
India Economic Outlook

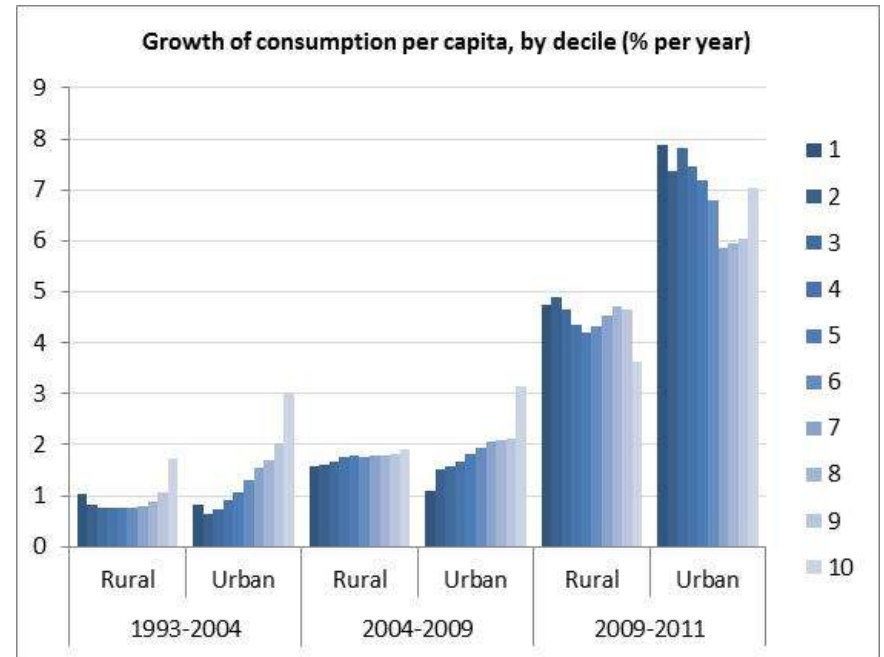
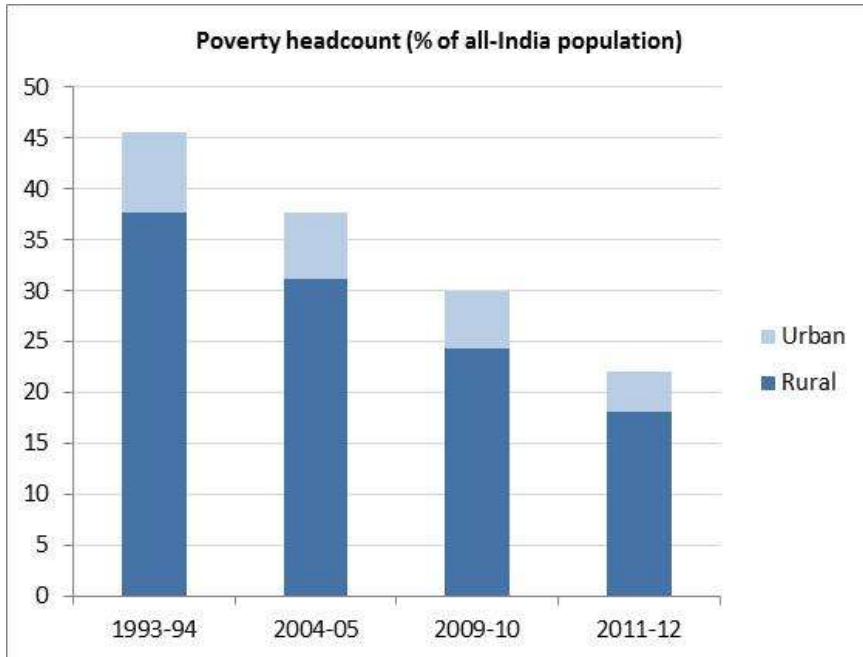
2014 Article IV Report

