Re-Thinking Monetary Policy Objectives

Why Mess with Success?

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The Future Direction of Monetary Policy Frameworks and Strategies in Emerging Market Economies

Bank Negara Malaysia

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The sea change in monetary policy

- Worldwide, the emphasis on price stability has increased over the past 20 years.
  - Narrowing of policy mandates, adoption of IT.
  - True in the U.S. with no explicit framework change.
  - Abandonment of exchange rate pegs.
- Has the trend gone too far? Is inflation targeting enough?

This paper

- Surveys theoretical arguments for and against expanding the set of policy targets.

- Examines the experiences of six Asian economies: Are they *de facto* already pursuing goals other than inflation?

The six Asian economies' policy frameworks

- Indonesia: IT since 2005
- Korea: IT since 1998
- Malaysia: not clear, IMF classifies as "other"
- Philippines: IT since 2002
- Singapore: crawling peg/band since 1981
- Thailand: IT since 2000

Price stability – a success story

	1987-1999		2000-2013	
	Mean	Standard deviation	Mean	Standard deviation
Indonesia	11.3%	15.3	7.0%	3.6
Korea	5.5	3.3	2.9	1.6
Malaysia	3.2	2.0	2.2	2.7
Philippines	8.7	4.4	4.0	3.5
Singapore	1.8	1.5	2.1	2.7
Thailand	4.6	2.9	2.5	3.0

- The mean and variance of inflation fell relative to the pre-Asia crisis period in 5 of the 6 countries.
- Singapore is the exception – unchanged policy framework.

Theoretical considerations: What *should* central banks do?

- Theoretically, what belongs in the objective function?
- Can additional tradeoffs be managed?
- How to hold central banks accountable?

Re-thinking policy objectives

$$E_t \sum_{\tau=0}^{\infty} \delta^{\tau} \left[(\pi_{t+\tau} - \bar{\pi})^2 + \lambda_y (y_{t+\tau} - \bar{y}_{t+\tau})^2 \right]$$

- Should policy pay attention to output?

$$E_t \sum_{\tau=0}^{\infty} \delta^{\tau} \left[(\pi_{t+\tau} - \bar{\pi})^2 + \lambda_y (y_{t+\tau} - \bar{y}_{t+\tau})^2 + \lambda_? (?_{t+\tau} - \bar{?}_{t+\tau})^2 \right]$$

- Does something else belong in the objective function?

The problem of goal proliferation

Must we accept parenthood for every economic development in the country? That is a hard thing for us to do. We would have a large family of children. Every time one of them misbehaved, we might have to spank them all.

– Benjamin Strong, NY Fed President, 1914–1928

A financial stability goal?

- The Bernanke-Gertler view: asset price booms are equivalent to demand shocks.
- The central bank should react to booms only to the extent that they affect the output and inflation goals.
- BG model simulations: no gain from reacting directly to asset prices.

Financial instability: not just spending?

- Bordo and Jeanne: asset price collapse damages the economy's supply side.
- Dupor: non-fundamental asset price fluctuations misdirect investment.
- Woodford: financial disruptions interfere with intermediation between savers and borrowers, causing inefficient consumption allocation.

Problems with a financial stability target

- Interest rates affect the whole economy, not just financial stability (the “blunt tool” problem).
- How much output or inflation must be sacrificed for certain increase in stability?
- What is a good empirical proxy for financial stability?
- How much of an impact does interest rate policy really have on financial stability?
- Accountability is almost impossible.

Why crisis prevention is hard to verify

- Consider a policy intended to increase the mean time between crises from 5 to 10 years.
- Assume crises follow a poisson process:
  - There is a 39% chance of having a crisis within 5 years even if the policy is successful.
  - There is a 13% chance of having no crisis for at least 10 years even if the policy is *un*successful.

Debt growth tempers Riksbank's stimulus

A monetary policy that to a greater degree must prioritise the short-term development of inflation of course places a greater responsibility on other policy areas for managing the risks associated with the high and growing indebtedness of households. A factor of importance here is that the **Riksbank's need to prioritise short-term stimulus measures to a greater extent will in itself lead to an increase in household debt**.

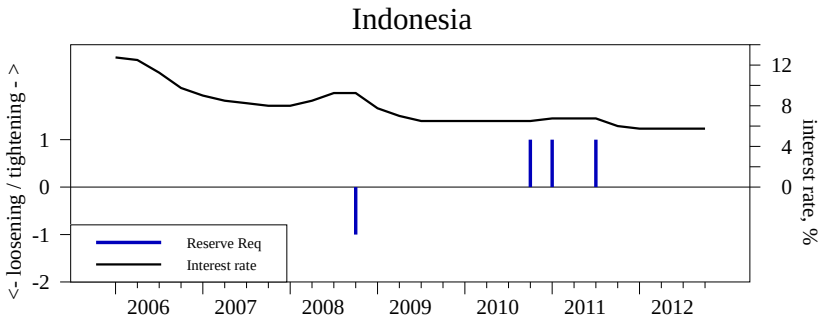
– Minutes of Riksbank monetary policy meeting, February 14, 2014

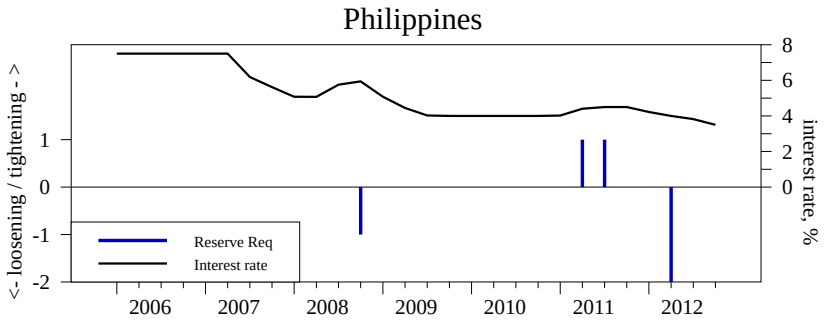
Some think this is a bad idea

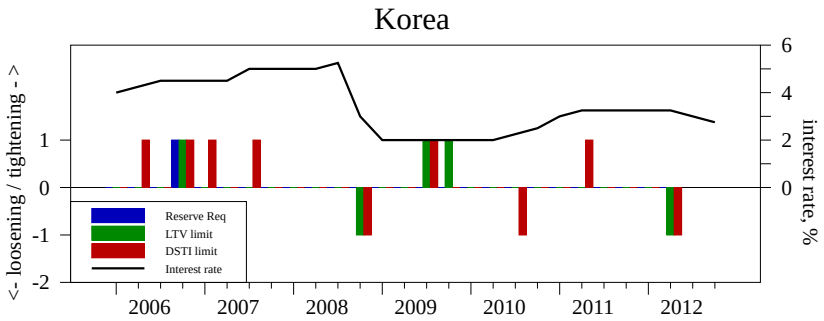
The repo rate is something of a **blunt instrument** for managing debt levels, however. According to the Riksbank's analysis, **substantial changes in the repo rate would be needed to have any appreciable effect on the debt-to-income ratio**. The NIER does not therefore believe there is currently any reason for monetary policy to be influenced by household debt.

