



Observations on Renminbi's Course

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ACAES Panel

“Can the Chinese Renminbi Rule?
If So, How and When?”

ASSA, San Francisco

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What does it mean by “rule”

- RMB as a global international currency?
- RMB as regional international currency?
- RMB as a reserve currency?
- RMB as anchor currency?

Roles of an International Currency

Table 1:

<i>Function of money</i>	Governments	Private actors
<i>Store of value</i>	International reserve holdings	Currency substitution (private dollarization)
<i>Medium of exchange</i>	Vehicle currency for foreign exchange intervention	Invoicing trade and financial transactions
<i>Unit of account</i>	Anchor for pegging local currency	Denominating trade and financial transactions

Source: Kenen (1983)

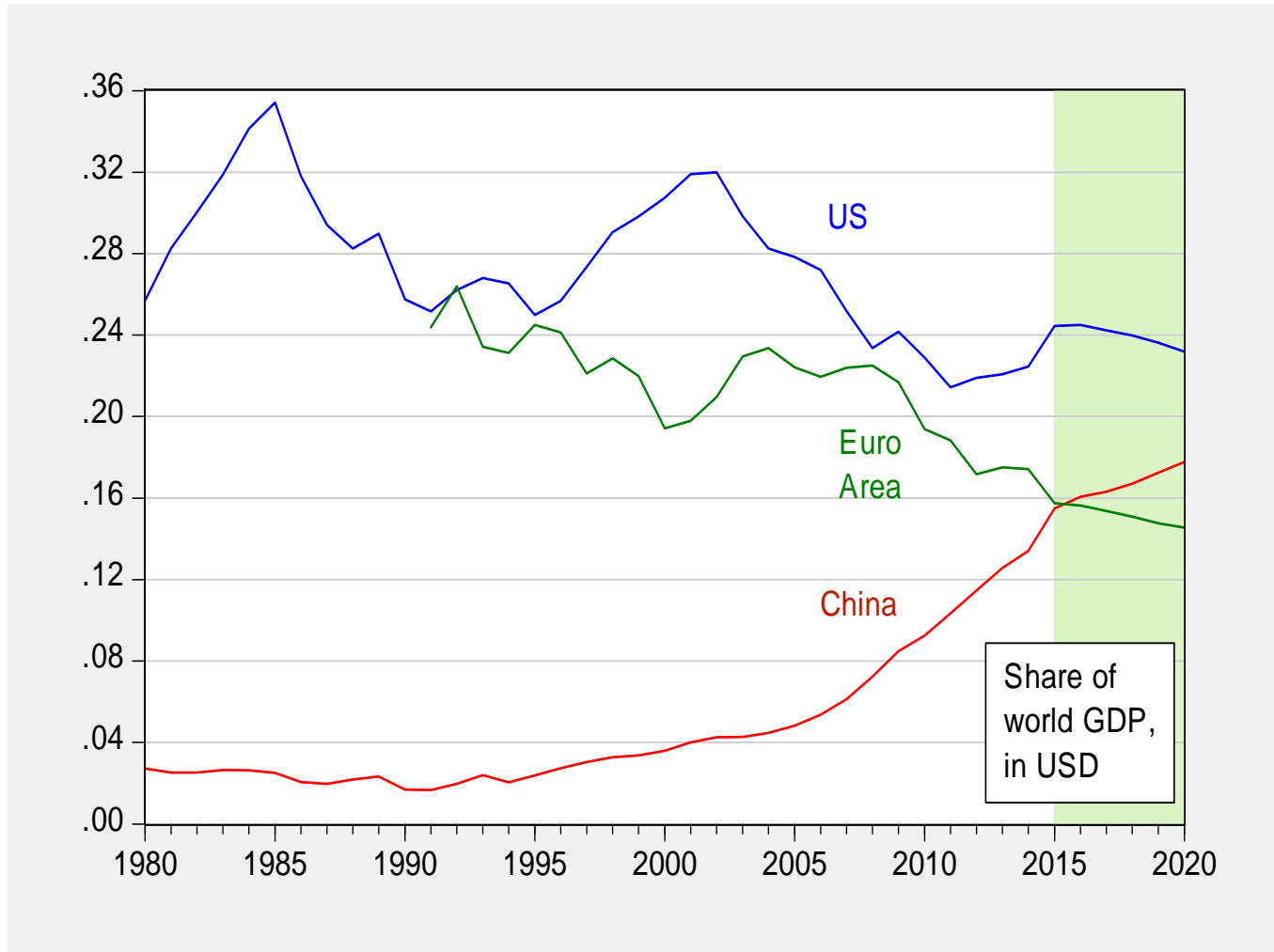
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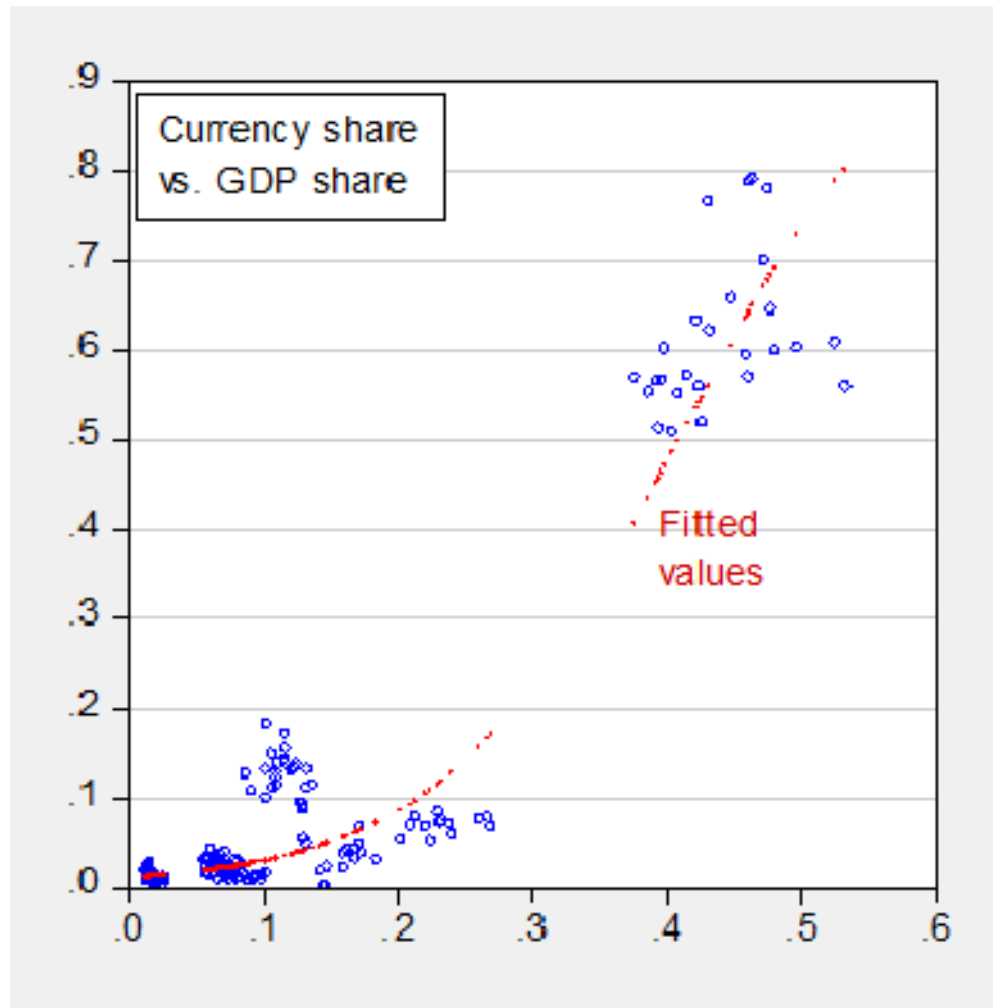
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China's Economic Mass Implies a Role



