国际金融动荡下
处乱不惊的政策选择

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Based on joint research with Dr. Xuehui Han, “Policy Choices and Resilience to International Monetary Shocks”

The Shanghai Free Trade Pilot Zone

- 上海自贸区改革实验的范围超过贸易
  - Goes beyond experiments in trade openness
- 金融改革的创新与实验是其重要内容之一。
  - Experiments in financial reforms are priorities too.
- 探索资本账户开放又被政府定义为是金融改革的重要内容之一。
  - Capital account convertibility is a particular item of experiments
- 国内及国际金融机构赞成者众多。
  - Strong support from financial institutions, both domestic and international

- 可能的麻烦 Possible trouble：

  开放的资本账户 + 高度管控的汇率制度

  -》本国的货币政策丧失自主权

Open capital account + inflexible exchange rate

  -> loss of monetary policy autonomy

- 美国升（降）息，中国会被迫跟进。
  - When US changes its interest, China will NOT have the luxury of not following it.

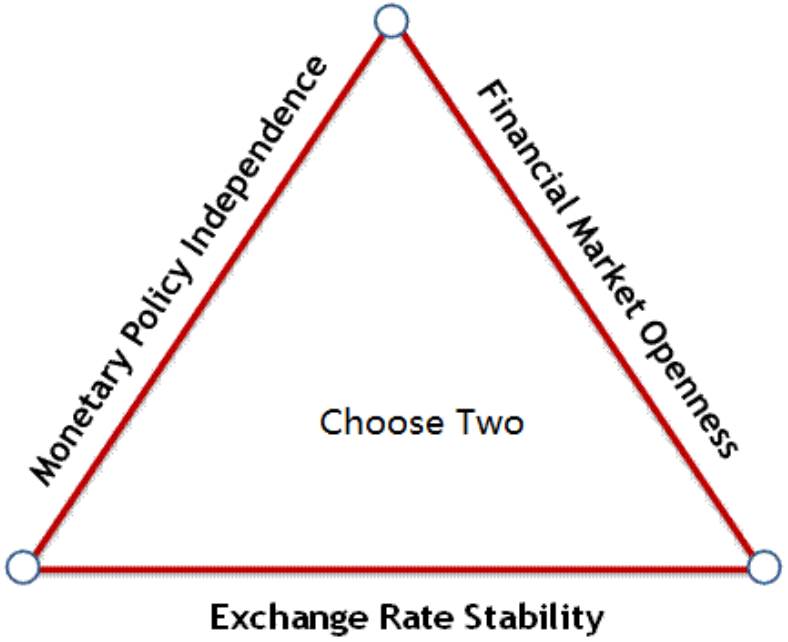
- 教科书及IMF的推崇方案：同时采用浮动/灵活名义汇率制度
- Possible solution: do a flexible exchange rate + open capital account combination

- 逻辑：蒙代尔教授的“三难假说”
  - Professor Robert Mundell’s famous Trinity/trilemma hypothesis

Policy Choices-*Trilemma theory*
三元悖论/三难选择理论

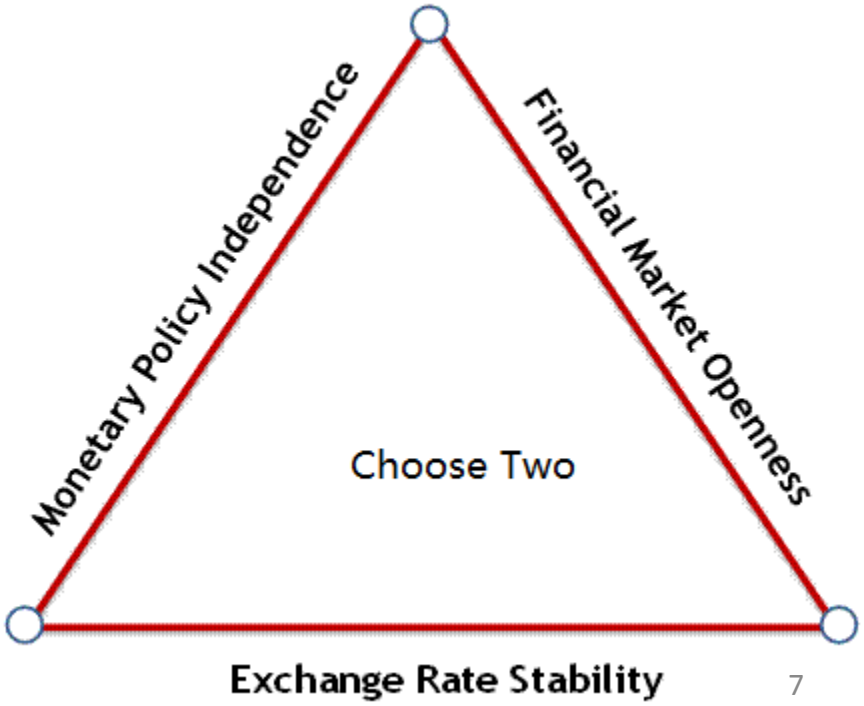
- No “triangular love”: cannot have a flexible exchange rate, an independent monetary policy, and free capital mobility simultaneously