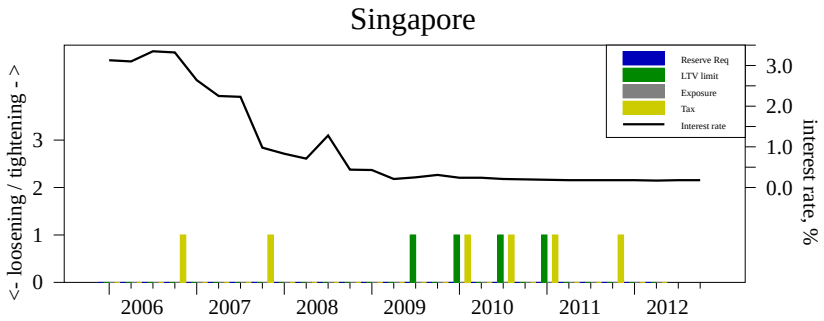
– "The Swedish Economy," National Institute of Economic Research, March 2014

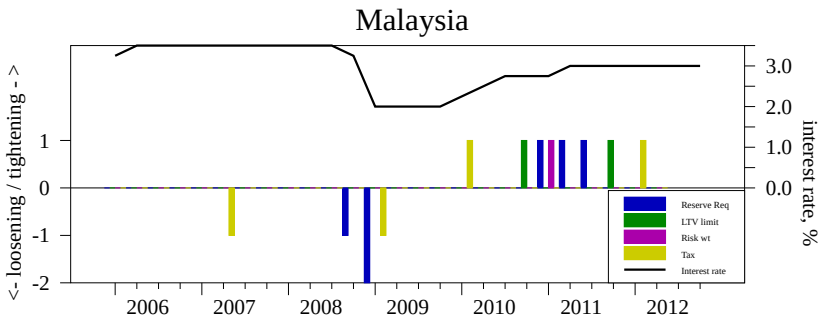
Other tools exist for financial stability

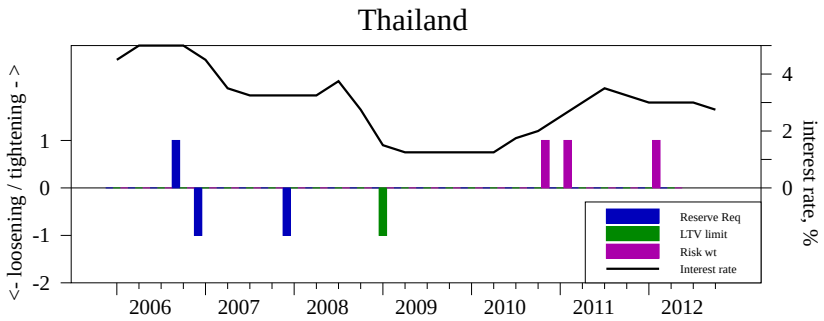












- Reserve requirements, LTV limits, etc., are widely used in Asia.

Source: Kuttner & Shim (2014)

What about an exchange rate goal?

- The exchange rate is something of an afterthought in the canonical New Keynesian model.*
  - Taylor: exchange rate changes = cost shocks, respond only if they affect inflation.
  - Galí & Monacelli: target domestic inflation, ignore the exchange rate.

*The term "open economy" appears only once in Woodford's *Interest and Prices*, on page 200. The exchange rate is never mentioned.

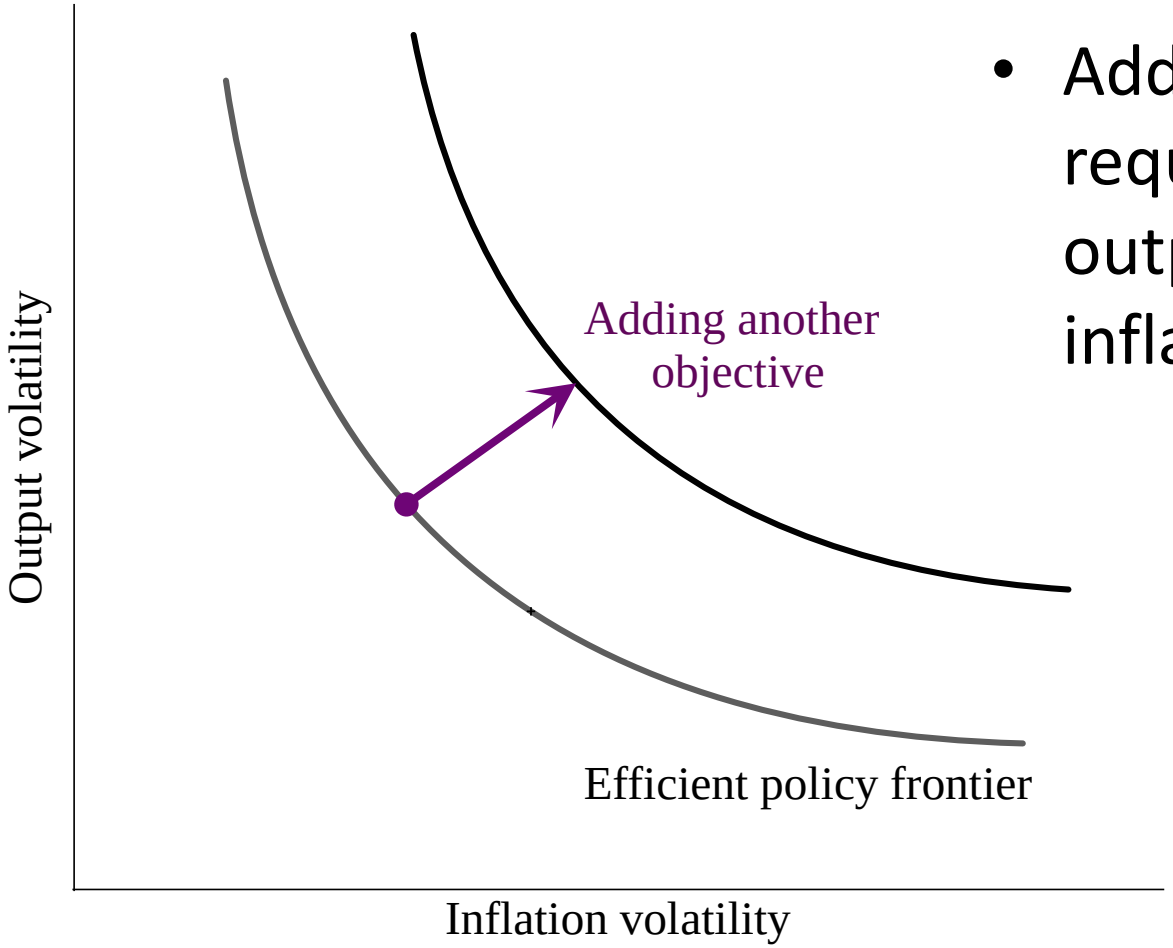
Rationalizing a weight on the exchange rate

- This requires direct costs of exchange rate fluctuations, not just pass-through effects.
- Possible sources:
  - Liability dollarization ("original sin")
  - Trade promotion
  - Devereux & Engel: Local currency pricing

Revealed preference:
What have central banks *been* doing?