Denis Medvedev
South Asia Region
The World Bank Group

Report raises (and answers) many good questions

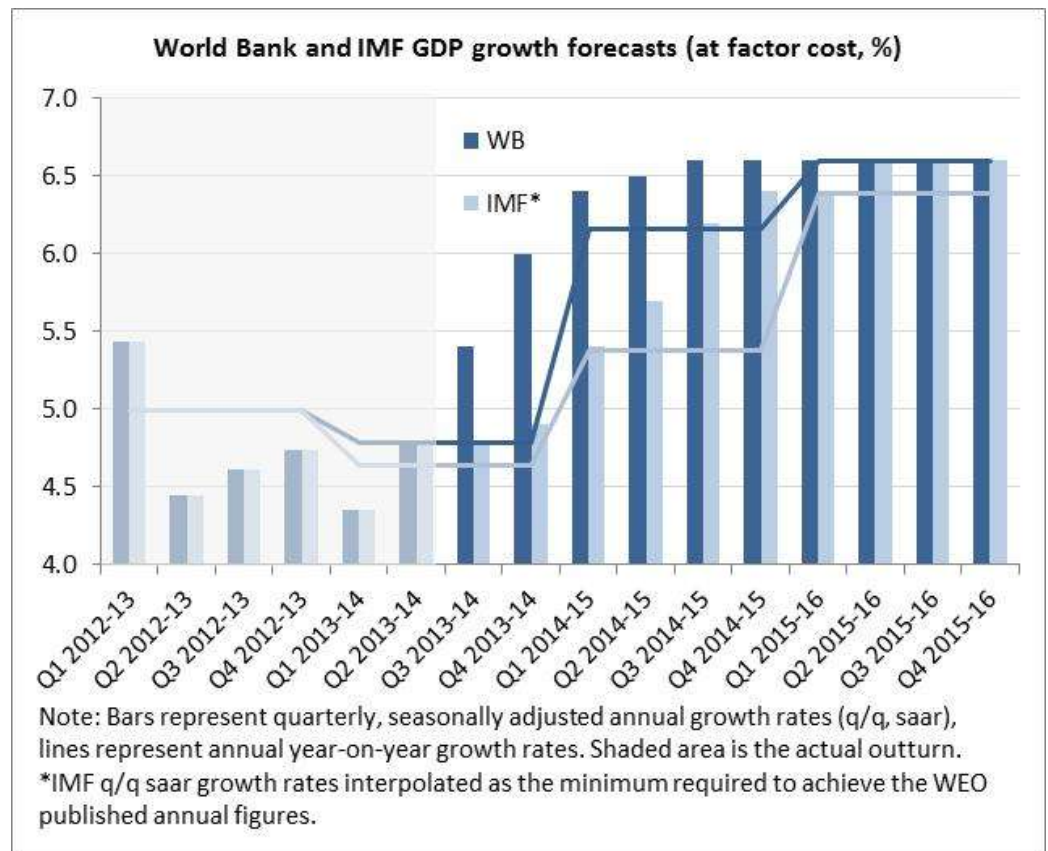
- Selected issues papers
 - Inflationary expectations
 - Poverty and inequality
- Growth optimism
 - What do we mean by “potential” growth?
- Getting macro fundamentals right
 - Demand for gold
 - Vulnerability vs. exposure

Inequality is still rising, but for different reasons?

