BANK FOR INTERNATIONAL SETTLEMENTS

International spillovers and monetary policy strategy in Asia

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Two main views on MP challenges from international spillovers

- The traditional view:
  - Very low US policy rate accentuates dilemmas for EMEs
  - Creates difficult choice about the path for the exchange rate and policy rate (Svensson, 2011 and Taylor, 2013)

- A second, partly complementary, view:
  - QE is transmitted via US term premium (Gertler and Karadi, 2013).
  - Bond markets play a bigger role in transmitting global liquidity (Shin, 2013, Chung et al, 2013 and Turner, 2014).
  - Traditional instruments might become less effective

Outline of this paper

- Monetary policy instruments and strategy: independence of policy rate and controllability of long-term rates.
- Relative role of US policy rate and US term-premium in Asian monetary transmission mechanism through an SVAR model
- Implications for instrument design: Is there a need for additional instruments? What could they be?
- Conclusions

1. Monetary policy instruments and strategies

- Challenges to policy consensus
  - ZLB is not a hard constraint
  - CB can affect risk premium in any assets (ZLB is a special but not a unique case).

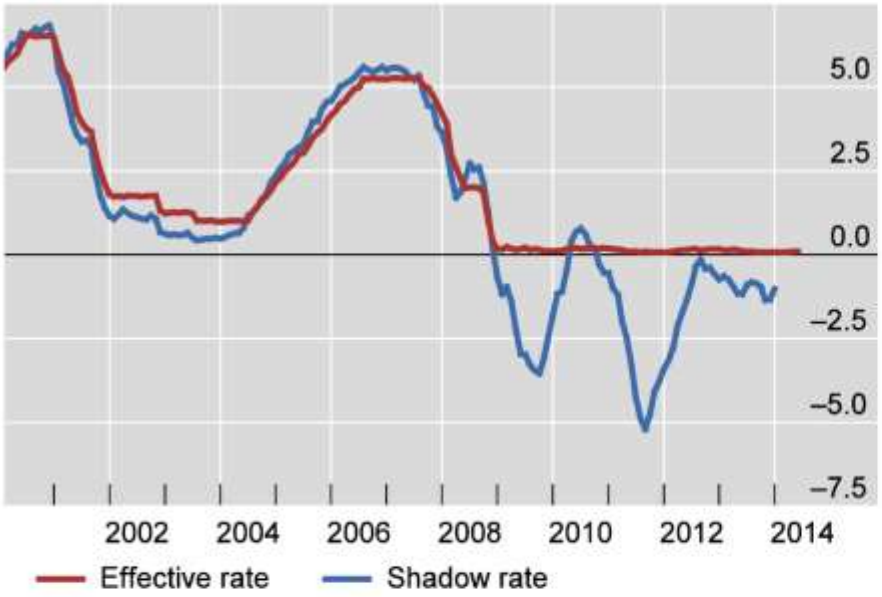
- Two estimated measures of US monetary policy :
  - The shadow policy rate
  - The 10-year term premium

US monetary policy

Per cent

Graph 2

Federal funds rate



Ten-year term premium

The vertical lines indicate start of US's large-scale asset purchases (LSAPs) in November 2008 and announcement of Fed's tapering announcement in May 2013.

Sources: Datastream; BIS calculations.

Implications for monetary policy setting in EMEs

- Hypothesis 1: Lower US policy rate leads to lower Asian short term rates.
  - Is the co-movement due to business cycle reasons?
  - Or is it a threat to policy independence?
- A recent paper (Takats and Vela, 2014) tries to answer this:

