows
 - Residency-based—commonly referred to as capital controls
 - Other—measures that do not discriminate on the basis of residency, but are nonetheless designed to influence capital inflows (including a subset of prudential measures that discriminate on the basis of currency)
- Non-CFMs—structural and prudential policies not designed to influence capital flows. Include measures that do not discriminate by residency and typically, but not always, do not differentiate by currency

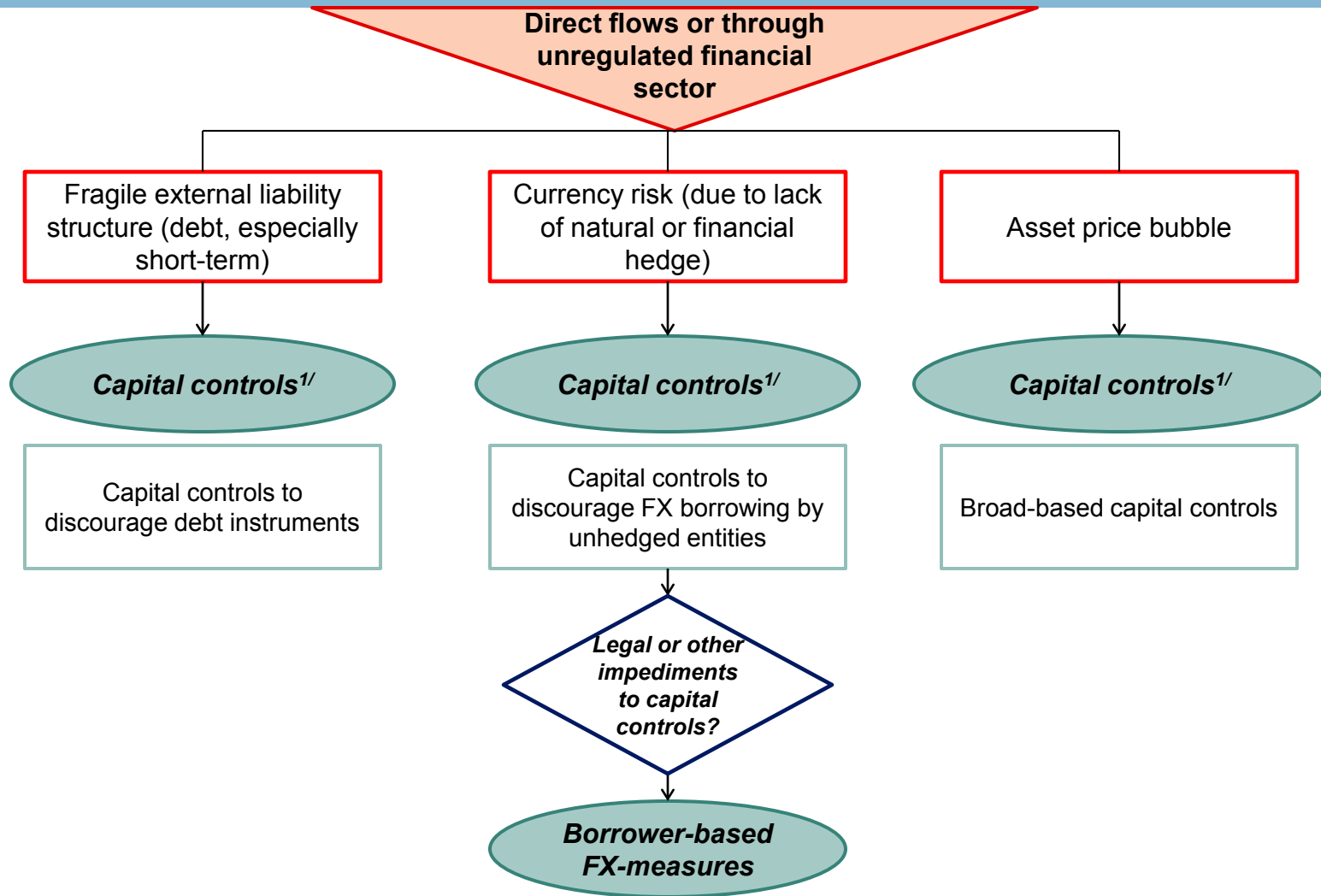
Matching Risks and Tools

Choice of Instruments: Flows Intermediated through the Financial Sector



1/ Once macro policy space exhausted, and taking due account of multilateral considerations.