不能同时实现浮动名义汇率，资本自由流动和独立的货币政策



- Independent monetary policy is achievable only through a flexible exchange rate regime OR capital controls

只有选择浮动汇率或者资本管制才能实现独立的货币政策



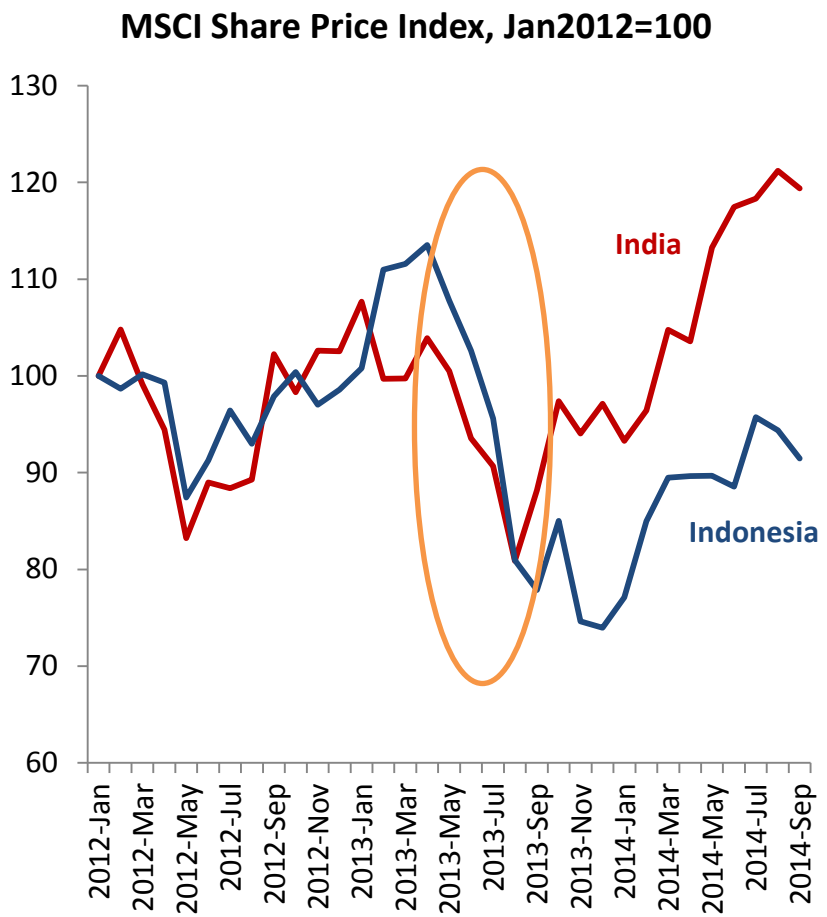
Policy Choices and Resilience to International Monetary Shocks

Xuehui Han and Shang-Jin Wei
Asian Development Bank

Background

- The tapering talk in June 2013 triggered jitters in the financial markets of emerging economies such as India and Indonesia