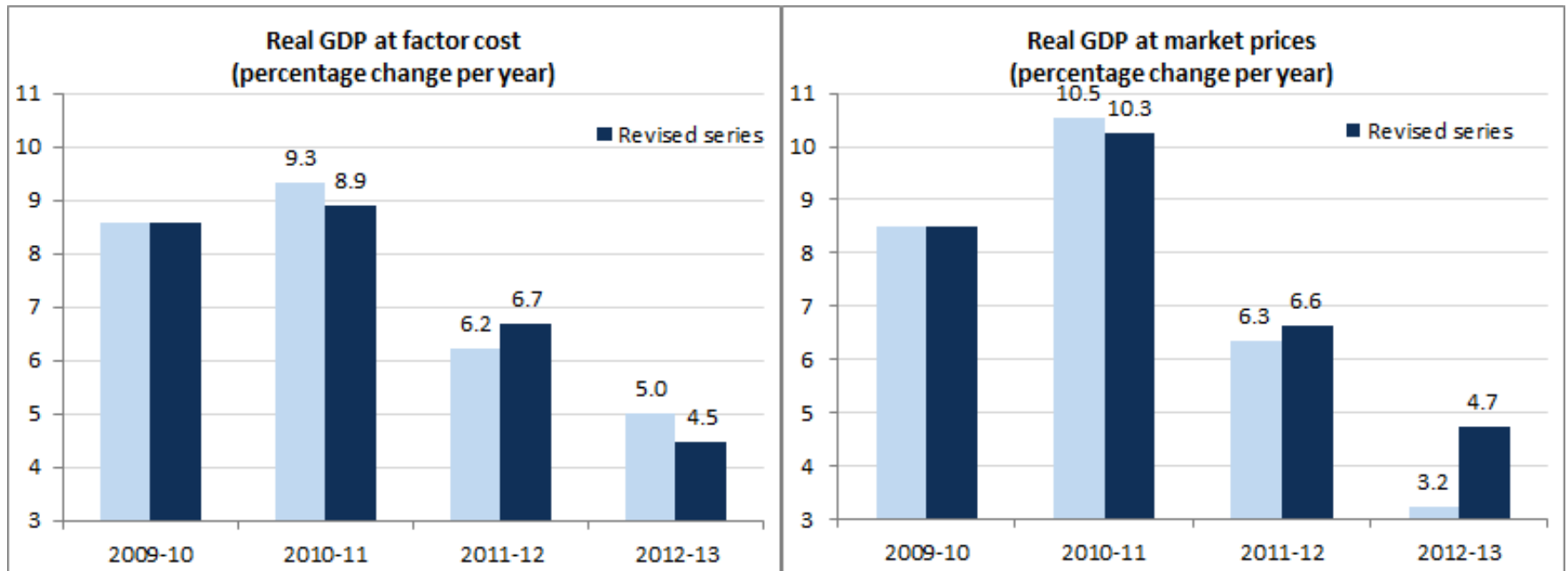


Long-term growth profile not particularly different

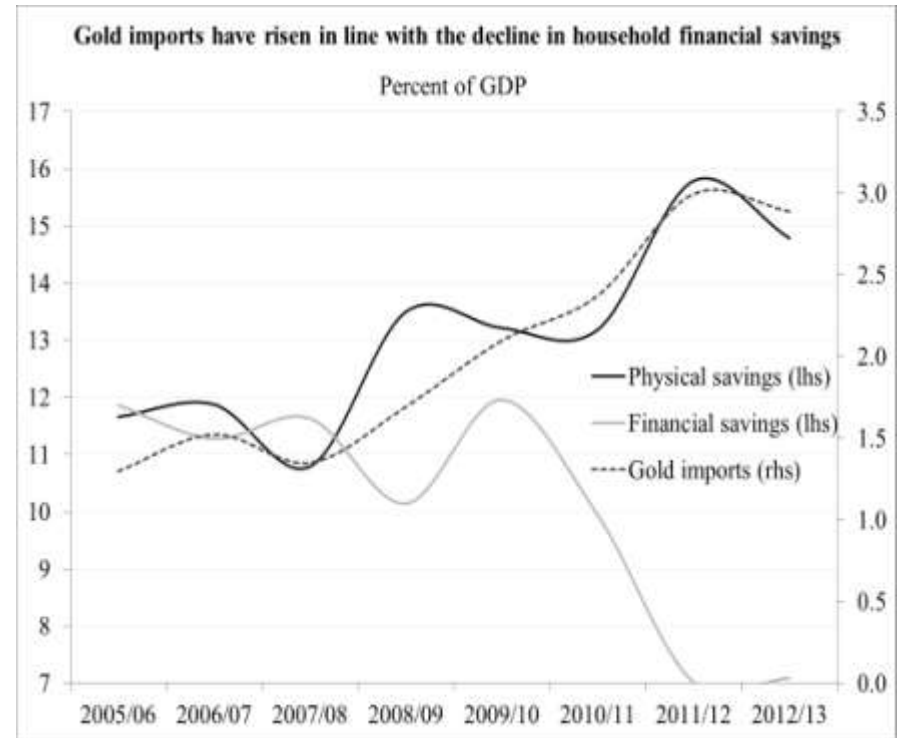