Choice of Instruments: Flows Not Intermediated through the Financial Sector



1/ Once macro policy space exhausted, and taking due account of multilateral considerations

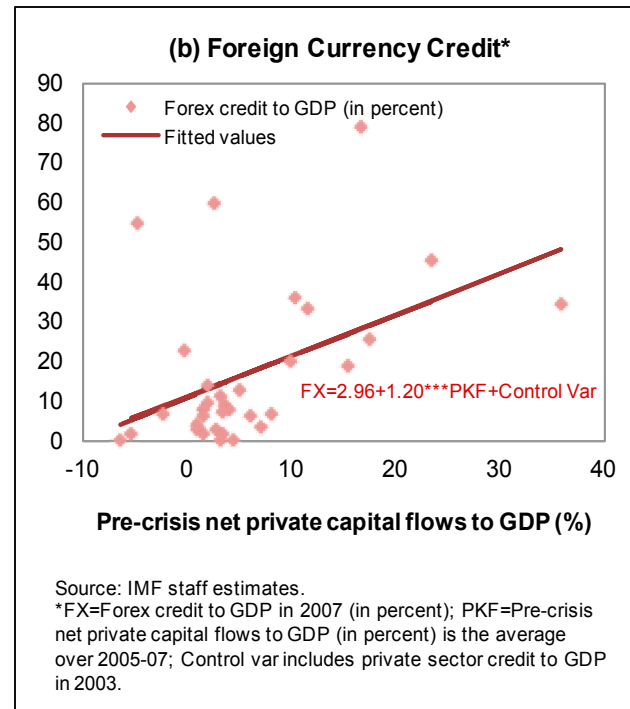
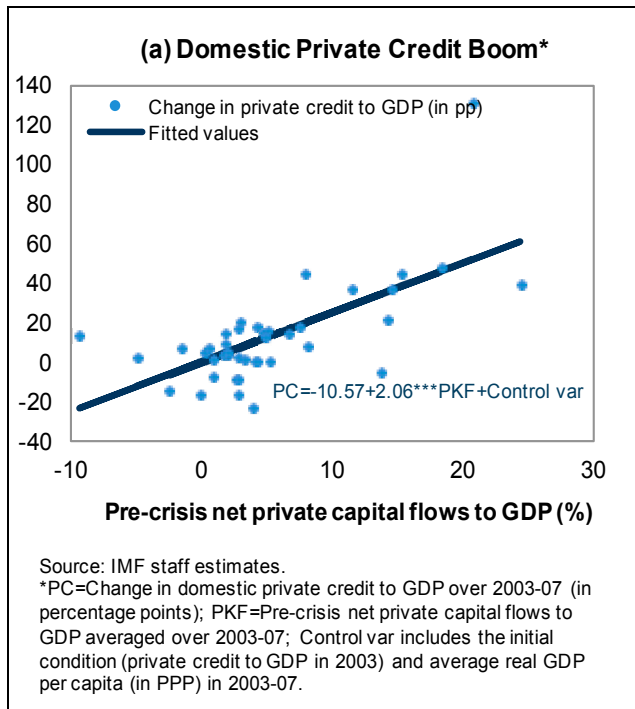
Exceptions to Flow Chart

- Playing field for access to credit of large firms vs. SMEs
- Prudential regulations may cause flows to be intermediated through the unregulated financial sector (e.g. Croatia)
 - Extend the perimeter of regulation? Not easy in short run
 - Regulatory arbitrage more likely in countries with weak supervision, sophisticated financial institutions, and deep capital markets
- International obligations may prohibit or constrain the use of capital controls (e.g., the EU treaty, the GATS, the OECD code, or various bilateral investment treaties)