A Logistic Transform - Graphical



Source: Chinn and Frankel, 2007



Determinants, again

- (1) The pattern of output and trade.
- (2) Financial markets
- (3) Confidence in the currency
- (4) Network externalities

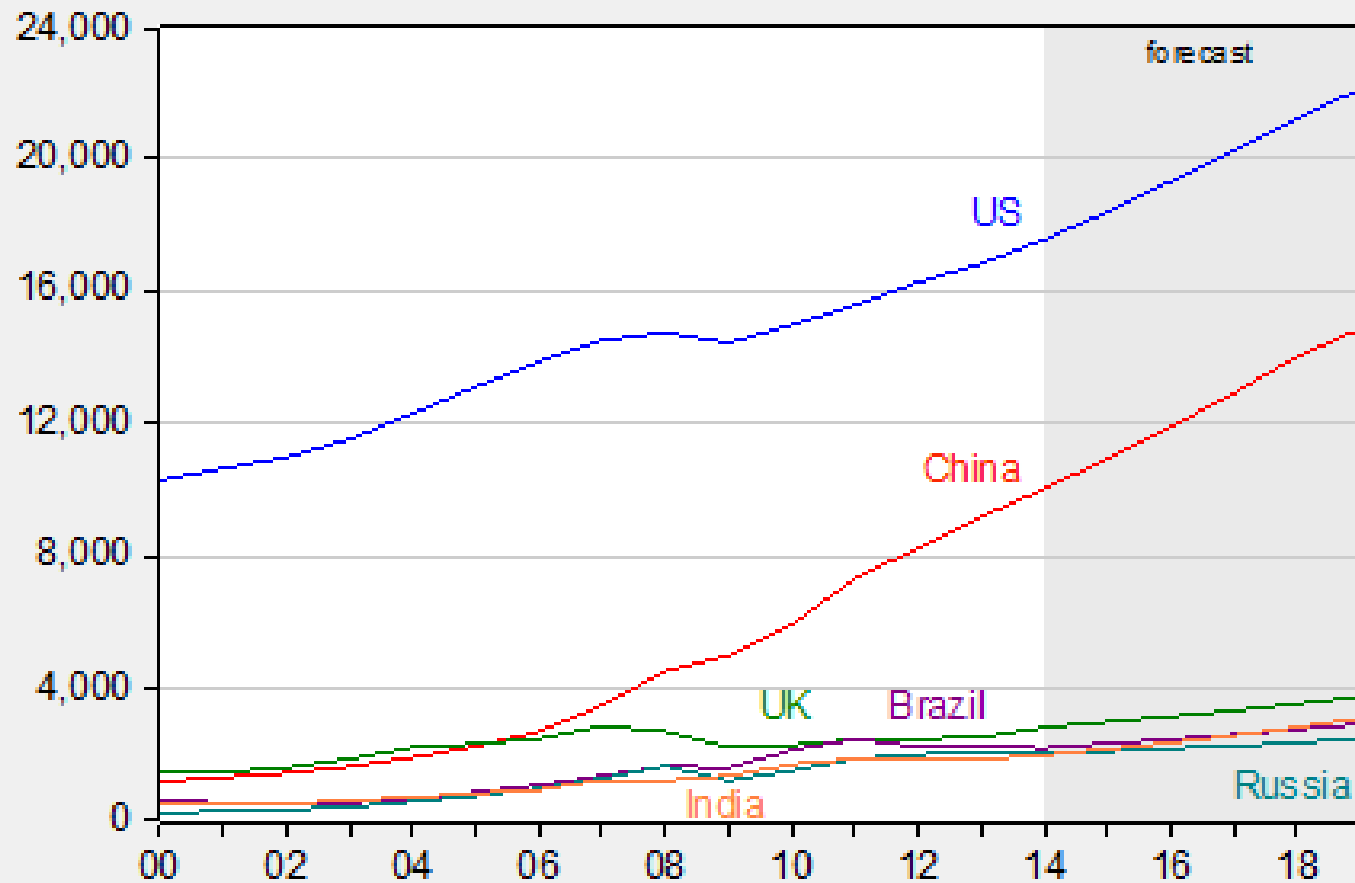
Key Estimates, using Logit

Table 2: Panel Regression for Determination of Currency Shares

Dependent variable: logit of currency shares in reserve holdings Pre-euro sample (1973-98)			
	[1]	[2]	[3]
Constant	-0.65 [0.15]	-0.49 [0.14]	-0.12 [0.06]
GDP ratio (y)	2.77 [0.64]	2.22 [0.62]	1.04 [0.29]
Inflation differential (π)	-2.64 [1.16]		
Depreciation (Δs)		-1.08 [1.29]	-1.10 [0.59]
Exratevar (σ)	-0.98 [0.57]	-0.58 [0.58]	-1.25 [0.34]
FX Turnover ratio (to)	0.45 [0.29]	0.21 [0.30]	0.43 [0.14]
Lag: logit(share _{t-1})	0.85 [0.03]	0.88 [0.03]	0.96 [0.01]
N	182	182	156
Sample	1973-98	1973-98	1973-98
Adjusted R2	0.97	0.97	0.99

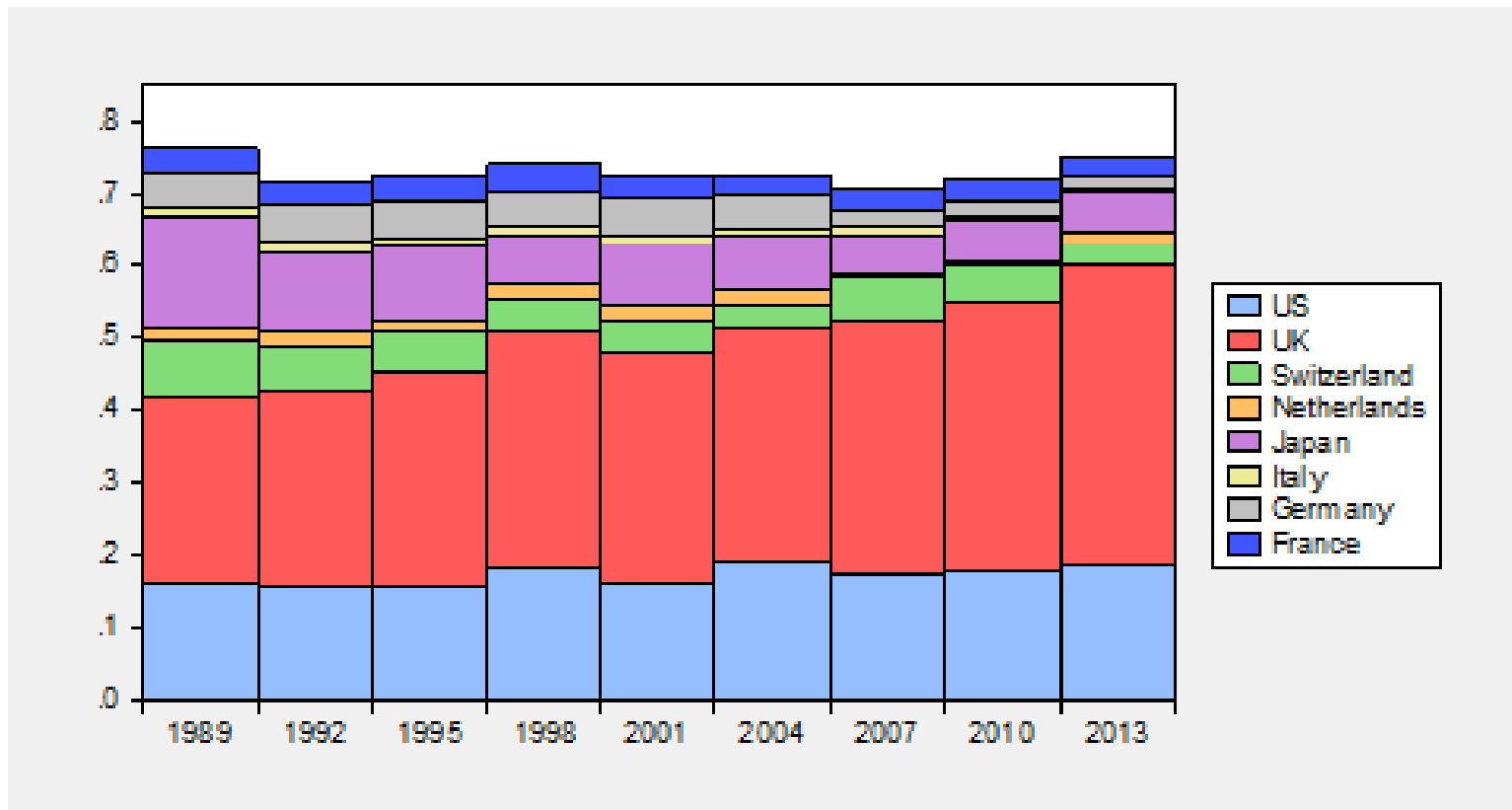
Notes: Dependent variable is $\text{logit}(\text{share}) = \log(\text{share}/(1-\text{share}))$. All variables are in decimal form. Figures in bold face are significant at the 10% level. Column [3] omits Japanese yen, and uses cross-section weighted standard errors.