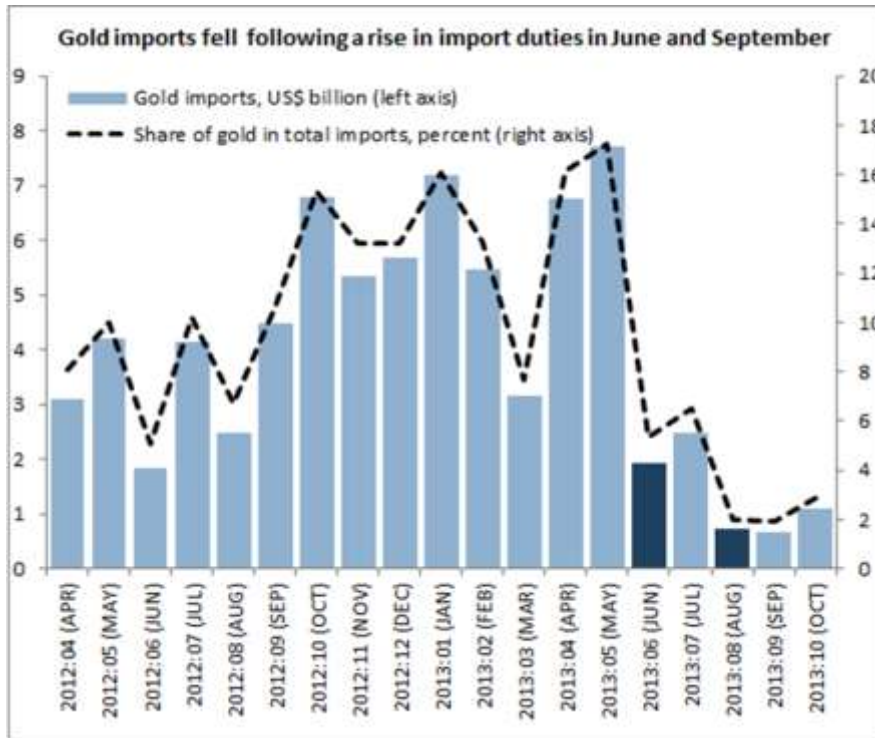
	IMF WEO January 2014	WB GEP January 2014
FY2013/14	4.6	4.8
FY2014/15	5.4	6.2
FY2015/16	6.4	6.6
Potential	6.75	6.4 - 6.8