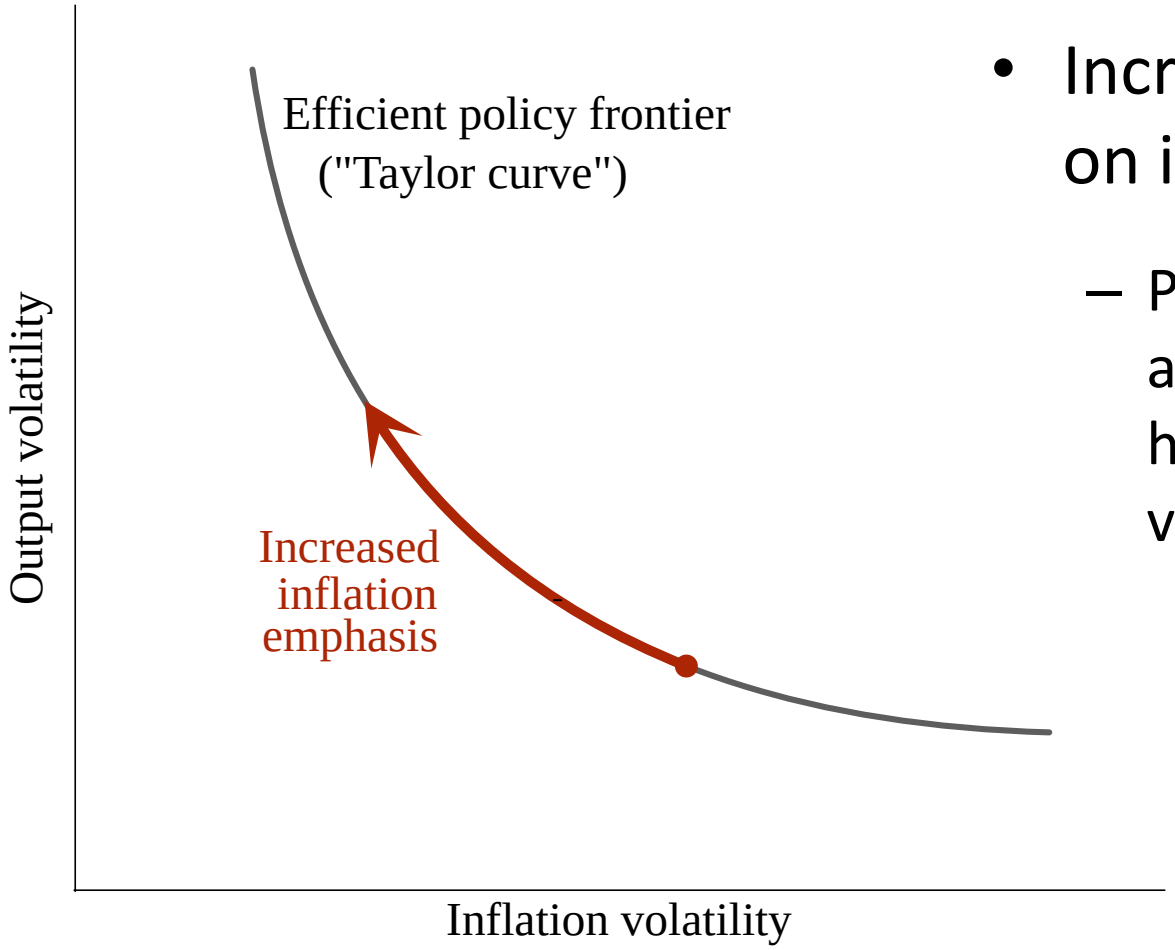
- Realized output and inflation volatility.
- Policy response to external conditions.
- Mini case study of 2007-08 commodity price shock.

Multiple objectives and macro volatility



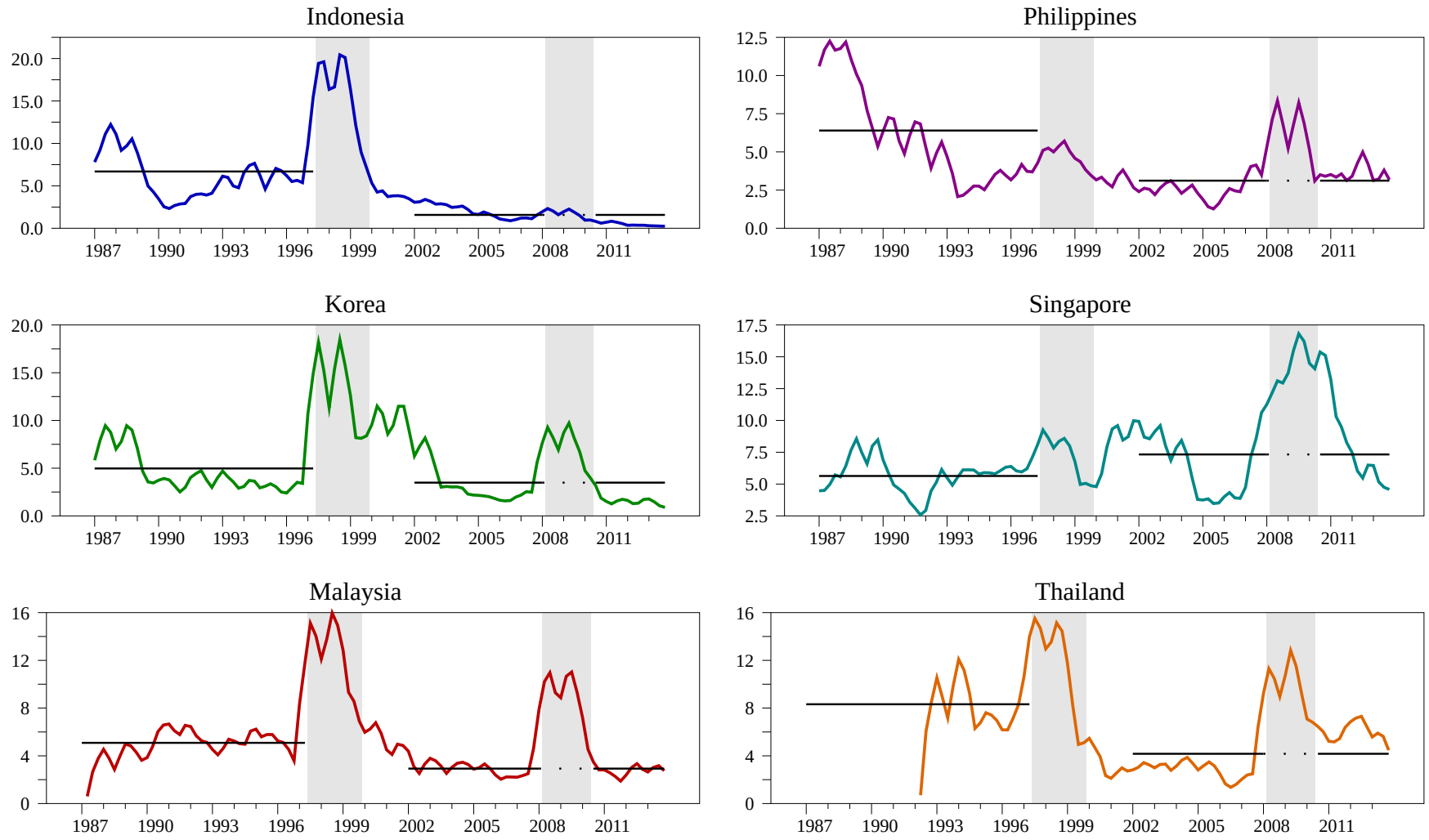
- Adding objectives requires sacrificing output and/or inflation stabilization.