GDP



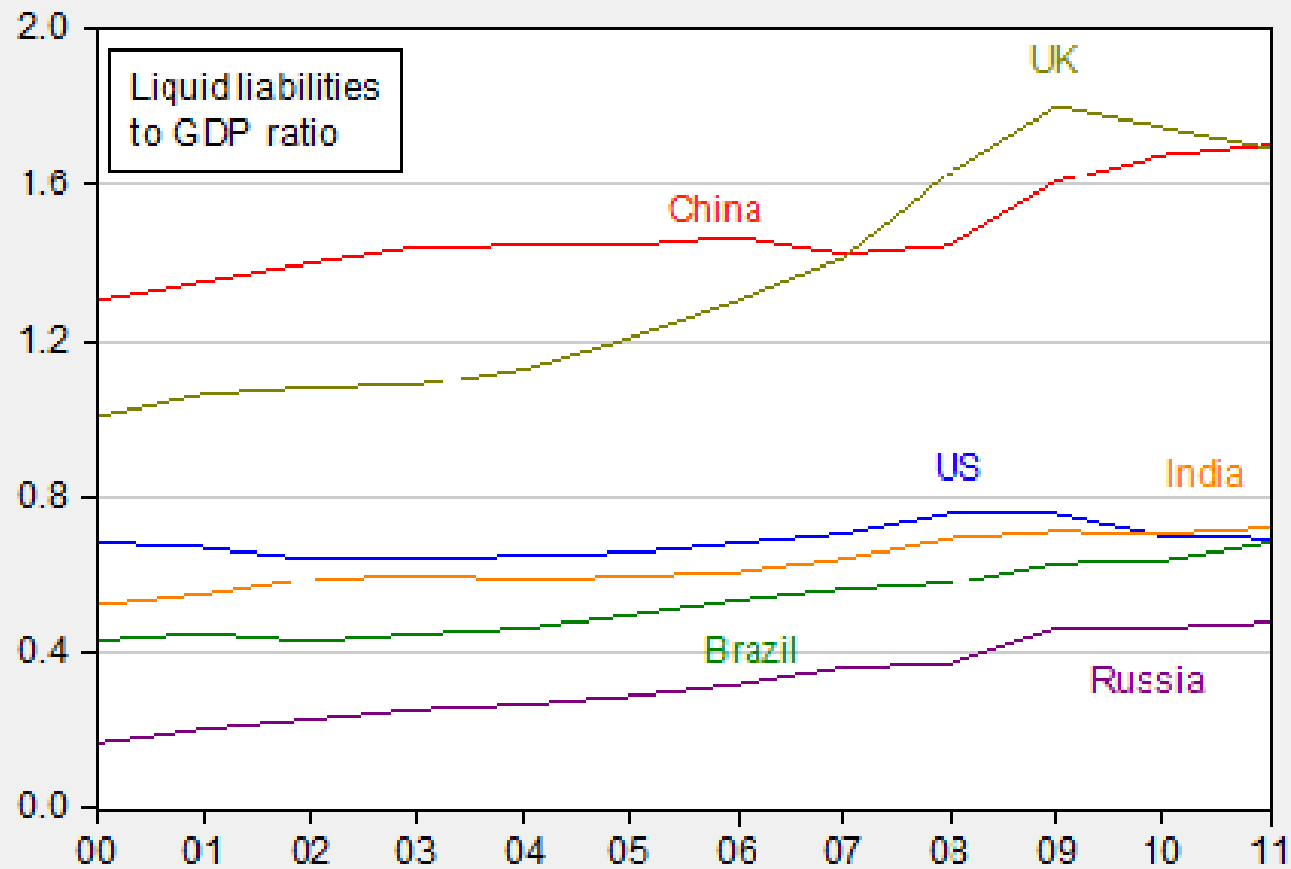
Source: IMF, *World Economic Outlook*, April 2014 database

Geography of FX Trading (Proxy for Financial Development)



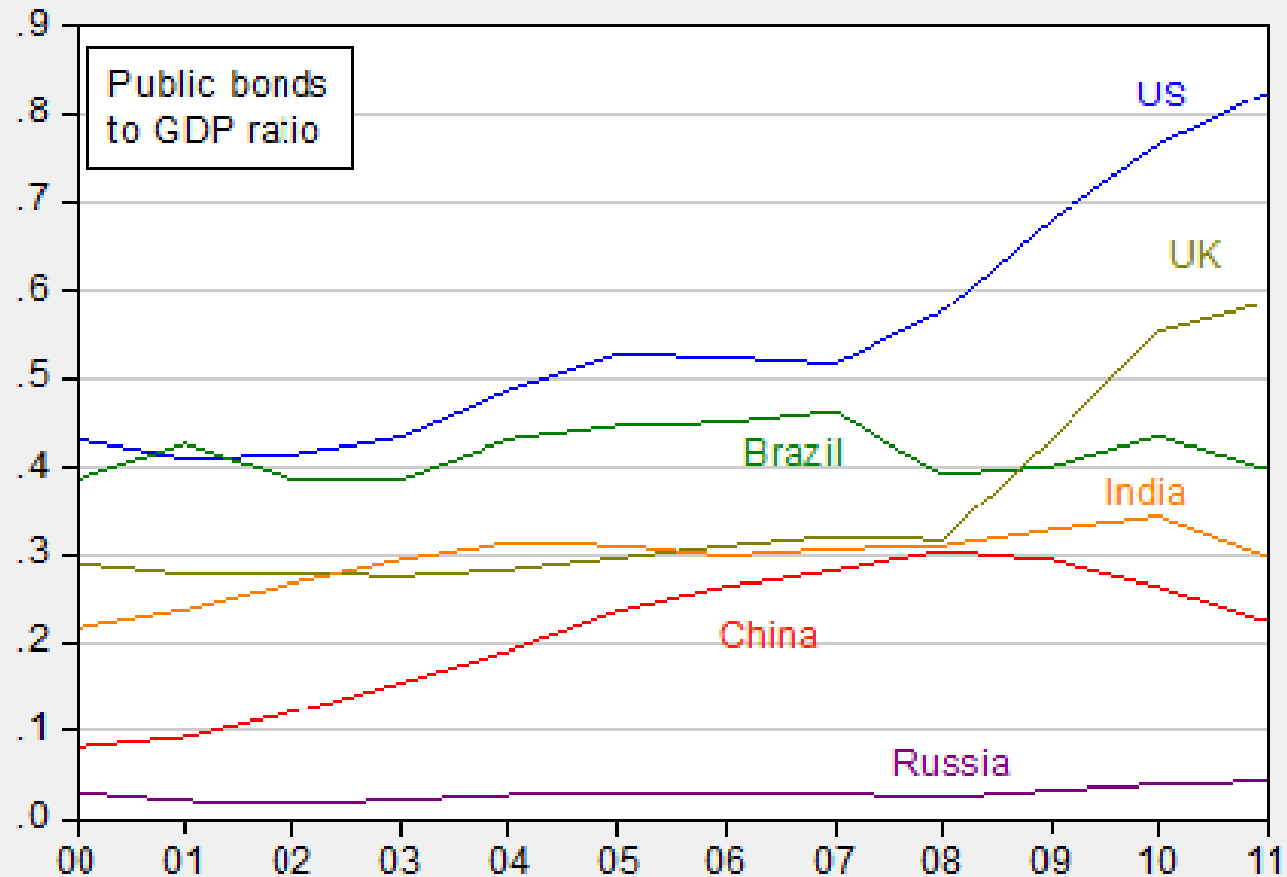
Source: Chinn (2015)