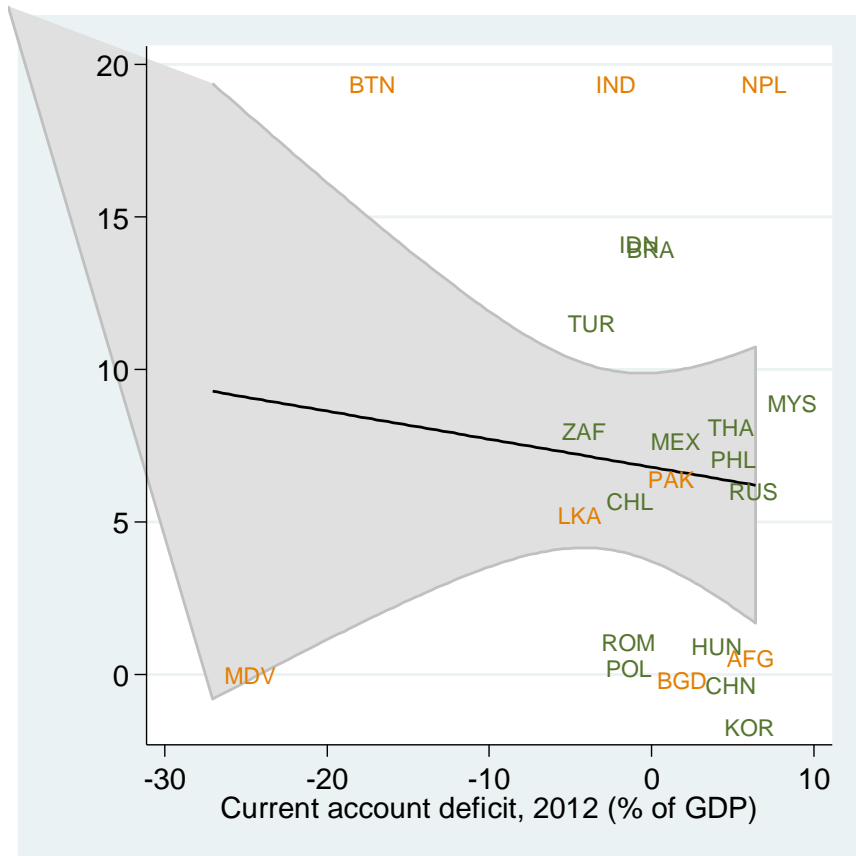
Forecasting made difficult by major revisions to data



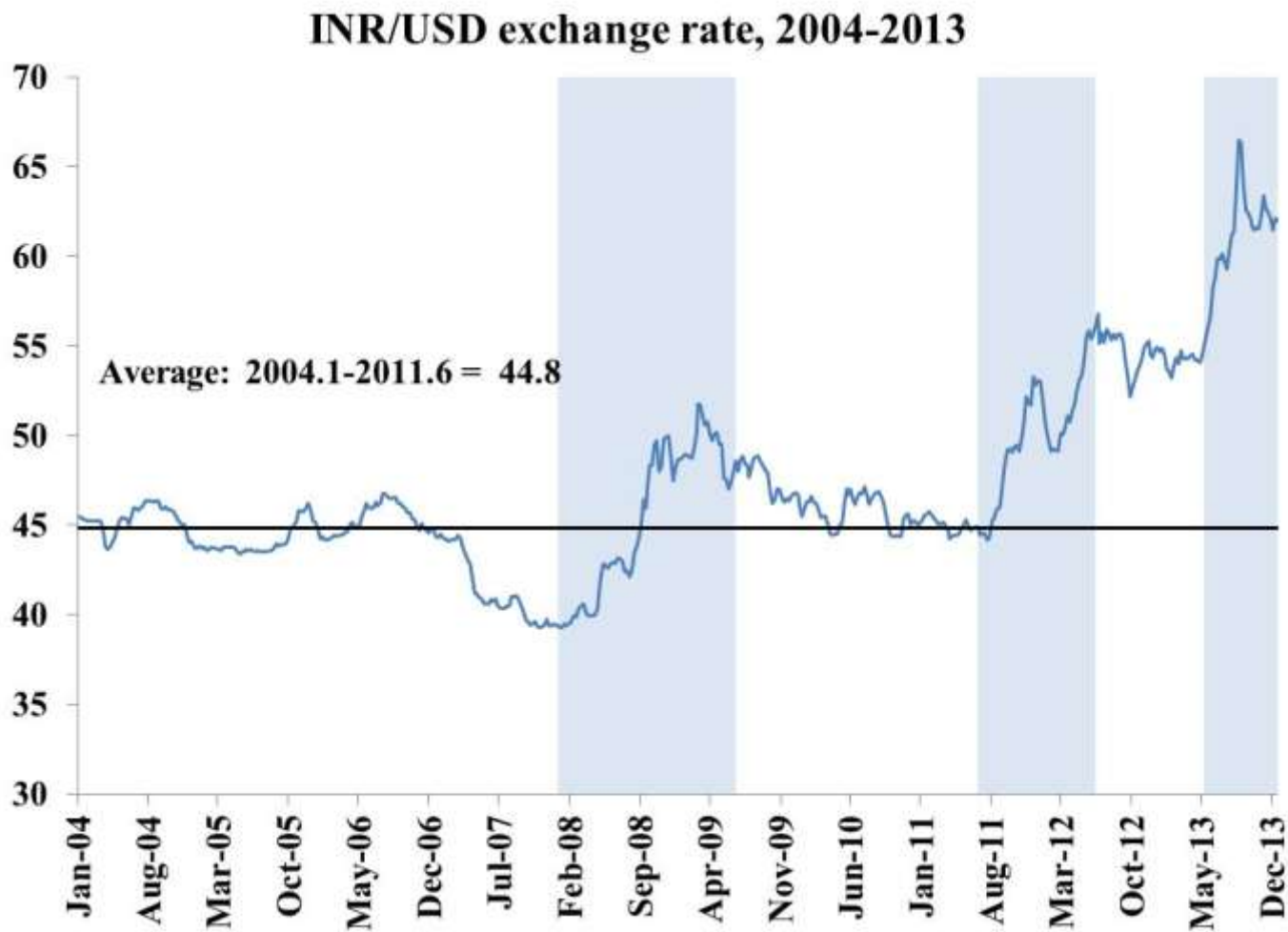
What is driving demand for gold?