$$r_{t,EME} = c + \alpha\pi_{t,EME} + \beta y_{t,EME} + \gamma r_{t,US},$$

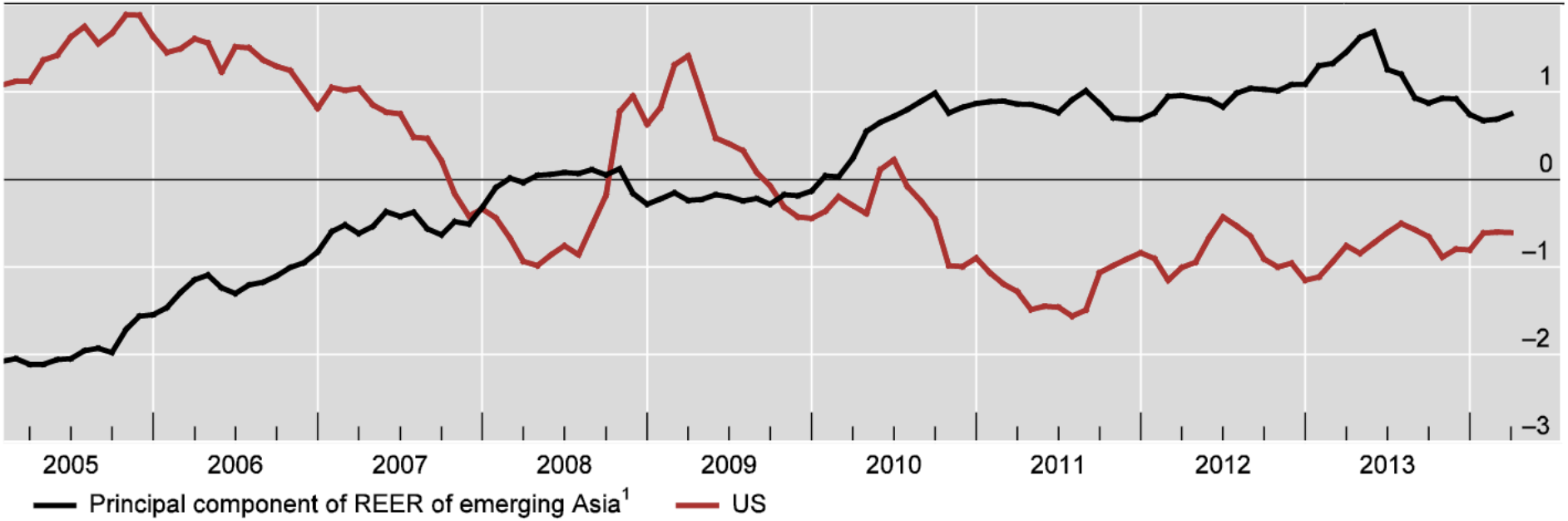
For 20 EMEs "γ" is generally positive during 2000-2013 with a median value of 0.5 (with actual fed fund rate) and 0.35 (with shadow policy rate).

- Real exchange rate appreciation in EMEs has been limited.

Real effective exchange rate

Normalised rate

Graph 7



[1] The first principal components of normalized real effective exchange rate of China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore and Thailand, explaining 59% of variation of these emerging markets' rates.

Source: BIS calculations.

Implications for monetary policy setting in EMEs

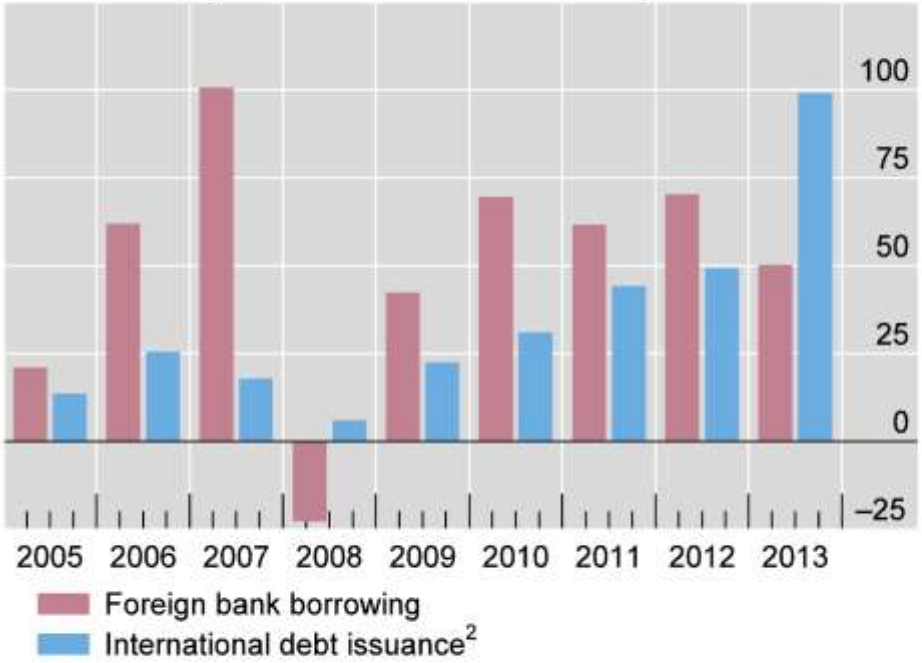
- Hypothesis 2: US term premium plays a bigger role in monetary policy setting in EMEs
  - Three main indicators.
    - Sharp increase in cross-border bond flows to Asia since 2009 (particularly international corporate debt issuance).
    - Increased search for yield by international investors through their fund managers ("herding").
    - Greater convergence of long term rates of Asia with those of the United States.