Financial Development



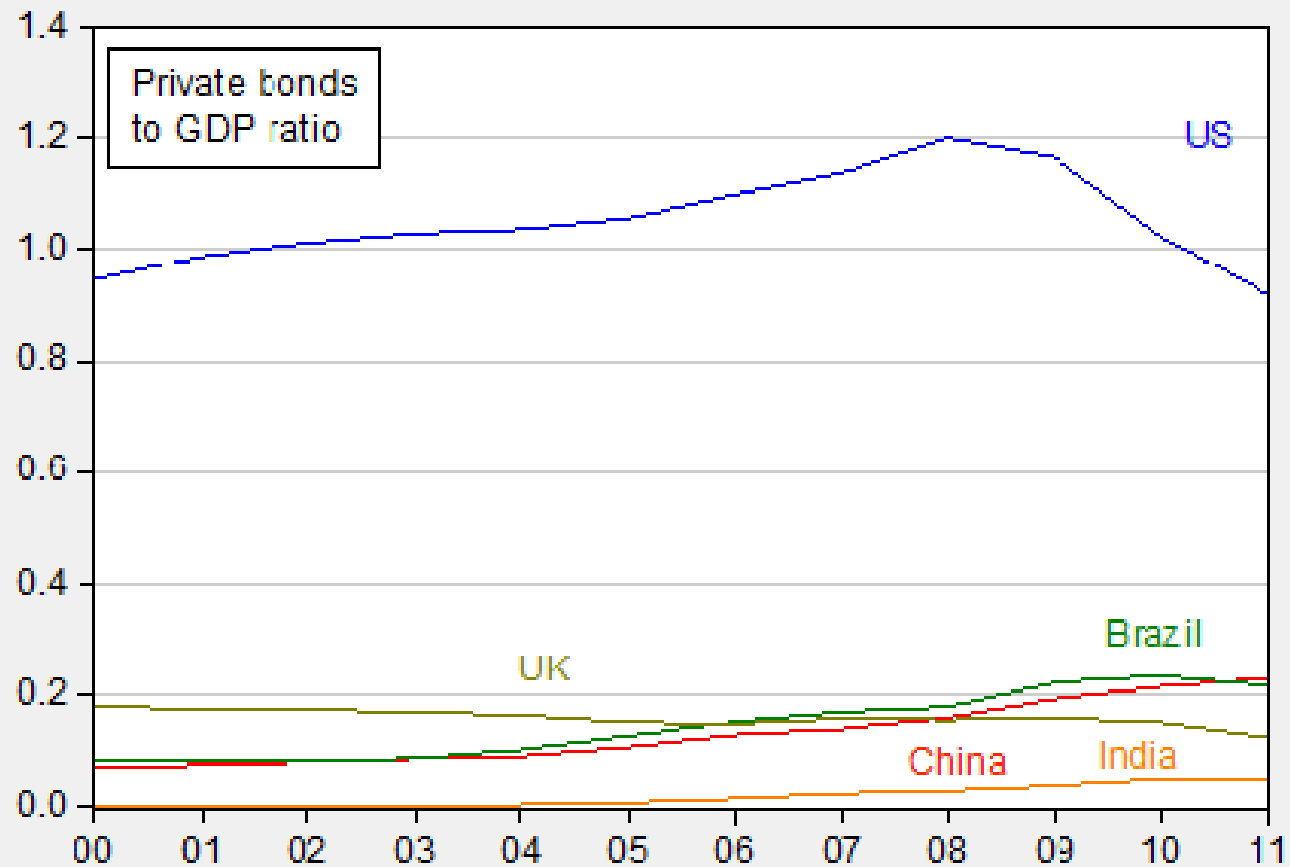
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Financial Development



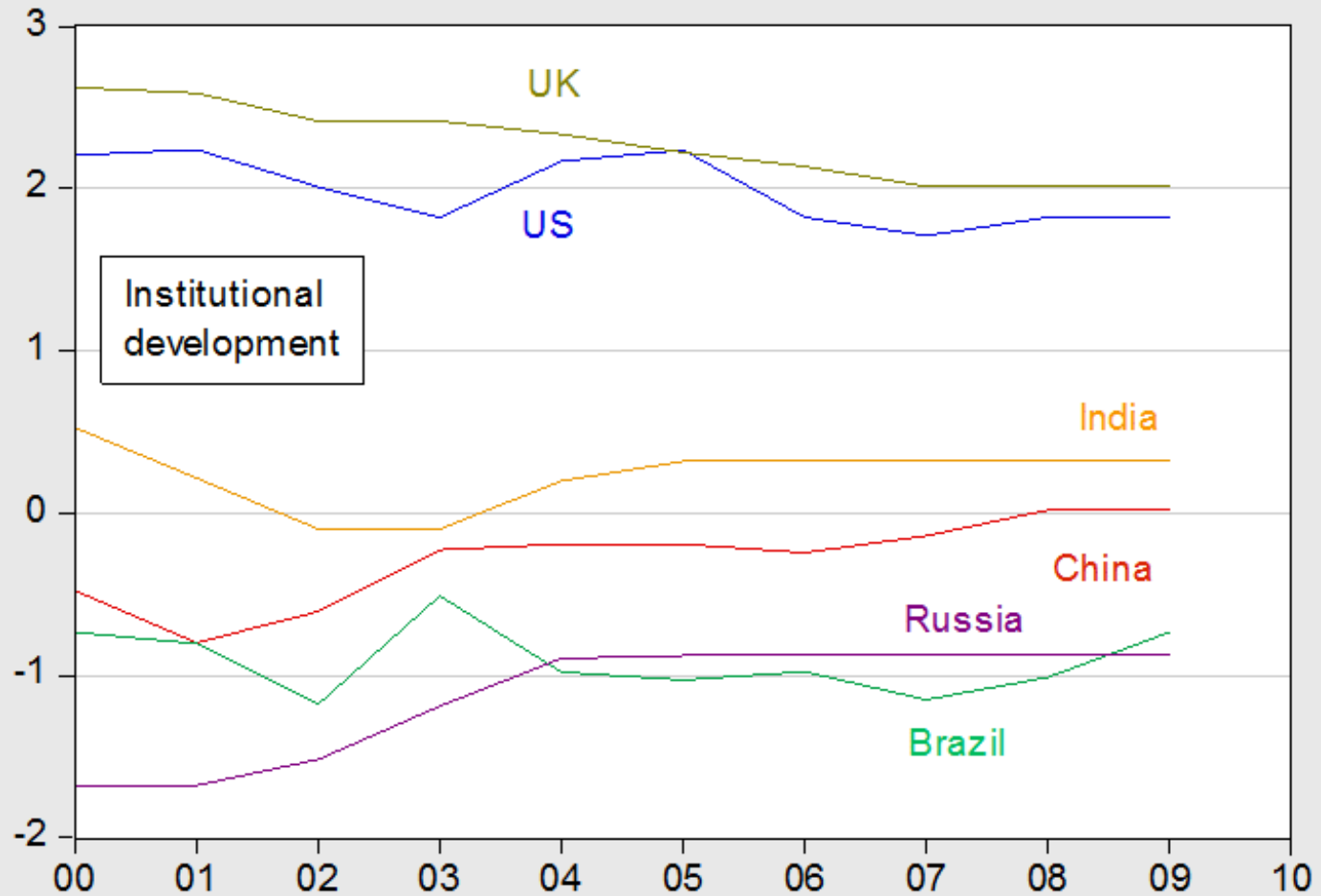
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Financial Development