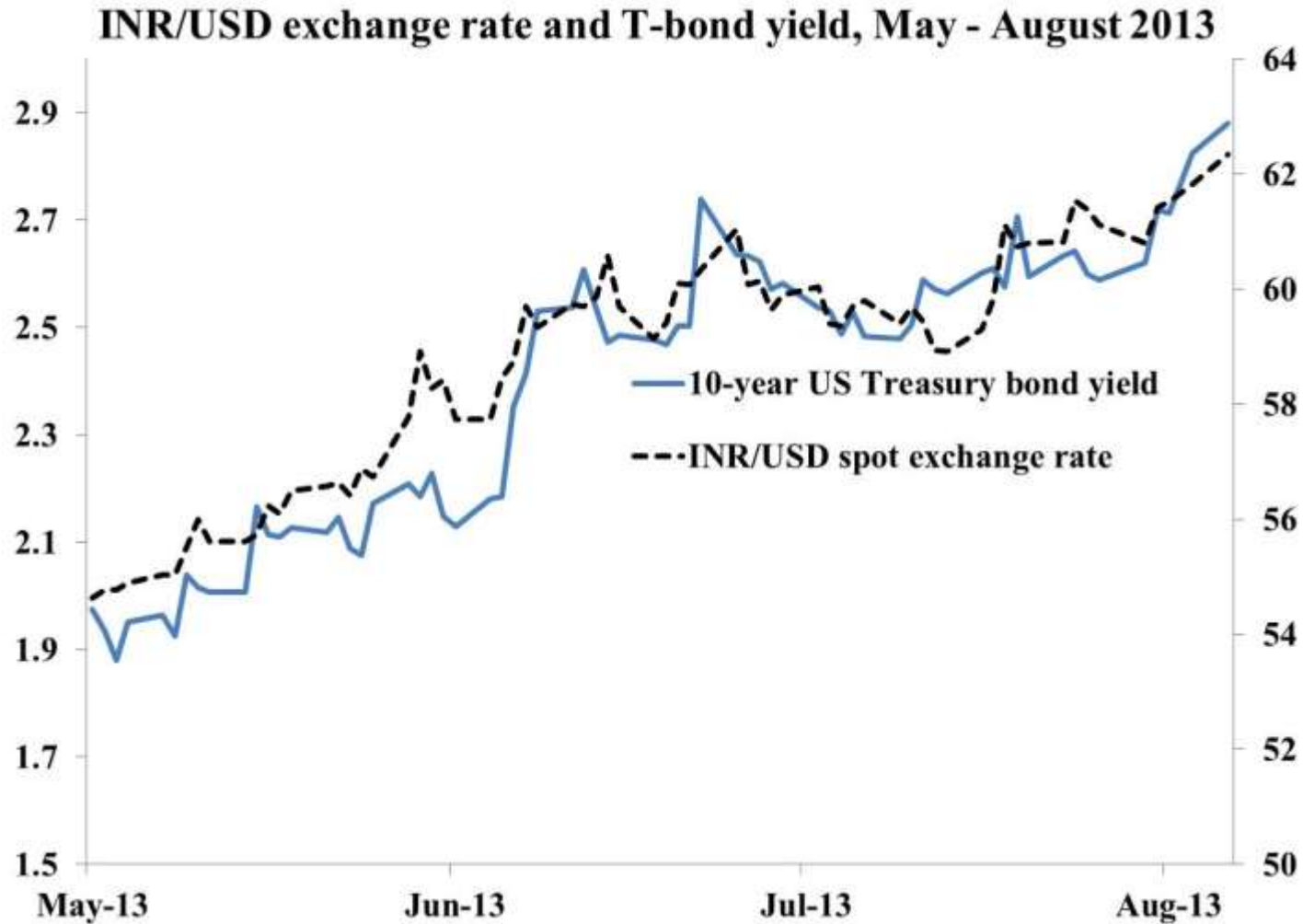
Exchange rate depreciation: is South Asia different?