Cross-border financing by private non-bank corporates of emerging Asia[1]

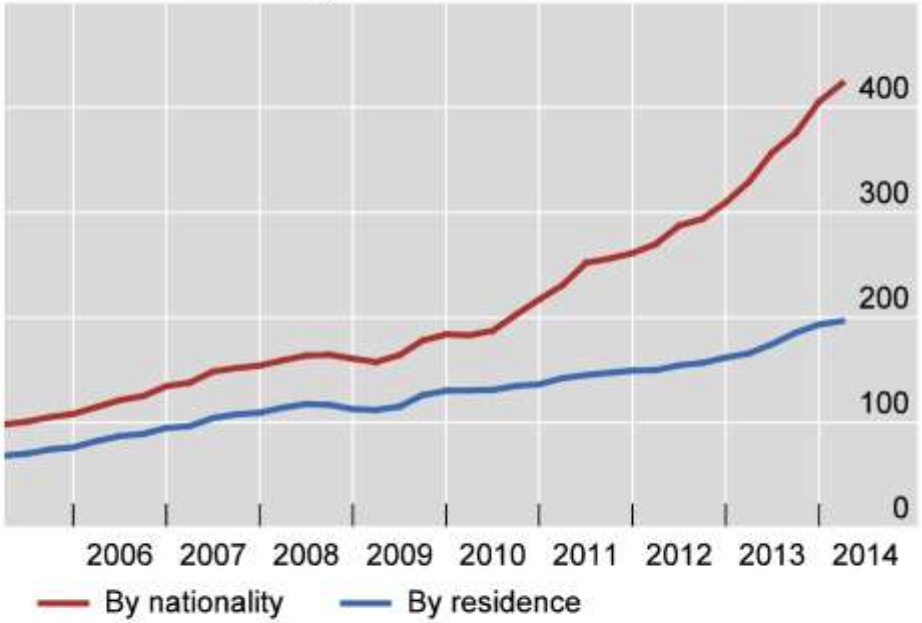
In billions of US dollar

Graph 6

Annual change in cross-border financing



Amount outstanding of international debt securities[3]



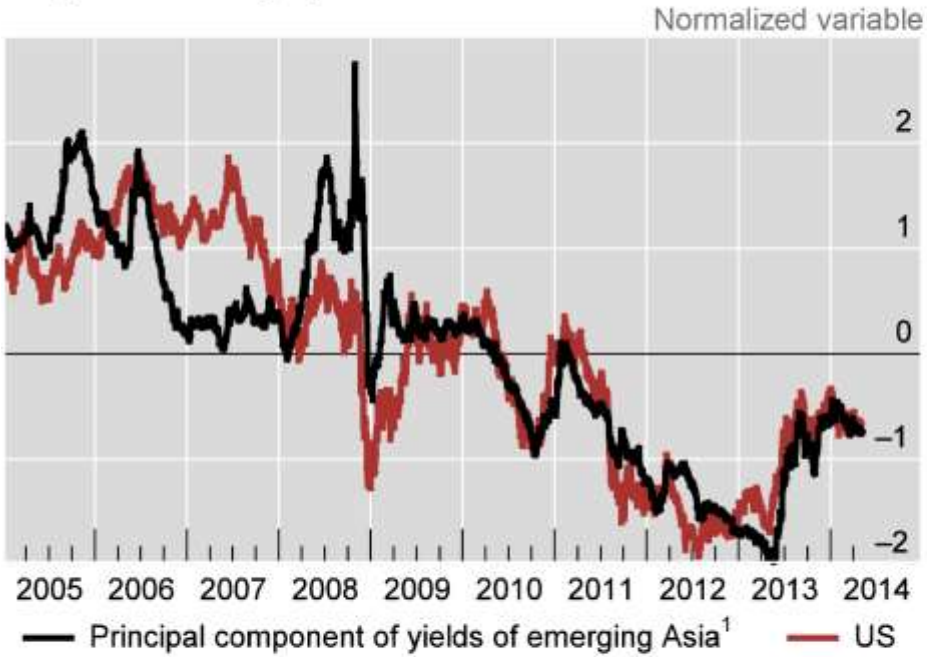
[1] Aggregate of China, India, Indonesia, Korea, Malaysia, Philippines and Thailand. [2] By nationality. [3] Amount outstanding of international debt securities issued by non-bank financial corporations and non-financial corporations.