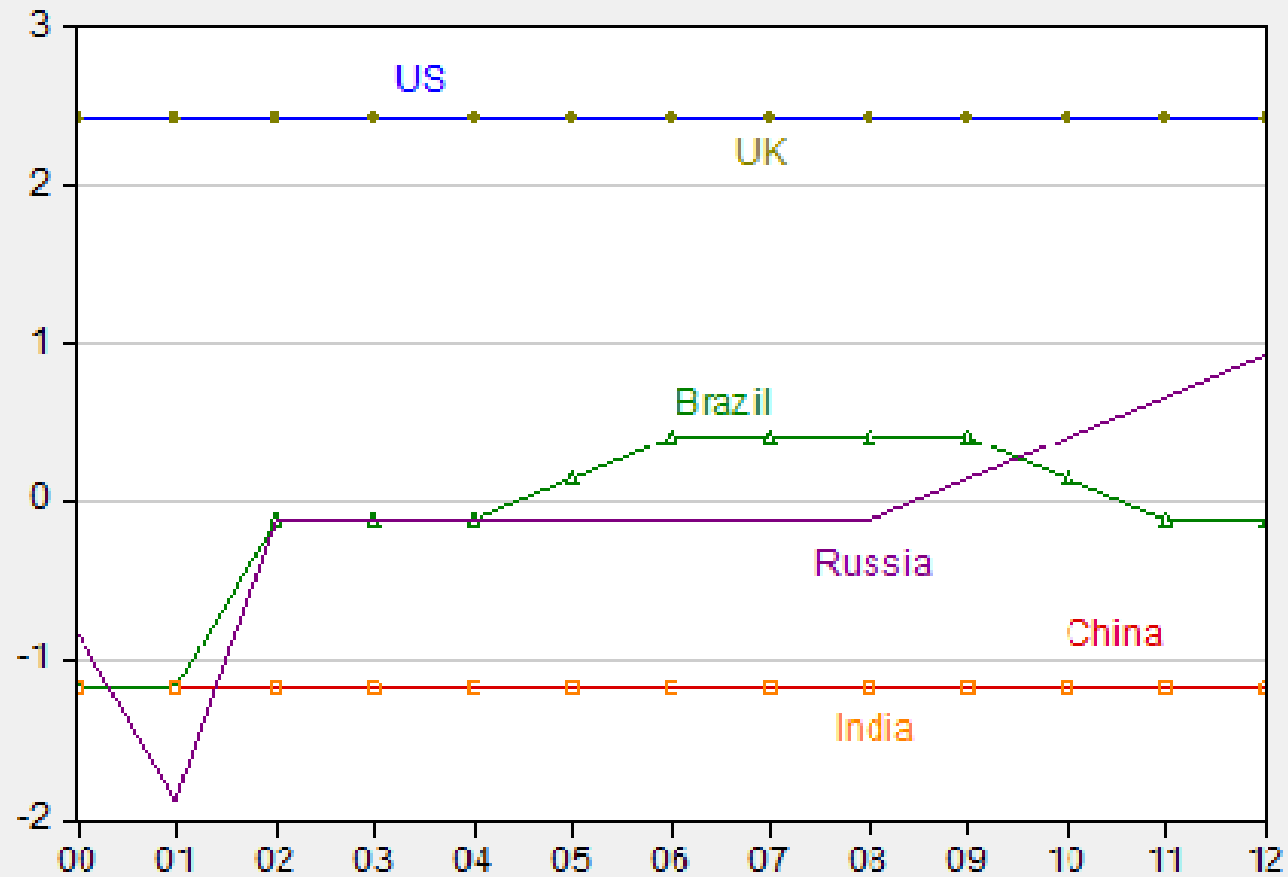


Source: Chinn (2015)

Institutional Development



Financial Openness (Chinn-Ito)

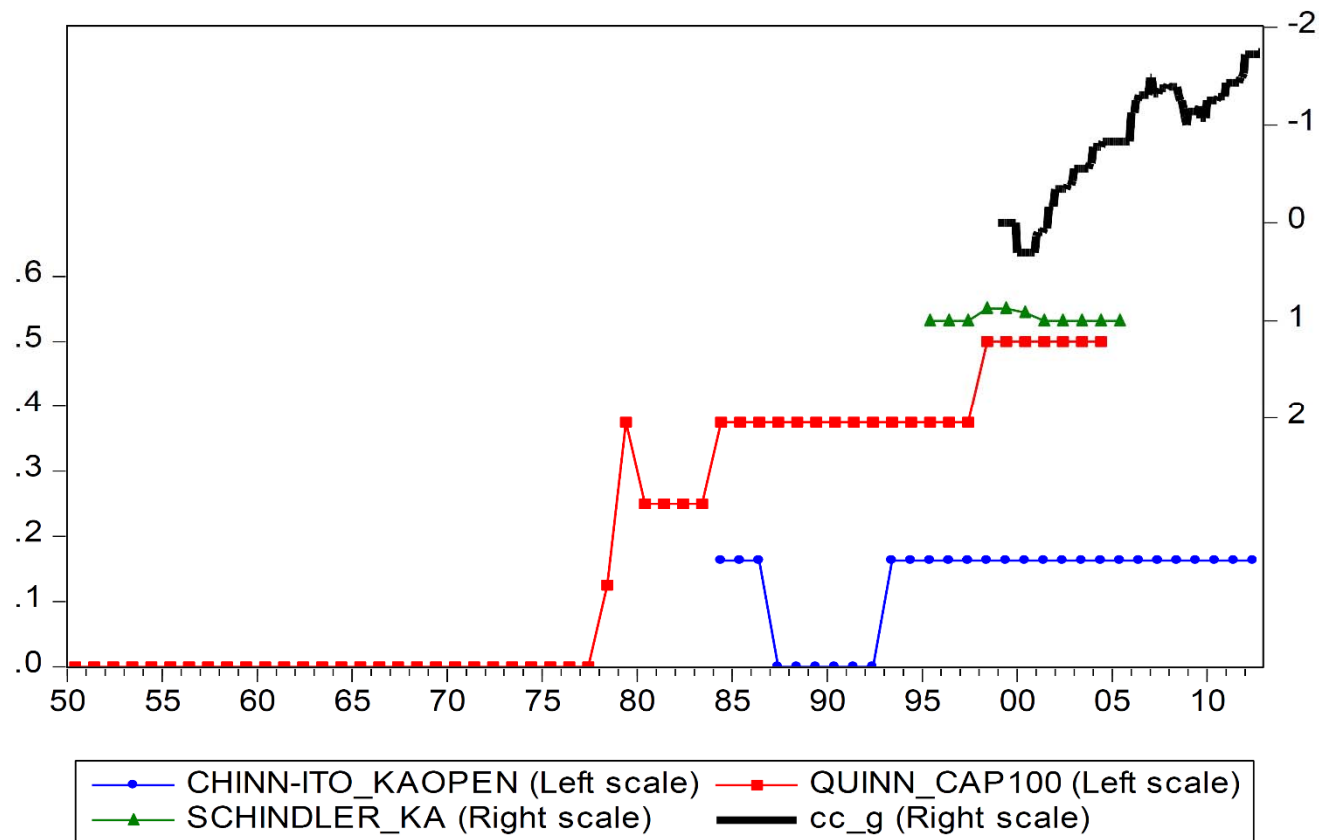


Source: Chinn (2015)