2013年6月美国关于缩减量化宽松货币政策的消息引发新兴金融市场恐慌, 例如, 印度和印度尼西亚



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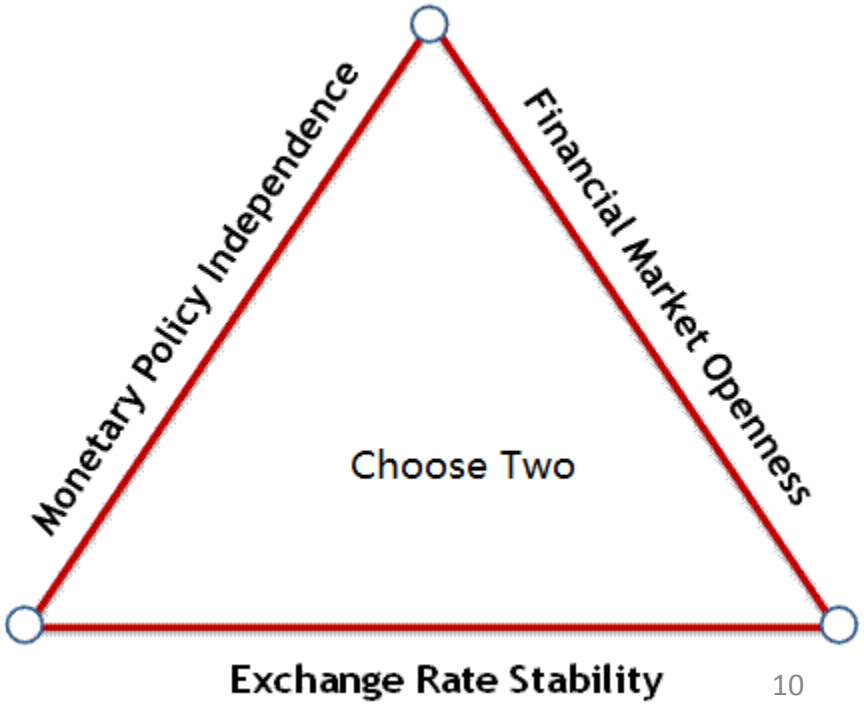


Alternative views

- Calvo and Reinhart, QJE, 2002
  - "Fear of floating"
- H. Tong and S.J. Wei, RFS, 2011
  - The nominal exchange rate regime does not make a difference to the transmission of global financial crisis to developing countries
- H. Rey, Jackson Hole presentation, 2013
  - Capital flows are highly correlated regardless of nominal exchange rate regime.

Competing recommendations:
(不同的政策建议)

- For emerging markets: prioritize exchange rate flexibility (e.g., IMF's Article IV reports on the People's Republic of China, 2014) since capital controls are leaky (Edwards, 2012) and costly (e.g., Wei and Zhang, 2007)
- 由于资本管制有漏出性以及成本较高, 新兴市场应该优先考虑采用浮动汇率政策

- Only capital controls confer real monetary autonomy (Tong and Wei (2011), Chinn and Wei (2013), and Rey (2013))
- 由于名义汇率制度无法有效降低全球金融危机的影响, 只有资本管制与否影响货币政策独立性

Objective

- Does a flexible exchange rate regime really confer monetary policy autonomy?
- 验证灵活的汇率制度是否真的带来了自主的货币政策?

- Capital control or flexible exchange rate regime, which one is more effective?
- 资本管制和浮动汇率制度, 哪个更有效?

The Baseline Model

$$(1)\Delta i_{i,t}^{p} = \lambda i_{i,t-1}^{p} + \gamma_1 \Delta r_{i,t}^{P*} + \gamma_2 \Delta r_{t}^{US},$$

- $\Delta r_{i,t}^{P*}$: a desired change based on purely domestic factors
- Δr_{t}^{US}: an "involuntary" change, responding to a US rate change

$$\Delta r_{i,t}^{P*} = \tilde{c} + \widetilde{\phi_1} * \Delta \text{GDP growth}_{i,t} + \widetilde{\phi_2} * \Delta Inflation_{i,t} + \widetilde{e_{i,t}}$$

$$\gamma_2 = \beta_1 D_{fixed.NC} + \beta_2 D_{fixed.C} + \beta_3 D_{flex.C} + \beta_4 D_{flex.NC}$$