Sources: BIS Consolidated Banking Statistics; BIS debt securities statistics.

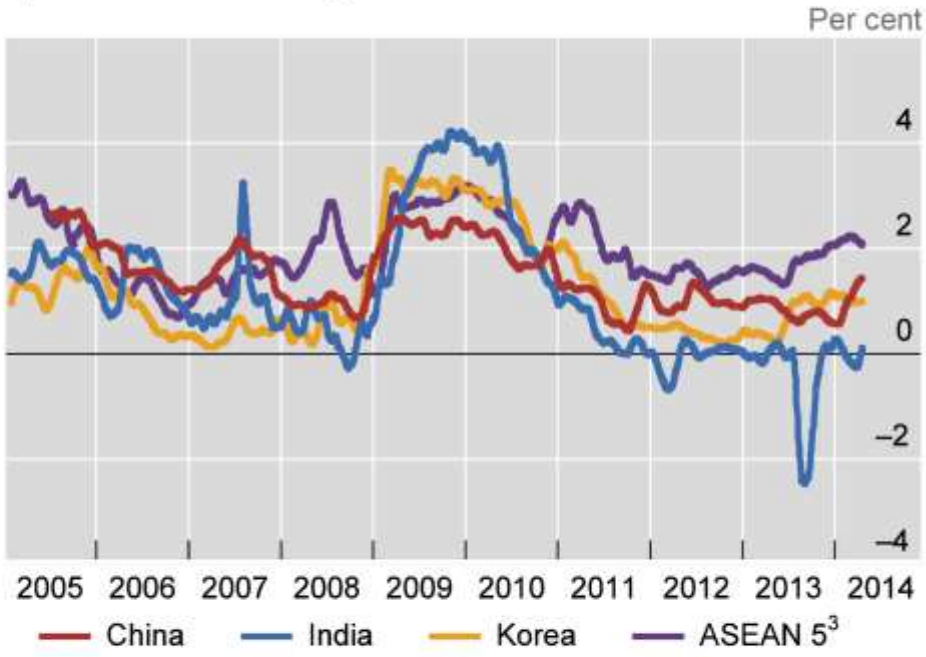
Long-term rates and spread

Graph 5

10-year sovereign yields



Spread between long-term and short-term rates



[1] The first principal components of 10-year sovereign yields of China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore and Thailand, explaining 97% of yields of these emerging markets. [2] Four-week moving average of spread between ten-year and three-month government bond yields. [3] Simple average of Indonesia, Malaysia, the Philippines, Singapore and Thailand.

Sources: Bloomberg; CEIC; Datastream; national data; BIS calculations.

2. Monetary policy synchronisation from an SVAR model

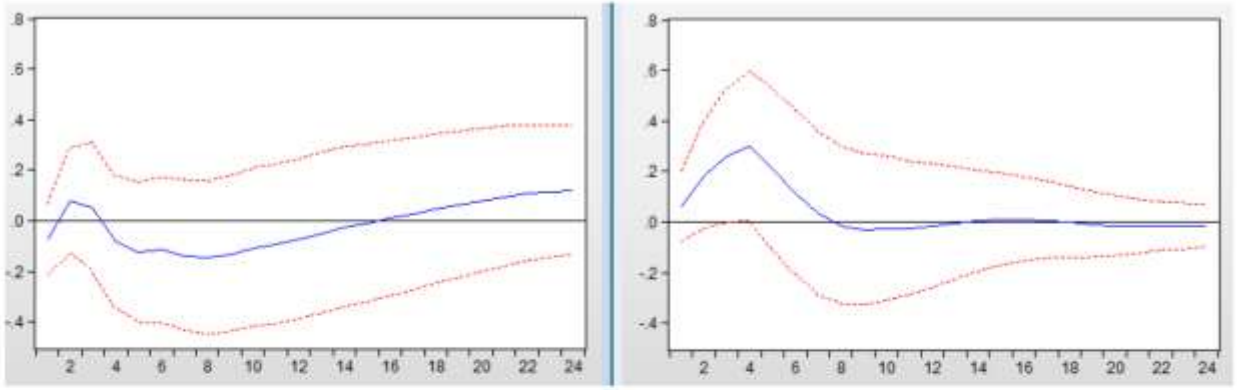
- We use an SVAR model to look at MP synchronisation:
  - Standard monthly monetary transmission model with foreign interest rates.
  - Consider three Asian economies (Indonesia, Korea and Malaysia) with different degrees of financial openness.
  - Use a common identification scheme to order the variables.
  - Look at responses of domestic overnight rate to innovations in US policy rate and term premium during 2000-2007 and 2009-2013.
  - Look at the share of fluctuations in domestic rates caused by US variables through variance decomposition analysis.