Financial Openness Is Key

(Partly because it drives financial development)

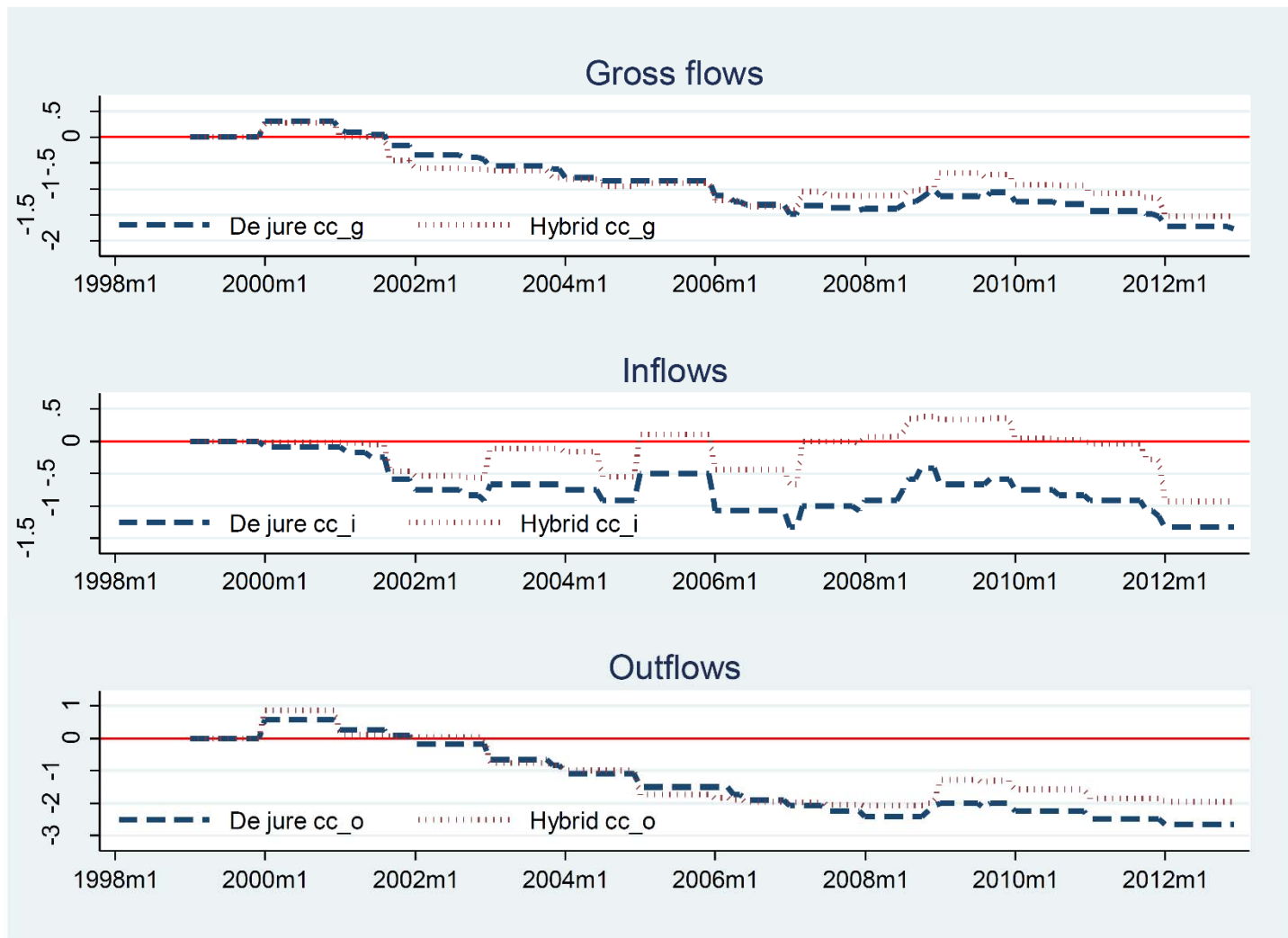
Figure 1: Comparison to other *de jure* indices



Source: Chen and Qian (2015)

Financial Openness /s Increasing

Figure 6: *De jure* and hybrid indices by flow types



Source: Chen and Qian (2015)

Roles of an International Currency

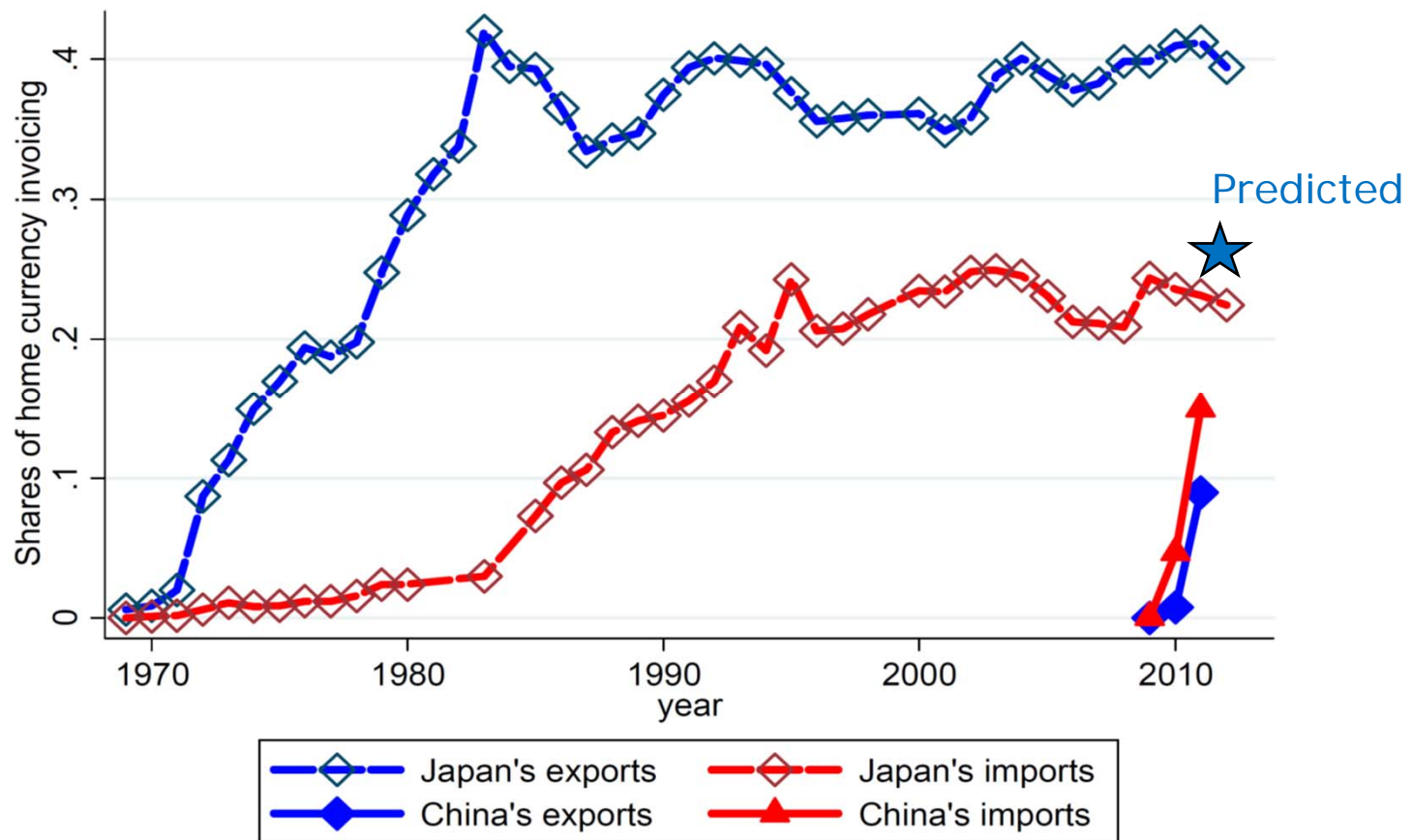
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Source: Kenen (1983)