The model used for estimations

$$\Delta i_{i,t}^{p} = c + \lambda i_{i,t-1}^{p} + \phi_1 * \Delta \text{GDP growth}_{i,t} + \phi_2 * \Delta Inflation_{i,t} + \beta_1 D_{fixed.NC} \Delta r_{i,t}^{US} + \beta_2 D_{fixed.C} \Delta r_{i,t}^{US} + \beta_3 D_{flex.C} \Delta r_{i,t}^{US} + \beta_4 D_{flex.NC} \Delta r_{i,t}^{US} + \varepsilon_{i,t}$$

Data

- Forecasts of GDP growth and Inflation are from WEO (semiannually) starting from 1999;
- Policy interest rate: monetary policy rate and discount rate (when monetary policy rate is not available);
- Capital Control Index: 1–Chinn-Ito financial openness index
- Nominal Exchange Rate regime: AREAER exchange rate regime classifications

Hypothesis and Analysis

Table 1 Combinations of exchange rate regimes and capital control scenarios and the coefficients on foreign policy influence

	No Capital Controls	Capital Controls
Fixed Exchange Rate Regime	β_1	β_2
Flexible Exchange Rate Regime	β_4	β_3

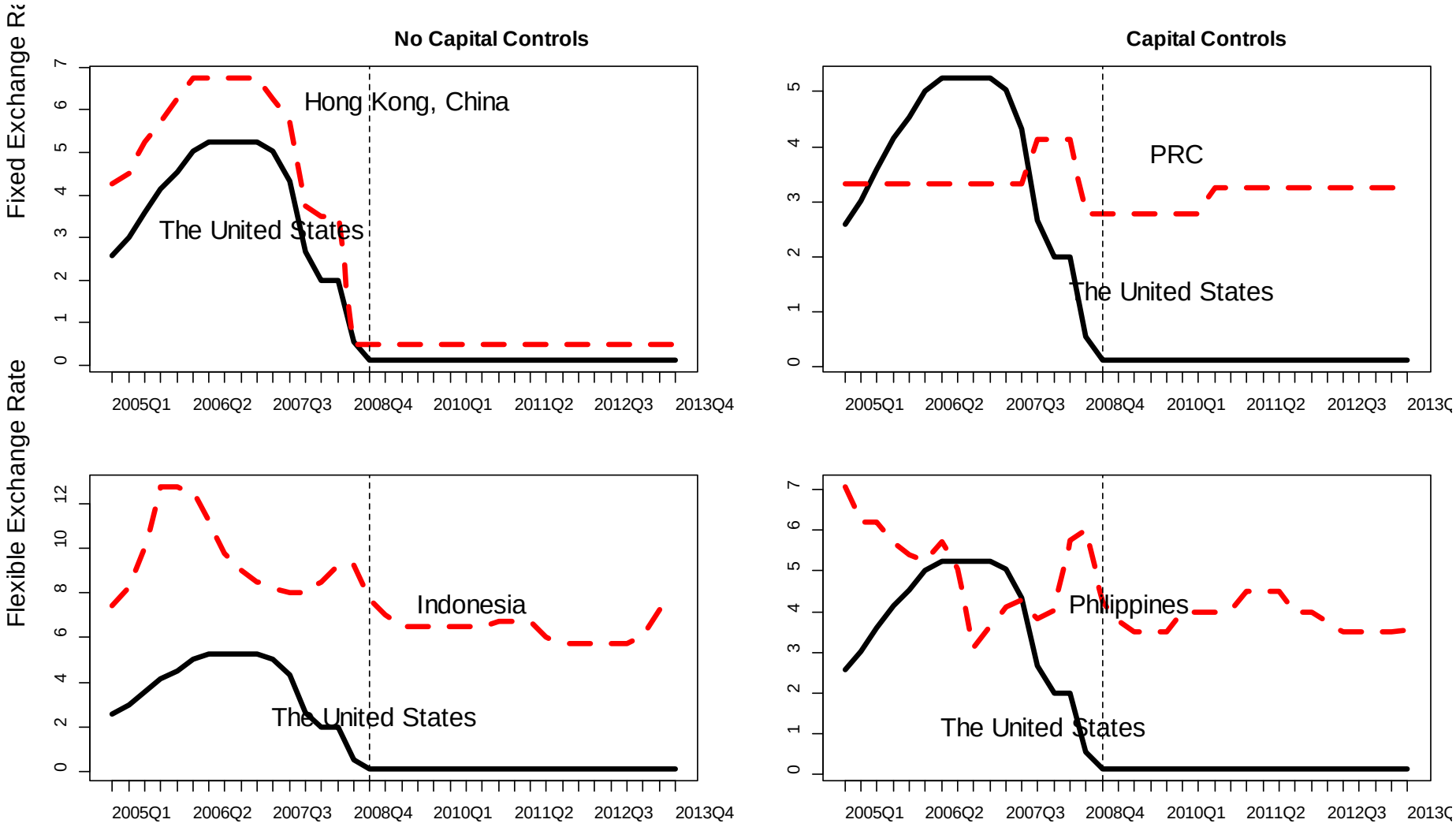
四种汇率和资本管制组合方式中基准类型:
固定利率和无资本管制

Table 2 Country classifications for the baseline estimation

	No Capital Controls	Capital Controls
Fixed Exchange Rate Regime	Argentina(2000Q3), Bolivia(2006Q2-2006Q3), Bulgaria(2006Q2-2008Q4), HK, Croatia(2007Q2-2007Q4), Denmark(2007Q2-2008Q4), Ecuador(2004Q2-2008Q4), Ireland(2000Q2-2005Q3), Lithuania(2005Q3-2008Q4)	Argentina(2006Q2-2007Q4), Belarus(2005Q2-2007Q4), Bulgaria(2000Q3-2005Q3), PRC(2000Q2-2005Q3 & 2008Q2), Ecuador(2001Q3-2003Q3), Pakistan(2005Q2-2006Q3)