Response of domestic interest rates to a rise in US variables, 2000M01–07M12 Graph 8

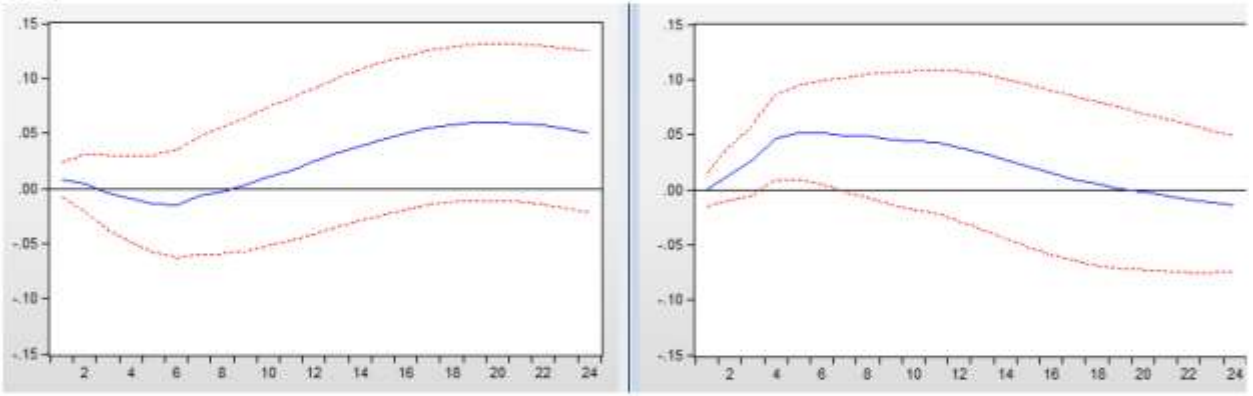
Response to a rise in US fed fund

Response to a rise in US term premium

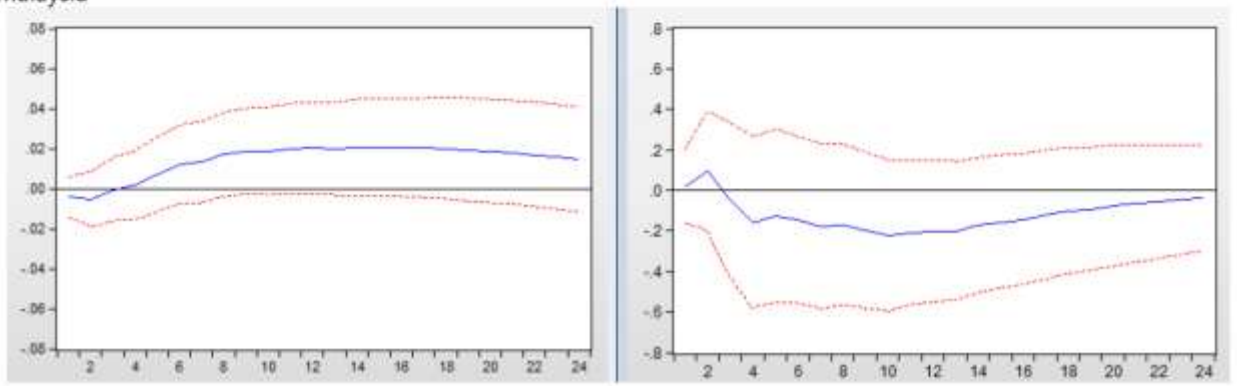
Indonesia



Korea



Malaysia



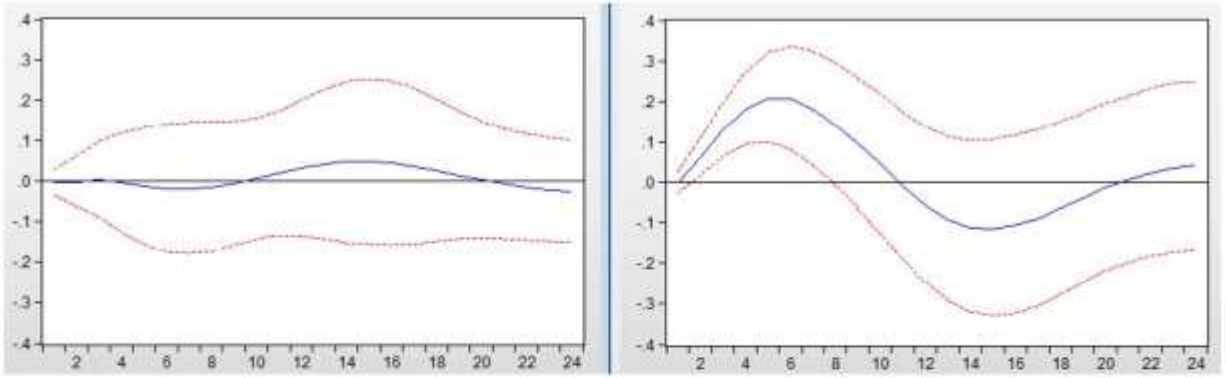
Sources: Authors' calculations.

Response of domestic interest rates to a rise in US variables, 2009M06–13M12 Graph 9