And Invoicing in RMB Is Increasing

Figure 4: In Japan's and China's Trade



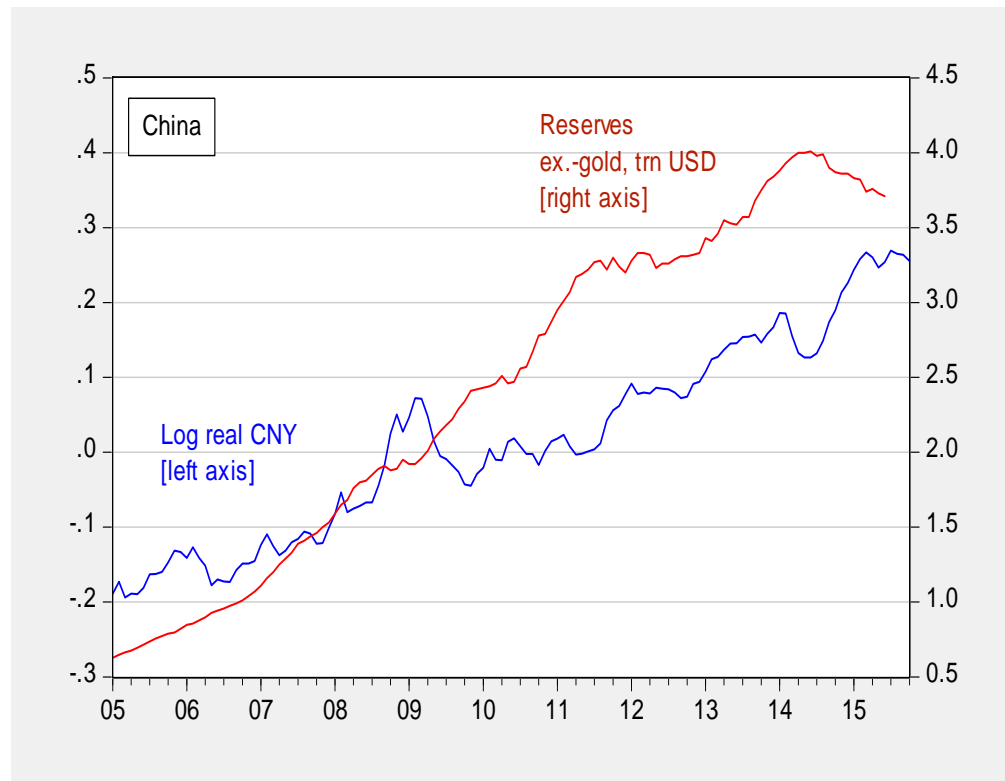
Source: Ito and Chinn (2015)

Getting to the Requisite Level of Financial Development

Requires much fuller cross-border/domestic liberalization

Which implies loss of policy autonomy

...during a period of slackening growth, weak external economy



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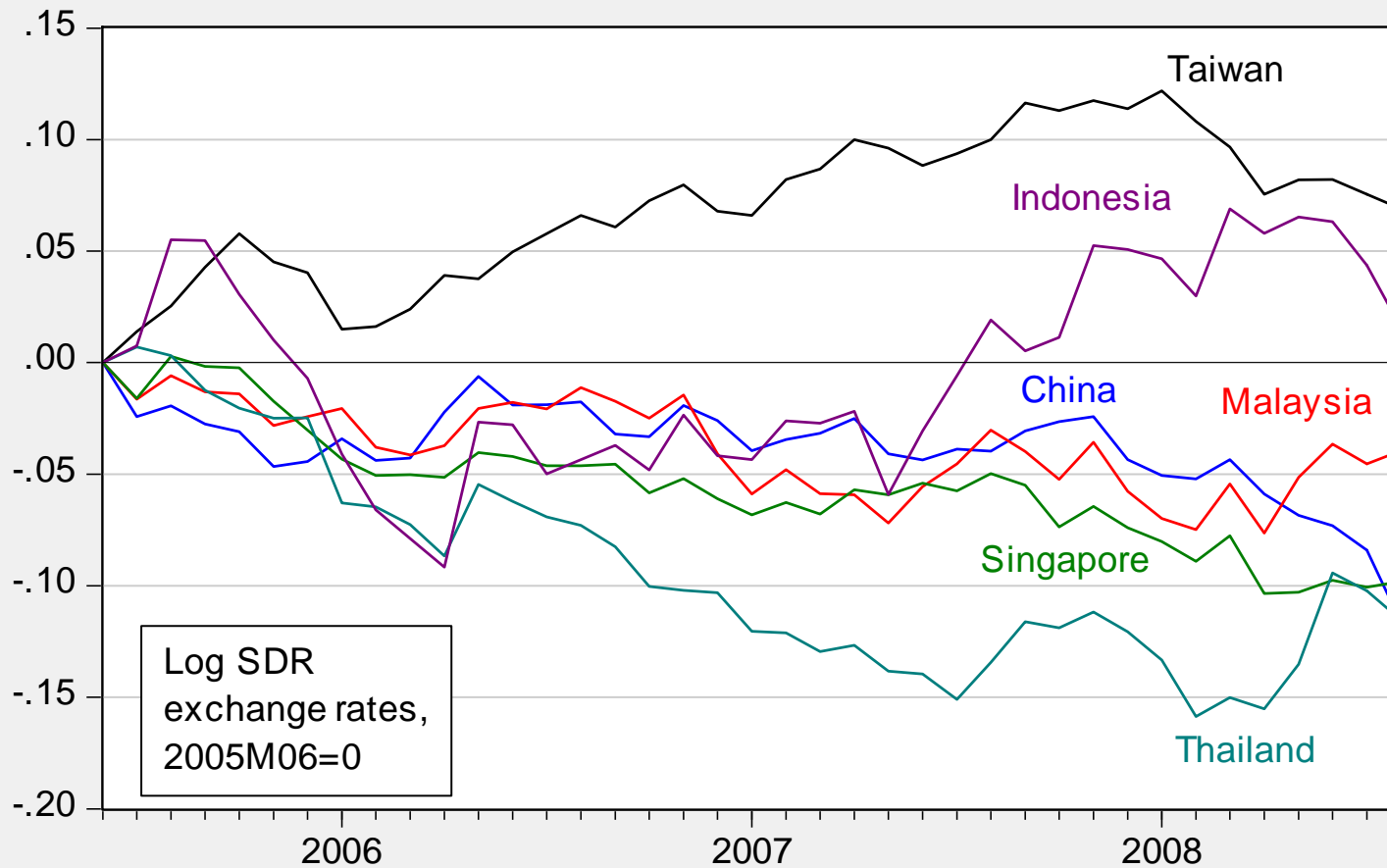
Source: Kenen (1983)