Hawkishness and macro volatility



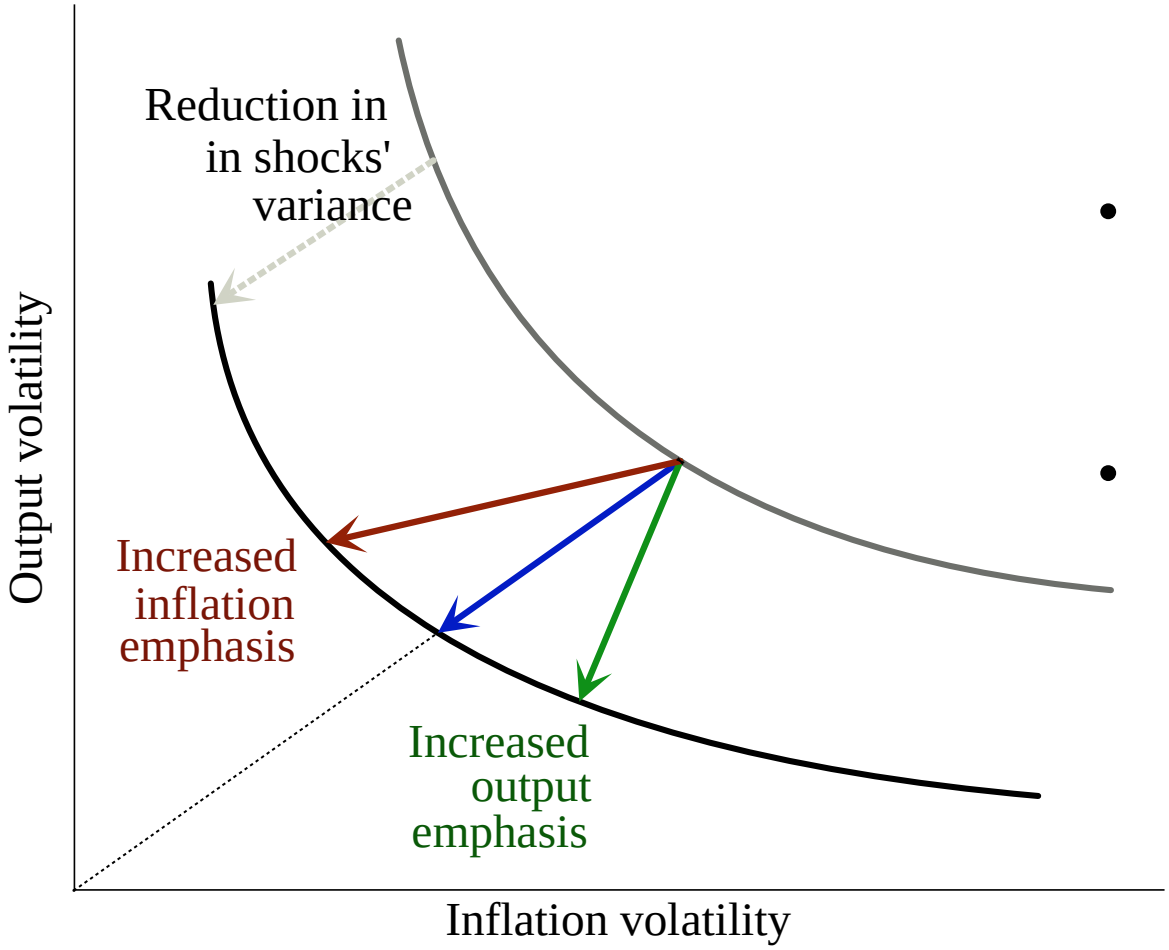
- Increased emphasis on inflation:
  - Price stability comes at the expense of higher output volatility.

Asia's "pretty good moderation"



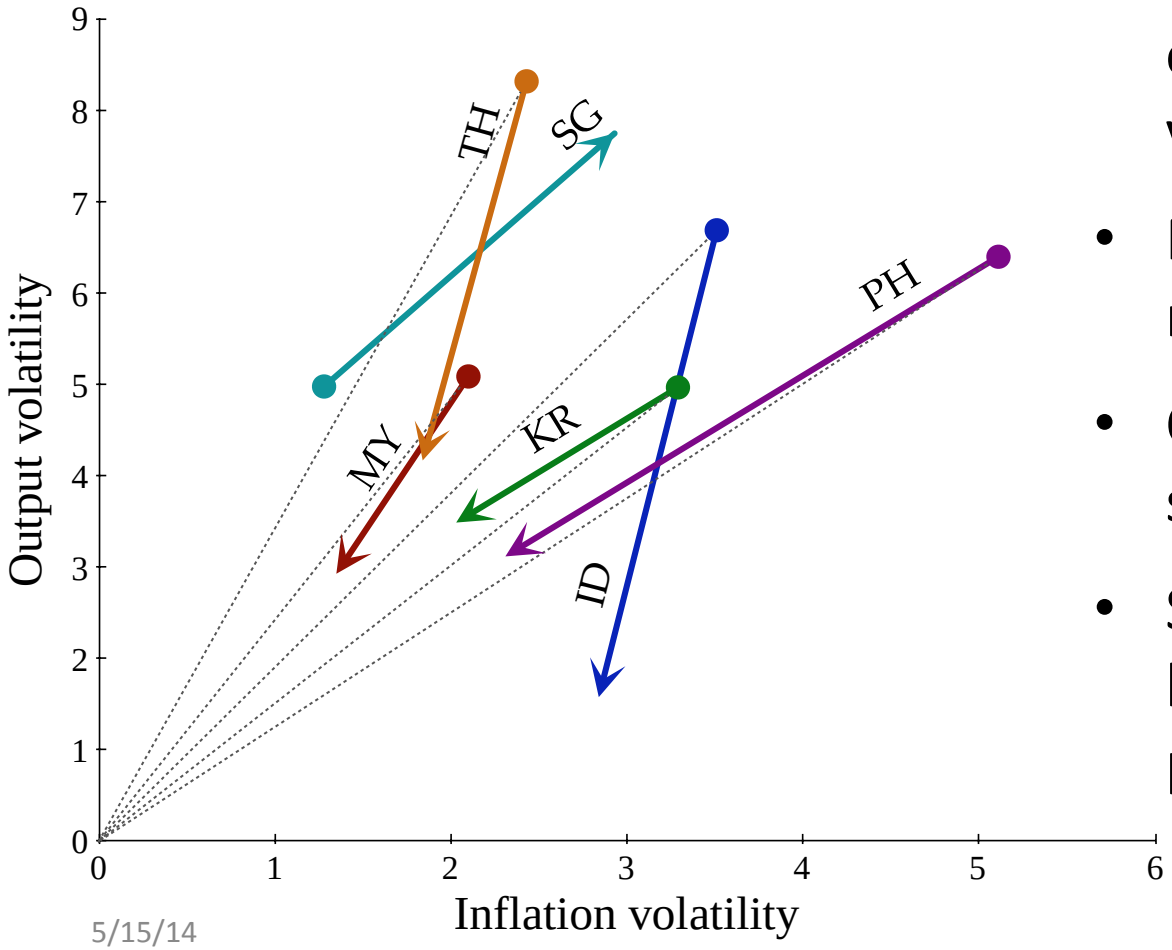
- Excluding crises, output volatility has fallen (except in Singapore).