Effectiveness of Instruments: Stylized Facts

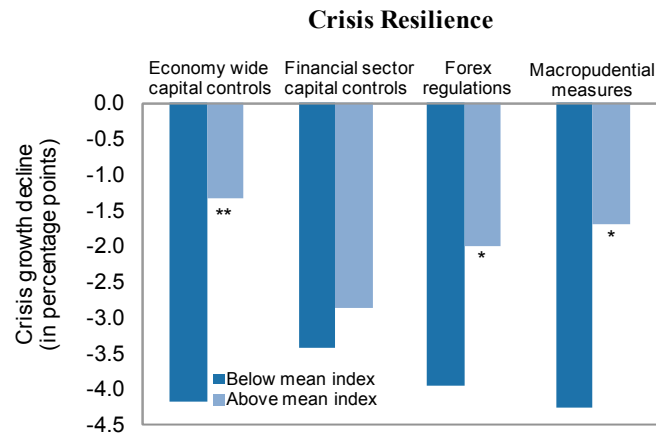
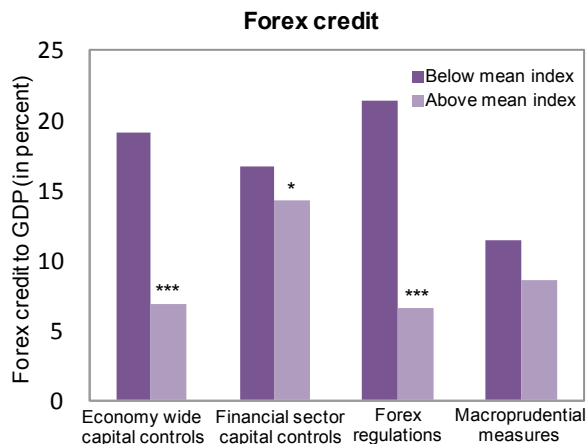
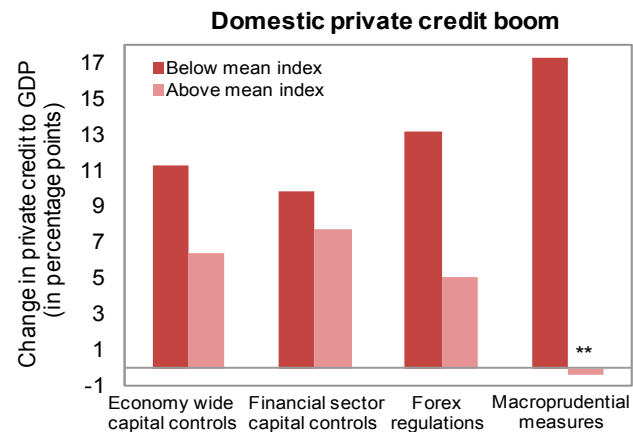
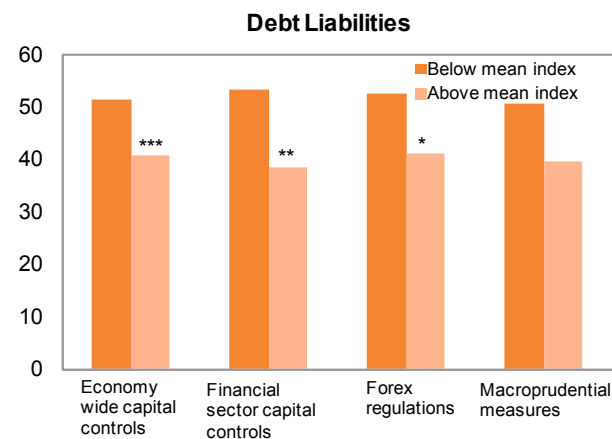
Capital Flows and Credit booms*

Domestic Credit and Net Capital Flows to GDP (in percent)