Flexible Exchange Rate Regime	Australia(2000Q2-2008Q4), Bolivia(2003Q2-2005Q3 & 2007Q2-2007Q4), Canada, Chile(2001Q2-2008Q4), Colombia(2008Q2-2008Q4), Costa Rica, Croatia(2003Q2-2006Q3 &2008Q2-2008Q4), Czech Republic(2001Q3-2008Q4), Denmark(2000Q2-2006Q3), Hungary(2001Q2-2008Q4), Indonesia, Ireland(2006Q2-2008Q4), Israel, Japan, Mexico, New Zealand, Norway, Peru, Romania(2004Q2-2008Q4) Singapore, Sweden, Switzerland, United Kingdom	Argentina(2001Q2-2001Q3 & 2003Q3 & 2004Q2-2005Q3 & 2008Q2-2008Q4), Belarus(2001Q3-2004Q3 & 2008Q2-2008Q4), Bolivia(2008Q2-2008Q4), Brazil, Chile(2000Q3), PRC(2006Q2-2007Q4), Colombia(2000Q3-2007Q4), Hungary(2000Q2-2000Q3), India, Republic of Korea, Pakistan (2000Q2-2004Q3 & 2007Q2-2008Q4), Philippines, Poland, Romania(2003Q3), South Africa, Thailand, Turkey(2000Q2-2000Q3 & 2002Q3 & 2003Q2-2008Q4)

Note: Some countries have different exchange rate regimes during different time periods; the periods are enclosed in parentheses.

PRC=People's Republic of China; HK=Hong Kong, China


Fixed Exchange Ra
Flexible Exchange Rate
No Capital Controls
Capital Controls
Hong Kong, China
The United States
PRC
The United States
Indonesia
The United States
Philippines
The United States
2005Q1
2006Q2
2007Q3
2008Q4
2010Q1
2011Q2
2012Q3
2013Q4

Main findings

- An increase in the US interest rate by 100 basis points is followed by an increase in the interest rate of a peripheral country with a fixed exchange rate regime and no capital controls by 54 basis points on average;
  美国利率上升100个基准点, 采用固定汇率和无资本管制的国家利率上升54个点

- Capital controls with a fixed exchange rate regime allow a country to be immune from the influence of the United States' interest rate;
  资本管制配合固定汇率政策可以帮助不受美国利率变动影响

- The same applies to capital controls with a flexible exchange rate regime;
  资本管制配合浮动汇率同样可以帮助不受美国利率变动影响