Explaining output *and* inflation stability



- Smaller shocks and/or better policy shift policy frontier inward.
- No change in preferences: proportional volatility reduction.
- Greater inflation emphasis: relatively larger impact on inflation volatility.

No distraction or inflation obsession



- Proportional reduction in output and inflation volatility.
- No evidence of single-minded inflation targeting.
- Consistent with narrower set of policy objectives.
- Singapore is the exception: larger shocks? Different policy objectives?

Policy responses to external conditions

- Regress change in policy interest rate on:
  - Lagged change in and level of policy rate
  - Current and lagged Fed funds rate
  - Current and lagged Asia risk spread*
  - Quantitative Easing (QE) proxy
  - Fed's discount window and TAF lending
- Similar specifications for exchange rate change and FX intervention (change in reserves)
- Reduced form. All regressors are exogenous.
- Limitation: no controls for domestic conditions.

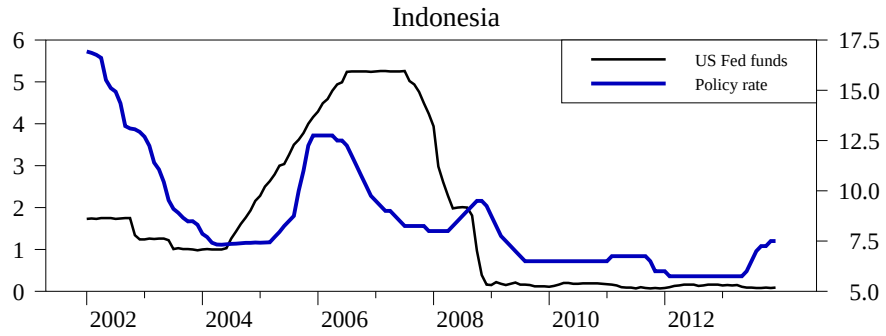
*BofA Merrill Lynch Asia Emerging Markets Corporate Plus Sub-Index Option-Adjusted Spread

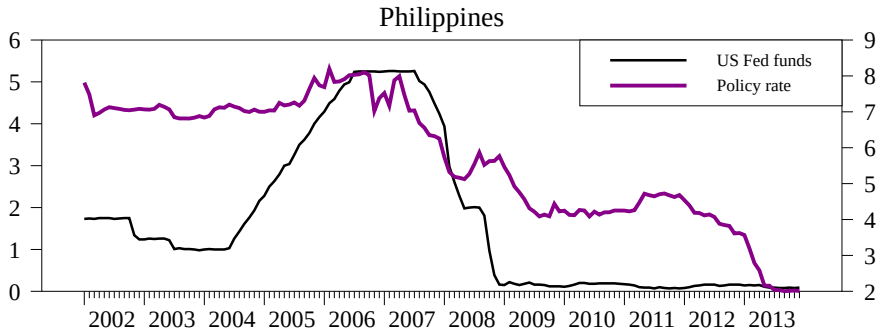
Reaction to the US federal funds rate

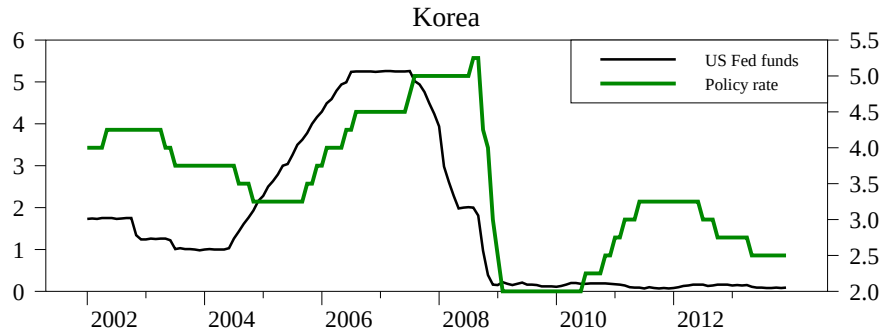
	Domestic policy rate		*Δ Exchange rate*		*FX reserves*
	Short run	Long run	FF change	Lag FF level	
Indonesia					
Korea		0.31			
Malaysia		0.14		+	+
Philippines	0.51	0.33		+	
Singapore	1.00	0.53	–	+	
Thailand				+	+

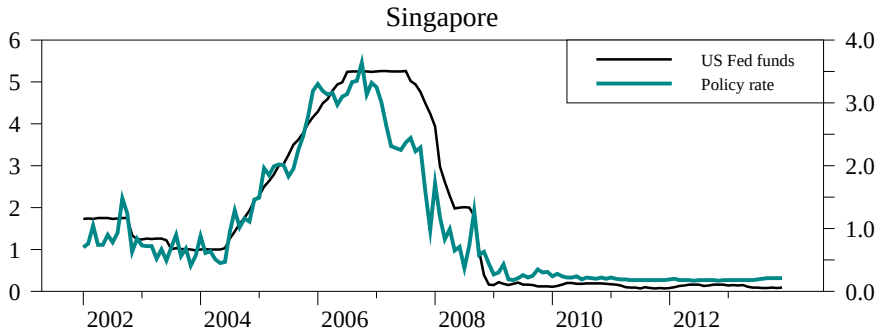
- In some cases domestic policy rates track the Fed funds rate.
- Funds rate often allowed to affect the exchange rate.
- Malaysia and Thailand use FX intervention.
- Does not *necessarily* imply concern with exchange rate stability.