*Sample: 41 EMEs over 2003-07

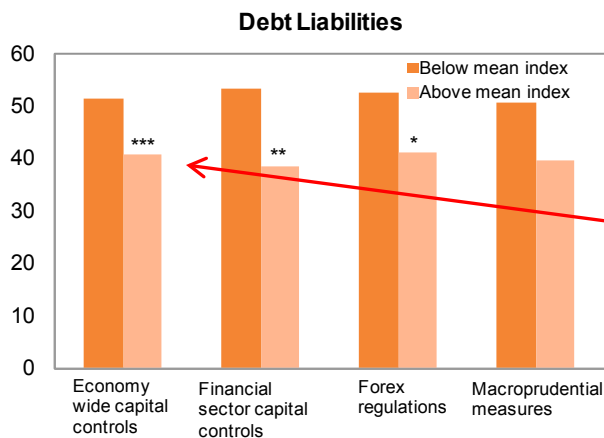
Policy Measures and Financial Fragilities*



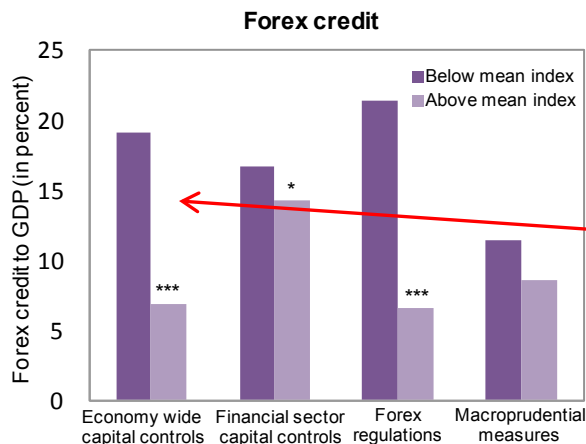
Source: Authors' estimates.

*Sample: 41 EMEs over 2003-07. Private credit boom is the residual (including constant) obtained after regressing change in private credit to GDP over 2003-07 on private credit to GDP in 2003. Forex credit is the residual (including constant) obtained after regressing forex credit to GDP in 2007 on private credit to GDP in 2005 and a binary variable (=1) if fixed exchange rate regime in place. Debt liabilities is the residual (including constant) obtained after regressing the share of debt liabilities in total external liabilities in 2007 (in percent) on a (lagged) composite external vulnerability index. Crisis resilience is the residual (including constant) obtained after regressing the difference between real GDP growth rates averaged over 2008-09 and 2003-07 on trading partner growth and terms of trade change.

Policy Measures and Financial Fragilities*



Capital controls and FX-related prudential measures associated with smaller proportion of debt in external liabilities ...



and with lower foreign currency denominated lending by domestic banks

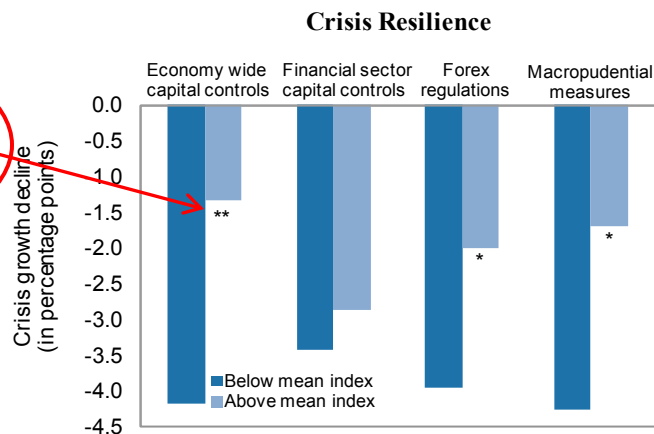
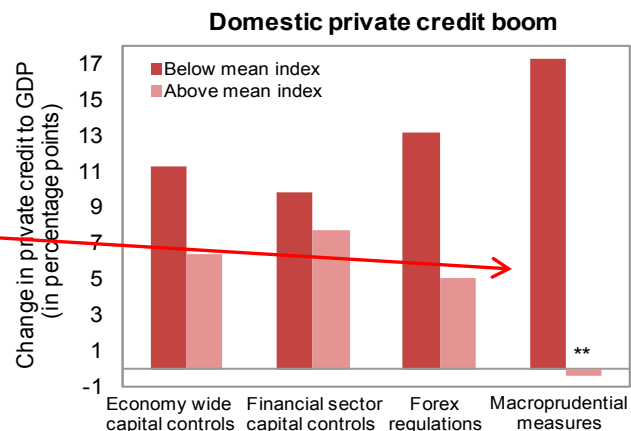
Source: Authors' estimates.