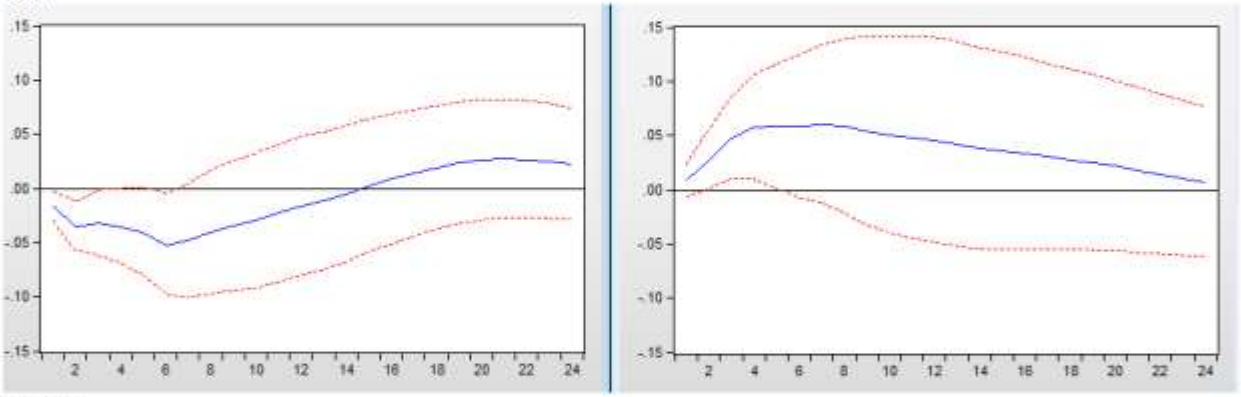
Response to a rise in US fed fund

Response to a rise in US term premium

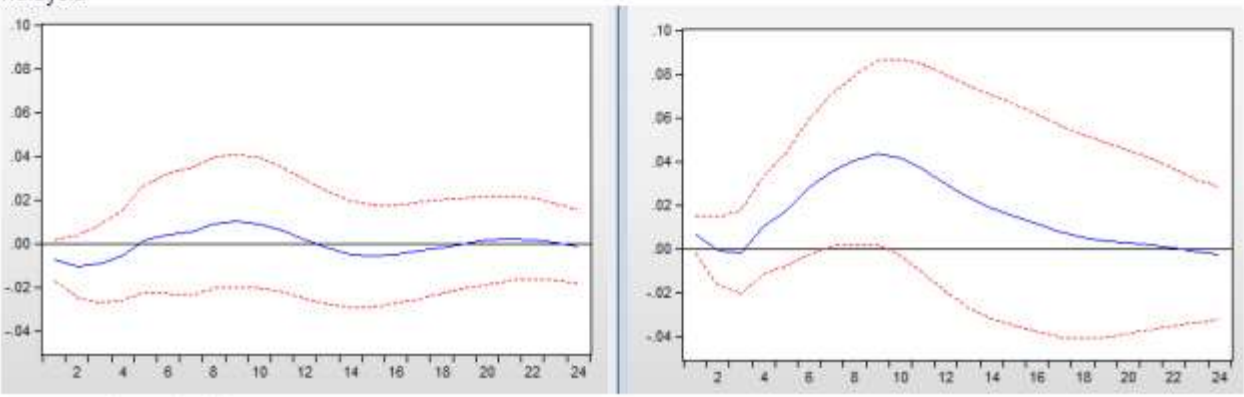
Indonesia



Korea



Malaysia



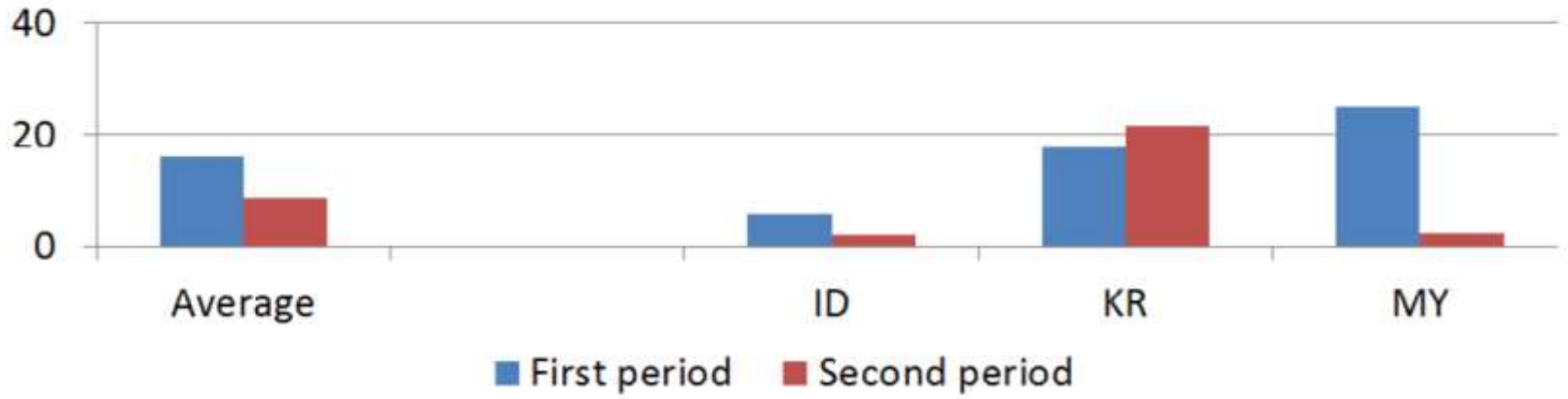
Sources: Authors' calculations.