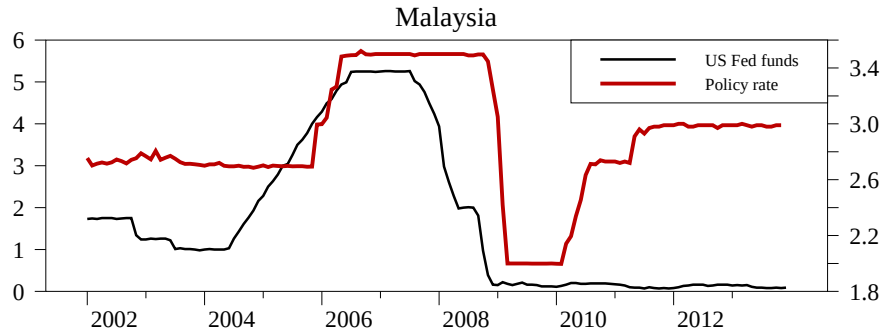
Plots corroborate the regressions

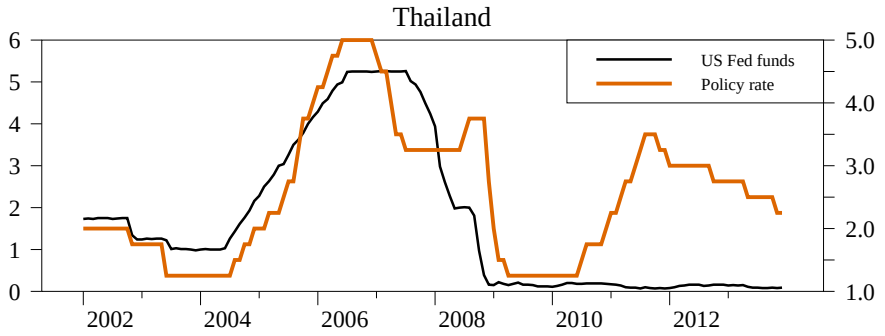












Reaction to U.S. Quantitative Easing

	Domestic policy rate	Δ *Exchange rate*	FX reserves
Indonesia	+	**+**	
Korea		**+**	
Malaysia		**+**	
Philippines			
Singapore		**+**	
Thailand	+	**+**	

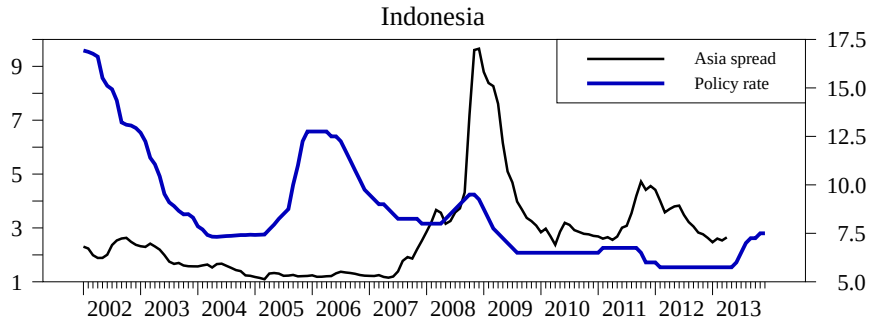
- QE led to exchange rate appreciation.
- Orders of magnitude: $100 billion → 1–3% Δ exchange rate.
- A largely laissez-faire response to QE – even in Singapore.
- Unexpected reaction in TH and ID: domestic conditions?

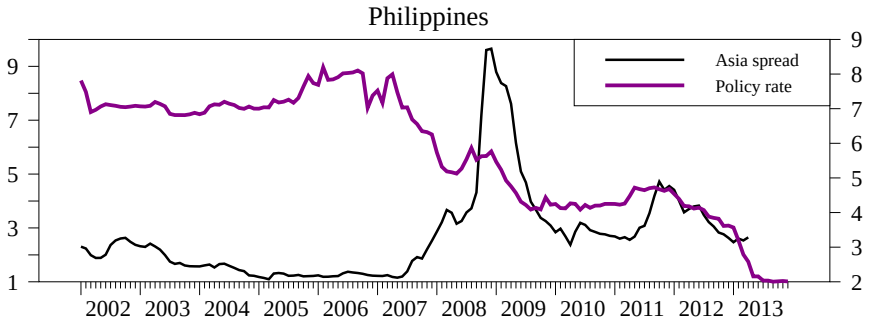
Reaction to Asia risk spread

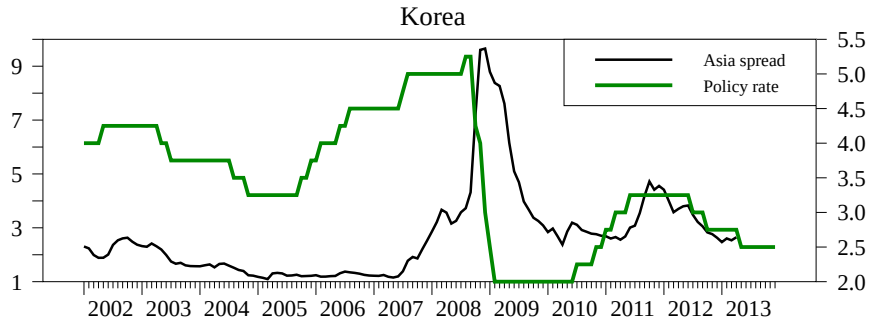
	Domestic policy rate	Δ *Exchange rate*	FX reserves
Indonesia		–	–
Korea		–	–
Malaysia		–	–
Philippines	+	–	
Singapore		–	–
Thailand	+	–	–

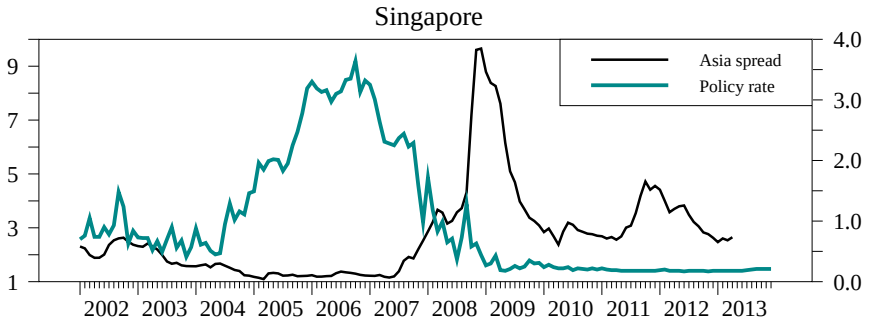
- Thailand & Philippines: **slight** tightening (1 pp Δ spread → 1–2 bp).
- Significant depreciation: 1 pp Δ spread → 2–7% Δ exch rate.
- In some cases FX sales: 1 pp Δ spread → $3 billion Δ reserves.
- (Contradicts Reinhart & Rogoff's "Fear of Floating" model.)

