Capital Flows and Capital Account Management in Selected Asian Economies

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- After collapsing during 2008 global financial crisis (GFC), capital flows to EMEs rebounded in late 2009 and 2010.
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- Sharp swings in volatility of flows has amplified the complexity of macroeconomic management in EMEs.
  - Capital inflows provide additional investment financing and avenues for risk diversification.
  - Unbridled flows could also exacerbate financial instability.
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EMEs undertaken diverse capital account management measures to stem flow of capital.
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  2. Exchange rate management; intervention in forex markets
  3. Imposition or relaxation of capital controls on inflows and outflows

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- Evaluate efficacy of these measures by analyzing whether they achieved desired goals.
  - Impact on Stock price indices and exchange rates
Volatile Flows

- India, Indonesia, South Korea, Malaysia, Thailand; 1998Q1-2011Q4.
- We assess increase in volatility by calculating standard deviation of quarterly gross capital inflows over last 8 quarters (Forbes, 2014).
- Gross capital inflows—extremely volatile in recent years in EAEs.

Figure 1: Volatility in Capital Inflows in Asia
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- 2 main phases of stops: AFC and GFC.
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- 2 main phases of stops: AFC and GFC.
- India experienced most number of surge episodes (5), Malaysia did not witness any.
- India & Thailand witnessed longest surge episodes before GFC.
- Longest stop episode- Thailand during AFC
Figure 2: Net and Gross Flows to Asian Economies along with Surge and Stop Episodes

(a) India

(b) Indonesia

(c) Korea

(d) Malaysia

(e) Thailand
Surge Episodes

- India: Mostly bank & non-bank flows (mid 1990s, 2004-05 & 2006-08 surges) and portfolio equity flows (2003-04 & 2010 surges); FDI peaking during longest pre-GFC surge.
- Indonesia: FDI flows big driver (pre-AFC and post-GFC surges) along with portfolio debt flows.
- Korea: Single surge episode in mid 1990s driven by bank & non-bank flows (56.9%) and portfolio debt flows (28.3%)
- Thailand: Primary drivers - bank & non-bank flows (mid 1990s and post-GFC); FDI and portfolio equity flows accounted for 2004-06 surge
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Stop Episodes

- Stop Episodes during AFC and GFC: bank & non-bank flows and portfolio equity were main channels of reversal.
- FDI inflows remained fairly constant during both crises.
Policymakers’ desire to prevent capital surges stems from risks associated with such episodes.

- Rapid exchange rate appreciation can hurt exports of EMEs (Subramanian and Rajan, 2005; Prasad et al., 2007)
- In underdeveloped financial systems, foreign capital channeled towards easily collateralized, non-tradable investments like real estate causes asset price booms, with subsequent busts disrupting the economy (Prasad and Rajan, 2008)
- 15% of capital inflow episodes over past two decades have resulted in a crisis (Schadler, 2010)
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Policymakers can resort to 3 broad macroeconomic measures to counter surges.
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- Open economy Trilemma: Impossible to attain monetary independence (MI), exchange rate stability (ERS) and capital market openness (KO), simultaneously.

We use empirical methods (Aizenman, Chinn, & Ito 2010; Hutchison, Sengupta, & Singh, 2013; Sen Gupta & Sengupta, 2012) to describe EAEs’ experience with Trilemma. 2000Q1-2011 Q4; period split into 3 equal segments. Examine validity of Trilemma framework: testing whether sum of 3 policy variables adds up to a constant. To obtain contribution of each policy variable, we multiply estimated coefficients with average of each variable for each phase.
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  - Korea fairly consistent focusing on MI followed by ERS.
    - KO increased pre-GFC; but GFC, followed by Euro crisis led to a slump in capital flows in last period.
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Policy response to manage flows

Contribution of Trilemma policy variables
II. Asymmetric Intervention in forex market

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- We empirically investigate this using a central bank loss function following Pontines and Rajan (2011); Sen Gupta and Sengupta (2014) for 2000-2011.
  - Evidence across all 5 EAEs that central banks pursued asymmetric intervention in forex market to counter surges & stops of capital flows.
- Costly sterilization attempts coupled with raising banks’ reserve requirements to contain money supply (India, Korea).
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- Thailand - In December 2006 BOT imposed an URR of 30% on all foreign transactions.
NER, Stock prices & Flow volumes

- Efficacy of capital controls in restricting exchange rate appreciation and stock price increase.
- Short & longer term effect, focusing on periods covering 1-month & 6-month before and after imposition of controls.
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- Moderate success in lowering volume of gross inflows in some cases (Thailand & Indonesia in 2006-07) but not much success in other cases.
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Change in composition of liabilities:

- Dismantling of ‘walls’ in a manner consistent with ‘pecking-order’ of capital flows (Ostry et al, 2010)
- Most EAEs, ‘walls’ on FDI liberalized the most, followed by equities; debt continued to be restricted (increase in restrictions recently).
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- Sequential relaxation of controls impacted liabilities composition.
EMPI

- A central bank’s capital account management could be driven by a desire to manage exchange rate stability.
- So we measure exchange market pressure (EMP) for 5 EAEs: combination of NER depreciation & reserves loss (Girton and Roper, 1977; Aizenman et al, 2012)
- Although EAEs experimented with capital controls, impact on EMP not significant.
- EMP indices of 5 EAEs display remarkably symmetric trend during 2000-2011.
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Policy response to manage flows

Impact of select controls: EMPI

Figure 6: Exchange Market Pressure Indices

(a) India

(b) Indonesia

(c) Korea

(d) Malaysia

(e) Thailand
Study attempts to enrich current debate ongoing in global policy circles on measures adopted by countries to deal with volatile capital flows.

Relevant especially at a time when EMEs about to face repercussions of potential rate hike by US Fed and/or launch of fresh QE measures by ECB.

Countries have resorted to multiple ways of dealing with capital flows-changing Trilemma trade-offs, asymmetric forex interventions and/or capital controls.

- Adhoc capital controls in response to surges/stops not as effective; perhaps a longer term approach towards capital account management necessary.

- Alternative policies include developing domestic financial markets & banking institutions through reforms such that capital inflows/outflows can be managed least disruptively.
Thank You For Your Attention!