Share of variation in domestic interest rates explained by US variable[1]

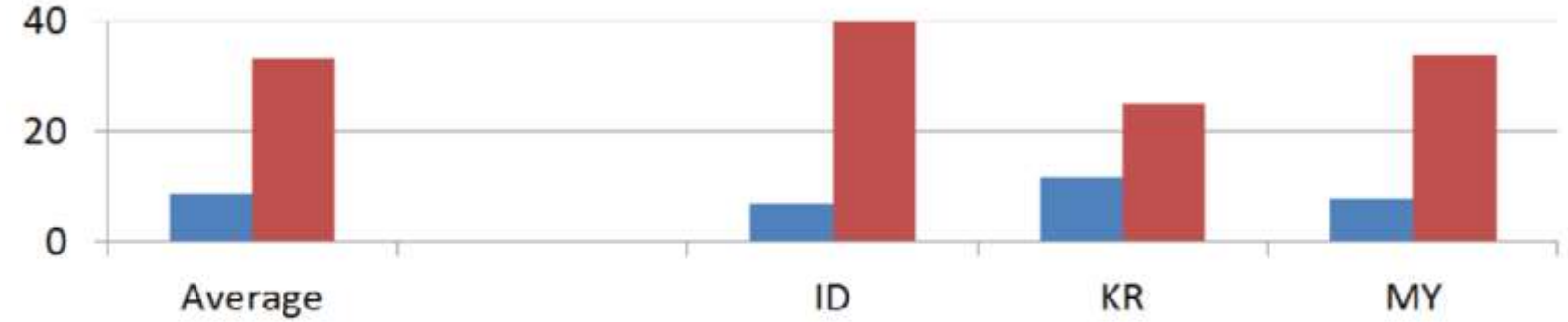
%

Graph 10

US variable = Shadow US fed funds



US variable = US 10 year term premium



[1] ID = Indonesia, KR = Korea, MY = Malaysia. Average is the simple average of the three.