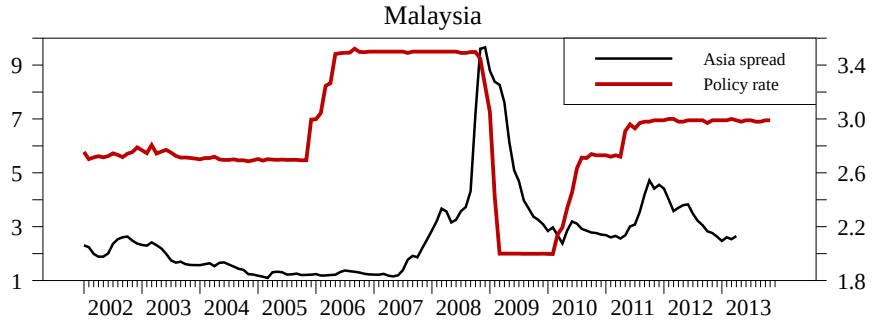
Plots again corroborate regressions

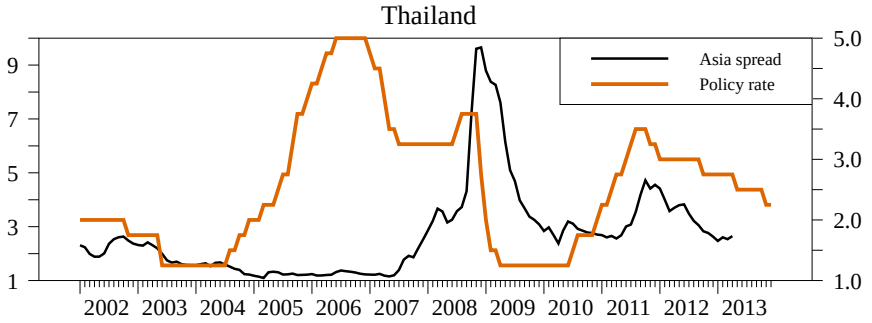








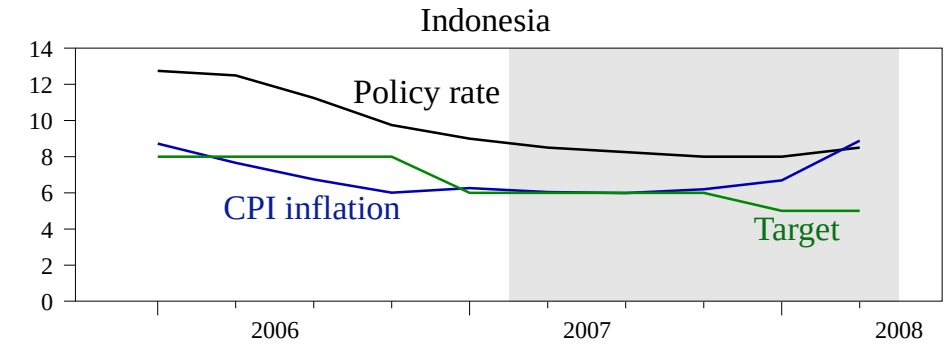


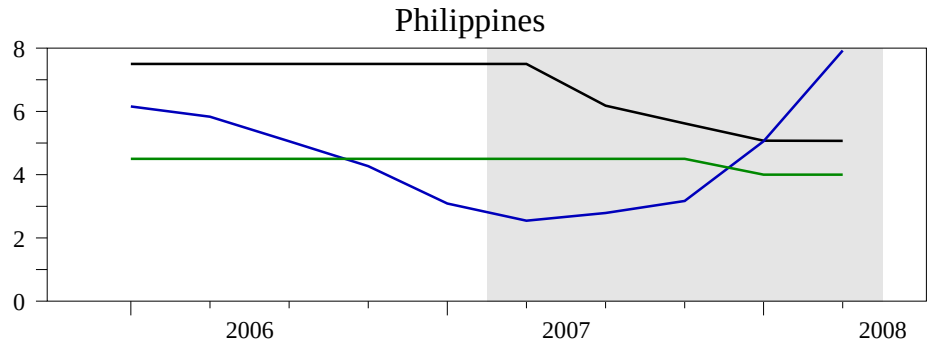


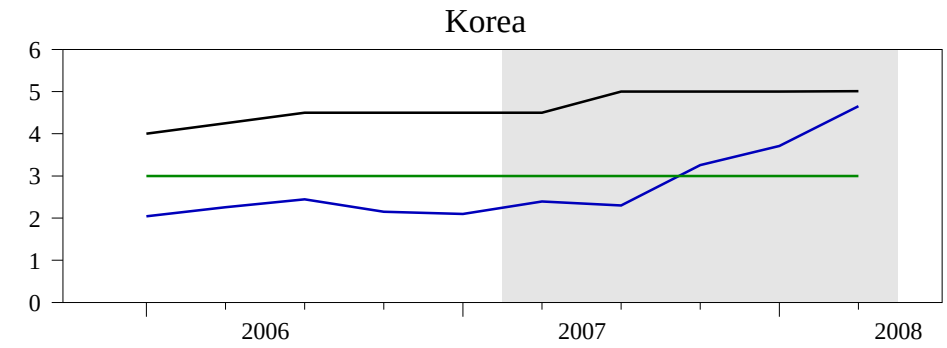
A mini case study of 2007-08

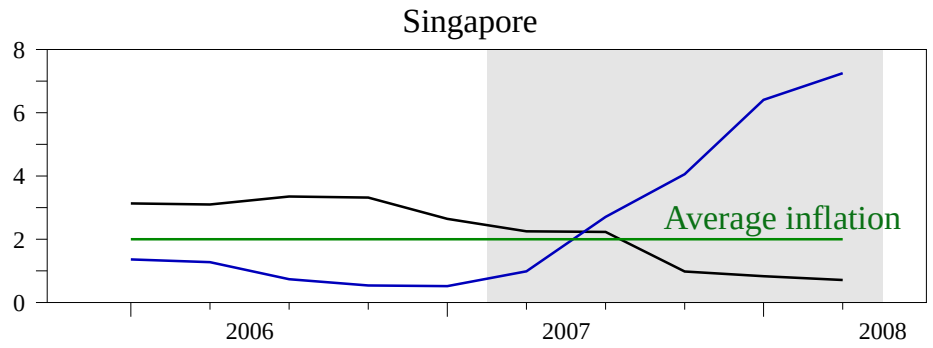
- Needed: a "natural experiment."
  - Ideally, one involving conflicts between goals.
  - The absence of a "divine coincidence."
- Hard to find one among the six Asian economies.
- A less-than-ideal experiment:
  - Commodity prices spiked in 2007-08, causing inflation to surge.
  - How did policy respond?
  - Experiment cut short by financial crisis, alas.