*Sample: 41 EMEs over 2003-07. Private credit boom is the residual (including constant) obtained after regressing change in private credit to GDP over 2003-07 on private credit to GDP in 2003. Forex credit is the residual (including constant) obtained after regressing forex credit to GDP in 2007 on private credit to GDP in 2005 and a binary variable (=1) if fixed exchange rate regime in place. Debt liabilities is the residual (including constant) obtained after regressing the share of debt liabilities in total external liabilities in 2007 (in percent) on a (lagged) composite external vulnerability index. Crisis resilience is the residual (including constant) obtained after regressing the difference between real GDP growth rates averaged over 2008-09 and 2003-07 on trading partner growth and terms of trade change.

Policy Measures and Financial Fragilities*

Other prudential measures associated with lower lending booms by domestic banks

Capital controls, FX-related and other prudential measures associated with greater crisis resilience.



Source: Authors' estimates.

*Sample: 41 EMEs over 2003-07. Private credit boom is the residual (including constant) obtained after regressing change in private credit to GDP over 2003-07 on private credit to GDP in 2003. Forex credit is the residual (including constant) obtained after regressing forex credit to GDP in 2007 on private credit to GDP in 2005 and a binary variable (=1) if fixed exchange rate regime in place. Debt liabilities is the residual (including constant) obtained after regressing the share of debt liabilities in total external liabilities in 2007 (in percent) on a (lagged) composite external vulnerability index. Crisis resilience is the residual (including constant) obtained after regressing the difference between real GDP growth rates averaged over 2008-09 and 2003-07 on trading partner growth and terms of trade change.

Designing Capital Control Instruments

Designing Capital Controls: Some Considerations

- **Broad principles**
 - **Effective**: achieve intended aim; not easily circumvented
 - **Efficient**: minimize distortions and scope for non-transparent/arbitrary enforcement
- **But a number of questions...**
 - **Permanent or temporary inflow?**
 - Macroeconomic concerns: Controls for temporary, not permanent inflows
 - Prudential concerns: Controls could be imposed for persistent flows
 - **Broad-based or targeted controls?**
 - Macroeconomic concerns: Broad based possibly with limited exemptions
 - Prudential concerns: Targeted but taking account of circumvention possibilities
 - **Price or quantity-based controls?**
 - Macro concerns: Price-based measures easier to adjust cyclically, and simpler to administer
 - Prudential concerns: Quantitative measures more appropriate when authorities face information asymmetries/uncertainty about private sector's response
 - **Other considerations**: Administrative and institutional capacity

Conclusions

Key Takeaways

- Macro and prudential policies can go a long way to deal with inflow surges
 - ▣ Use and strengthen orthodox toolkit before resorting to capital controls
- There is strength in numbers—no measure is likely to work perfectly, so diversify and use more than one
- Capital controls and prudential measures should target specific risks
 - ▣ Prudential measures main instrument when flows are intermediated through the banking sector
 - ▣ Capital controls main instrument when flows by-pass the banking sector
- In designing capital controls,
 - ▣ Macro concerns imply broad and price-based controls for temporary surges
 - ▣ Prudential concerns imply targeted on specific risks and possibly administrative capital-control measures, even in case of persistent inflows
 - ▣ Design should reflect administrative inheritance/apparatus