RMB as Anchor Currency

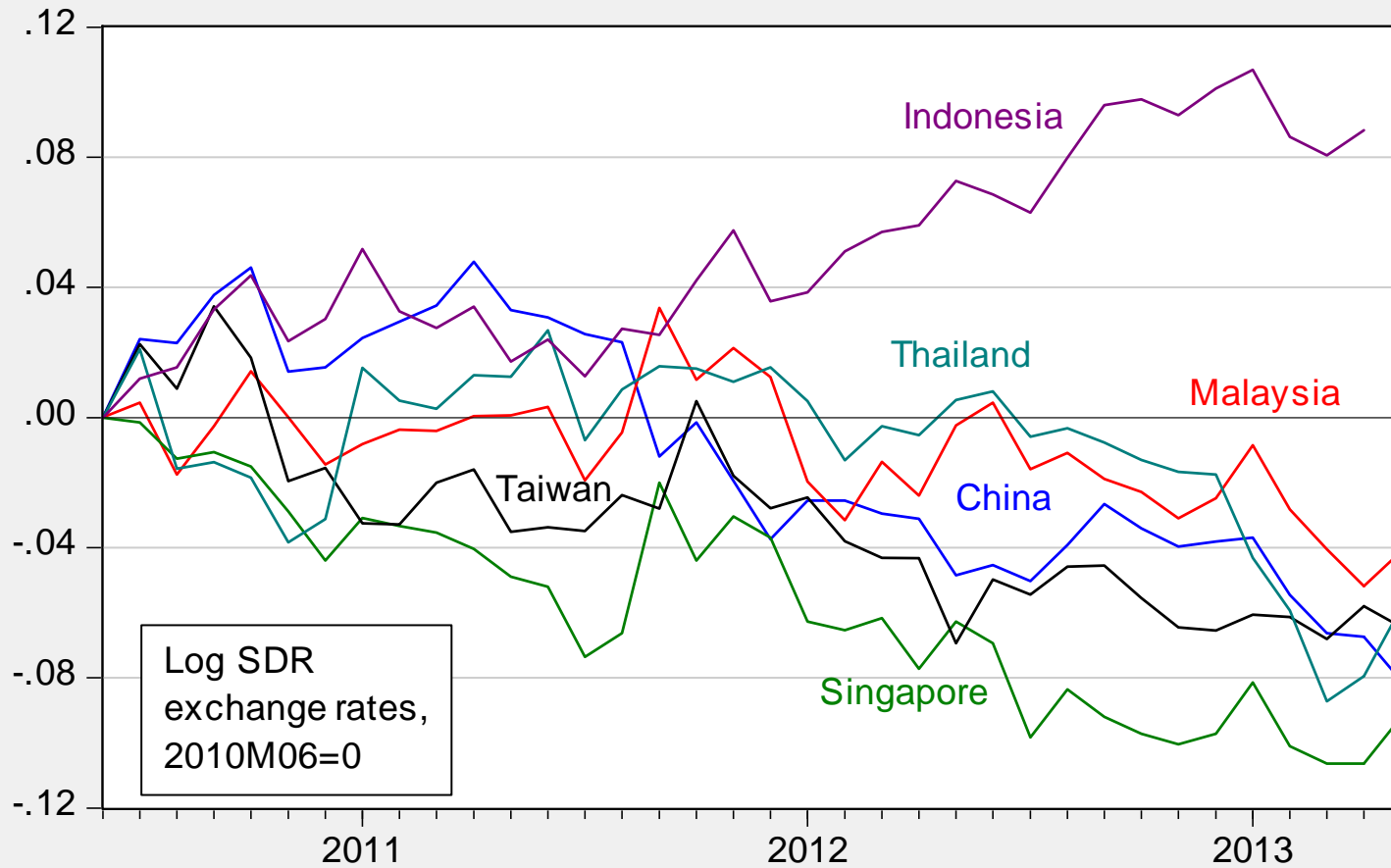
- Do other currencies peg or manage against the RMB instead of USD or EUR?

RMB as Anchor (I)



Source: Chinn (2014)

RMB as Anchor (II)





Exchange Rate Factors

- Formalize using Frankel-Wei approach to infer weights

$$\Delta e_t^{\frac{i}{SDR}} = \alpha_0 + \alpha_1 \Delta e_t^{\frac{USD}{SDR}} + \alpha_2 \Delta e_t^{\frac{CNY}{SDR}} + \alpha_3 \Delta e_t^{\frac{EUR}{SDR}} + \beta_4 \Delta e_t^{\frac{JPY}{SDR}} + \alpha_5 \Delta e_t^{\frac{GBP}{SDR}} + u_t$$

Exchange Rate Factors & Long Run

- Need a specification allows for both short and long run dynamics
- Estimated with monthly data
- Allows for the effects of financial stress

$$\begin{aligned}\Delta e_t^{\frac{i}{SDR}} = & \beta_0 + \beta_1 e_{t-1}^{\frac{i}{SDR}} + \beta_2 e_{t-1}^{\frac{USD}{SDR}} + \beta_3 e_{t-1}^{\frac{CNY}{SDR}} + \beta_4 e_{t-1}^{\frac{JPY}{SDR}} + \beta_5 F_{t-1} \\ & + \beta_6 \Delta e_{t-1}^{i/SDR} + \beta_7 \Delta e_{t-1}^{USD/SDR} + \beta_8 \Delta e_{t-1}^{CNY/SDR} + \beta_9 \Delta e_{t-1}^{JPY/SDR} \\ & + \beta_{10} \Delta F_t + u_t\end{aligned}$$

Table 8.3 Coefficients from error correction model

	KRW	SGD	NTD	IDR	MYR	THB
Period: 1999M01-2005M06						
B_1	-0.117† (0.075)	-0.110 (0.095)	0.141† (0.075)	-0.105† (0.069)	-9.593 (9.703)	-0.054 (0.064)
US	-0.055 (0.039)	0.036 (0.052)	-0.173** (0.069)	0.129† (0.082)	9.557 (9.705)	0.006 (0.035)
JP	0.045 (0.073)	0.040 (0.031)	-0.038 (0.064)	-0.112 (0.132)	0.052** (0.024)	-0.005 (0.065)
$Adj R^2$	0.03	0.02	0.14	0.02	0.01	-0.05
$US(LR)$	-0.47	na	na	1.23	na	na
$JP(LR)$	0.38	na	na	-1.07	na	na
Period: 2005M07-2013M04						
B_1	-0.160*** (0.063)	-0.167** (0.074)	-0.156** (0.064)	-0.212*** (0.064)	-0.204** (0.081)	-0.151*** (0.053)
CN	-0.019 (0.086)	0.176* (0.091)	0.029 (0.048)	-0.099 (0.099)	0.144* (0.082)	0.171** (0.083)
US	0.247** (0.108)	-0.092** (0.045)	0.016 (0.058)	-0.018 (0.109)	-0.025 (0.043)	-0.046 (0.057)
JP	-0.051 (0.051)	-0.005 (0.029)	0.032† (0.024)	0.025 (0.046)	-0.009 (0.027)	-0.023 (0.029)
$Adj R^2$	0.55	0.15	0.3	0.32	0.07	0.04
$CN(LR)$	-1.19	1.05	0.19	-0.47	0.71	1.13
$US(LR)$	1.54	-0.55	0.10	-0.08	0.12	-0.30
$JP(LR)$	-0.32	0.03	0.21	-0.12	-0.04	-0.15

Source: Chinn (2014)



The RMB Zone: Findings

- In the pre-2005 period, little evidence of long run relationships between CNY, USD, JPY and respective currencies
- Post-2005, there is greater evidence of cointegration
- And more anchoring on the CNY
- Exception: KRW



Final Question and Conclusion

- What price RMB internationalization in terms of policy autonomy are Chinese policymakers willing to pay?
- I doubt whether full capital convertibility will be achieved in the next five years (and that's not even tackling domestic financial deregulation)
- Hence, the RMB will be/is an important regional currency but only very eventually – an international one



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