Sources: BIS staff calculations.

Summary of findings

- Systematic effect of US term premium on domestic overnight rate in the pre-crisis period; but US policy rate is insignificant.
- The impact is stronger in the post-crisis period.
- Results are consistent with Chen, Filardo, He and Zhu (2013) who also find significant effect of US term premium on EME interest rates.
- Also McCauley, McGuire and Sushko (2014): break in the relationship between US term premium and growth of offshore dollar credit in 2009.
- The model does not yet incorporate domestic long term bond yields.

3. Implications for central bank instrument design

- Traditional instruments: exchange rate vs policy rate adjustment.
- The classical adjustment mechanism may be blocked for several reasons:
  - Currency appreciation might boost risk-taking (Bruno and Shin, 2013)).
  - Currency overvaluation increases the probability of financial crisis (Gourinchas and Obstfeld, 2012).
  - An undervalued exchange rate may be preferred for growth (Rodriks, 2008).
  - Non-cooperative (unstable) solution if central banks follow each other in cutting rates (Taylor, 2013).

Implications for CB instrument design

- Sterilized FX intervention as an additional instrument ("two instrument two targets").
- Is sterilized intervention effective? Results from a recent BIS meeting (BIS 2013):
  - FX intervention has temporary effects on the exchange rate (due mainly to "signaling" channel) .
  - Might increase volatility in the wrong direction (Miyajima and Montoro, 2013)
- Unintended balance sheet effects from one-sided intervention
  - Depends on the method of sterilisation
  - Bank balance sheets become more liquid with larger holdings of short-term CB securities.
  - Risks of credit boom (Gadanecz, Mehrotra and Mohanty, 2013)

Implications for CB instrument design

- Bank-based, asset-based macro-prudential tools
  - Can reduce pro-cyclicality of lending
  - Limit risks to the banking system
- Effectiveness might depend on
  - Whether capital flow is intermediated by banks or bond markets
  - Whether market players are leveraged or unleveraged
- Capital flow management measures (a preferred option according to IMF recent recommendations).
  - But lose effectiveness over time
  - Entail costs
  - Delay adjustments

Additional instruments

Liability-based macro-prudential measures to more effectively control bank credit and monetary aggregates (Shin, 2013 and Chung et al 2013)

- Levy on non-core liability of banks (vary pro-cyclically with capital flows). Could be short-term FX funding by banks, or corporate deposits.
- A few advantages
  - Can act as an automatic stabiliser
  - Leave bank assets funded by core liabilities (eg retail deposits) unaffected
  - Can reduce problems associated with sudden stop of capital
- Korea's recent experience with leverage cap on FX derivative positions and macroeconomic stability levy on non-core FX liabilities (Kim, 2013)

Additional instruments

Active debt management policy

- Assumes imperfect substitutability of assets of different maturities
- Central bank operations can have direct effect on the term premium (experience of Federal Reserve and Bank of England)
- Could be relatively more effective in EMEs (Filardo, Moreno and Mohanty, 2013)
  - Small size of debt markets
  - More segmented market structure
  - Central banks are debt managers and issue their own securities.
- Potential risks
  - Impact on fiscal discipline
  - Distortions to bond markets
  - Risk exposure of central bank

Conclusions

- Some evidence that the impact of US term premium on Asian monetary transmission mechanism has grown since 2009 (consistent with findings by others).
- The role of exchange rate in the adjustment mechanism appears limited.
- A key question is whether FX intervention and asset based macro-prudential tools provide the required degree of monetary policy freedom in the face of changes in the nature of capital flows.
- The role of other instruments such as liabilities-based macroprudential tools and debt management policies is relatively unexplored.
- There are downside risks, especially from central banks involvement in debt management. Choices will vary depending on country situations.