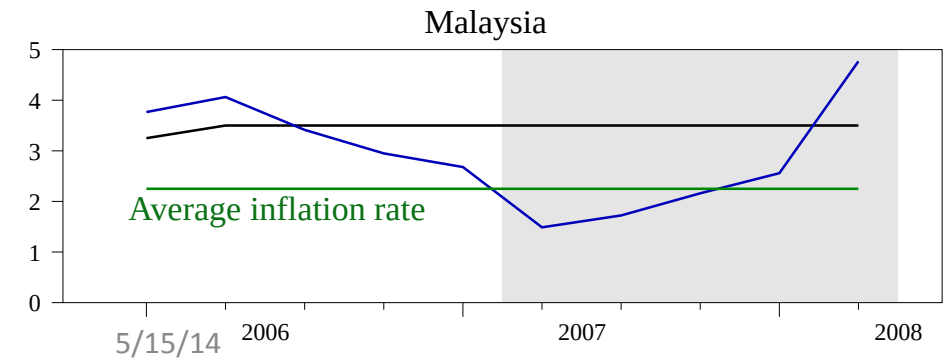
Central banks ignored inflation rise

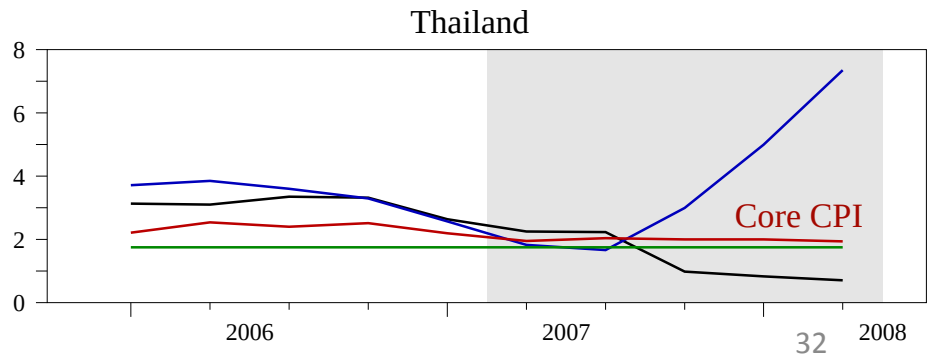








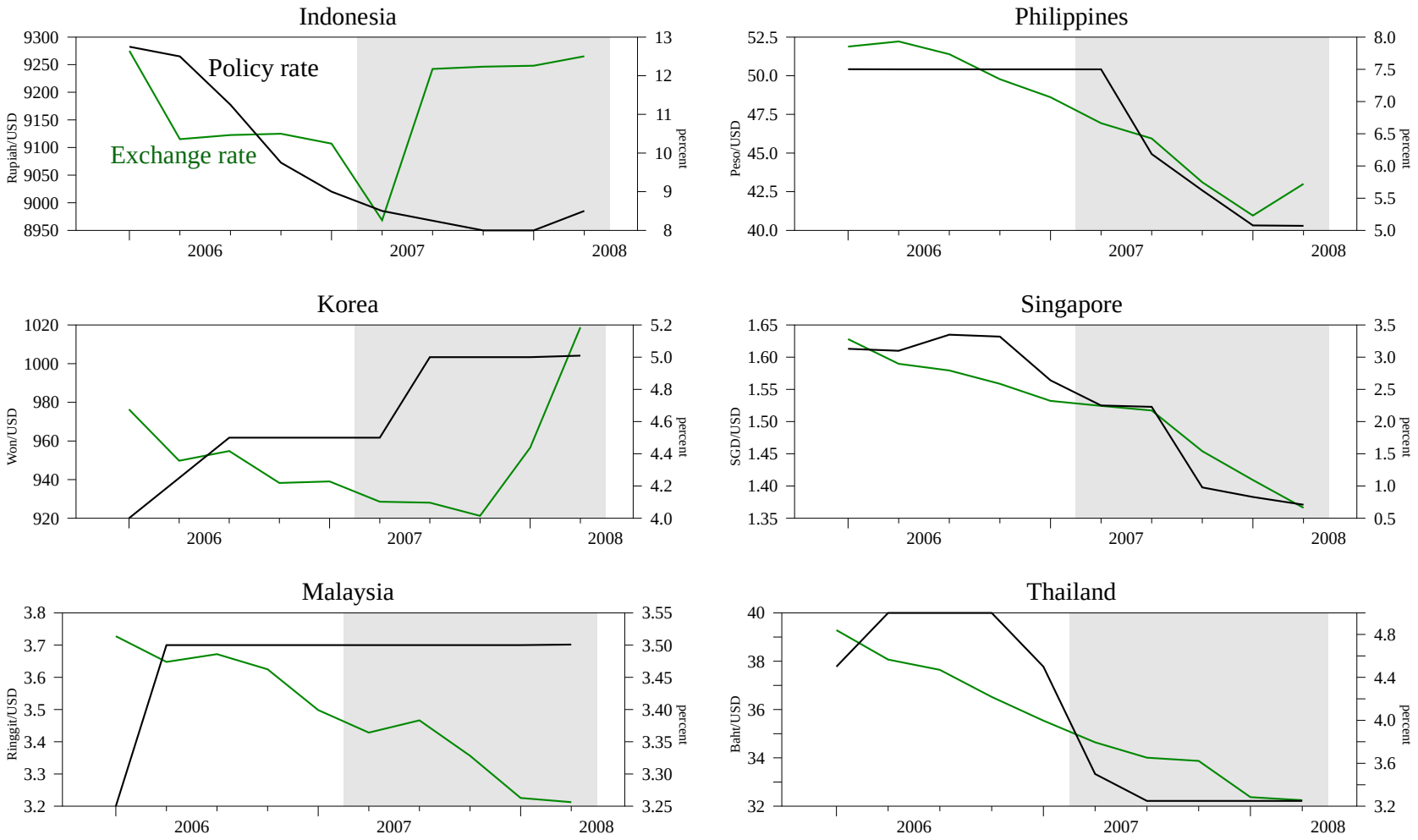




Explanations for the policy non-response?

- Commodity price shock thought to be temporary.
  - Thailand: targeting core inflation
  - But why the rate *cuts* in some countries?
- Weak level of economic activity?
  - No, real GDP was close to or above trend.
- External factors, i.e. the exchange rate?
  - Apparently, a reaction to appreciation in the Philippines, Thailand and Singapore.
  - To be expected for Singapore, of course.

Do exchange rates explain policy rates?



- Apparently yes in Philippines, Singapore and Thailand.

Bottom line: should there be other objectives?

- Justifying objectives beyond output and inflation requires extending standard macro theory.
- Targeting financial stability would present major practical problems.
- Exchange rate stability may already be a *de facto* goal. (Old news.)
- Entwined with the search for additional tools:
  - Non-interest rate (macroprudential) policies,
  - Sterilized foreign exchange intervention.

The proof of the pudding is in the eating

- Asian inflation targeters: flexible IT + some degree of exchange rate management (not news).
  - They do not overreact to supply-driven inflation.
  - FX intervention often used instead of interest rate.
- "Flexible/Eclectic IT" seems to have worked well.
  - Inflation is lower and more stable.
  - Output is less volatile.
- Why mess with success?