- Without capital controls, countries on a flexible exchange rate regime generally follow US monetary policy moves in the same direction, albeit not one for one.
  浮动汇率但不限制资本流动将受美国利率变动影响

Table 3 Coefficient estimates for baseline model from 2000 to 2008

	Estimates	Std. Err.	T-Value
$i^{p}_{i,t-1}$	**-0.15**	**0.01**	**-14.92**
ΔGDP growth$_{i,t}$	-0.01	0.08	-0.14
$\Delta Inflation_{\mathrm{i,t}}$	**0.45**	**0.05**	**9.81**
$D_{fixed\ .NC}\Delta r^{US}_{i,t}$	**0.54**	**0.20**	**2.68**
$D_{fixed\ .C}\Delta r^{US}_{i,t}$	0.28	0.25	1.12
$D_{flex\ .NC}\Delta r^{US}_{i,t}$	**0.32**	**0.09**	**3.40**
$D_{flex\ .C}\Delta r^{US}_{i,t}$	0.18	0.12	1.55
Adjusted R-squared		0.34	
No. of Observations		604	

Robustness Check

Table 4. Coefficient estimates using different exchange rate regimes and capital controls indexes

	Re-defining capital controls		Re-defining the exchange rate regime		Using pre-assigned Taylor Rule	
	Estimates	Std. Err.	Estimates	Std. Err.	Estimates	Std. Err.
$i^{p}_{i,t-1}$	**-0.146**	**0.010**	**-0.14**	**0.01**	-0.15	0.01
ΔGDP growth$_{i,t}$	-0.010	0.075	-0.004	0.08	0.29*0.5=0.15	
$\Delta Inflation_{i,t}$	**0.453**	**0.046**	**0.45**	**0.05**	0.29*1.5=0.44	
$D_{fixed\ .NC}\Delta r^{US}_{i,t}$	**0.521**	**0.207**	**0.29**	**0.13**	**0.45**	**0.21**
$D_{fixed\ .C}\Delta r^{US}_{i,t}$	0.277	0.320	0.17	0.16	0.23	0.32
$D_{flex\ .NC}\Delta r^{US}_{i,t}$	**0.350**	**0.101**	**0.39**	**0.11**	**0.30**	**0.10**
$D_{flex\ .C}\Delta r^{US}_{i,t}$	0.078	0.166	0.22	0.14	0.04	0.17
Adjusted R-squared		0.34		0.34		0.34
No. of Observations		604		604		604

Imposed-parameter Taylor rule: $r_i^{P*} = r^* + \pi^* + 1.5(\pi - \pi^*) + 0.5y$

Table 5 Coefficient estimates for four groups of countries using SUR

	Fixed and capital controls		Fixed and no capital controls		Flexible and capital controls		Flexible and no capital controls	
	Estimates	Std. Err.	Estimates	Std. Err.	Estimates	Std. Err.	Estimates	Std. Err.
Intercept	0.24	0.07	0.48	0.14	1.24	0.21	0.36	0.13
$i^{p}_{i,t-1}$	-0.07	0.01	-0.13	0.03	-0.18	0.03	-0.10	0.03
Δ GDP growth	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.05
Δ Inflation	0.30	0.03	0.30	0.03	0.30	0.03	0.30	0.03
Δr^{us}	**0.23**	**0.07**	**0.47**	**0.08**	0.17	0.11	**0.28**	**0.09**

- The results of the baseline model are robust to changes in exchange rate regime definition, capital control index, the Taylor rule specification, and SUR.

  采用不同的指标定义汇率和资本管制类型，以及其他政策利率预期公式不影响基本结论

中国有无特殊性？

- 大国
  - 总有一定的独立性
  - 但独立性有限

结论 Conclusions

- The trilemma might be misleading hold in the data
  三元悖论理论的通常解释大有问题

- Countries with a flexible exchange rate system do not appear to be able to insulate themselves from the influence of US monetary policy if they do not have capital controls
  如果不配合资本管制, 浮动汇率国家无法不受美国利率变动影响

- Capital controls do appear to buy countries a significant measure of monetary policy independence
  资本管制可以帮助增加货币政策独立性