Three episodes of depreciation in recent history, coinciding with global financial turmoil



Exchange rate movements this summer followed closely the 10-year US Treasury bond yield



Error-correction model

- Long-run equilibrium
 - $s_t = \alpha + \gamma X_t + u_t$
 - X_t includes relative prices and output growth
 - Assumption: series are $I(1)$ and there is a cointegrating vector such that u_t is $I(0)$
- Short-run dynamics
 - $\Delta s_t = k + \beta \Delta X_t + \delta (s_{t-1} - \alpha - \gamma X_{t-1}) + \Theta \Delta Z_t + \varepsilon_t$
 - Z_t includes stock market levels and volatility, central bank assets, and T-Bond yield
 - Assumption: the spot rate returns to its long-term trend (given by the cointegrating vector) such that $\delta < 1$

Long run equilibrium

	OLS	Prais- Winsten	Newey- West	ARMAX (1-3 lags)
Dependent variable : log nominal INR/USD spot exchange rate				
US PPI, log	-0.71***	-0.67***	-0.71***	-0.53***
India WPI, log	1.28***	1.00***	1.28***	0.92***
US IIP, log	-0.13	-0.04	-0.13	-0.06
India IIP, log	-0.53***	-0.21**	-0.53***	-0.22***
Trade balance, % of GDP, lag	0.47***	0.18*	0.47	0.19**
Observations	118	118	118	118
Adjusted R ²	0.84	0.97		
*** p<0.01, ** p<0.05, * p<0.1				

Short run dynamics

	(1)	(2)	(3)
Dependent variable : first difference, log nominal INR/USD spot exchange rate			
$\Delta \ln(\text{US PPI}_t)$	-0.60***	-0.65***	-0.55***
$\Delta \ln(\text{IN WPI}_t)$	0.80***	0.75***	0.61***
$\Delta \ln(\text{US IIP}_t)$	-0.06	-0.08	-0.08
$\Delta \ln(\text{IN IIP}_t)$	-0.07	-0.08	-0.07
$\Delta(\text{trade deficit}_{t-1})$	0.14**	0.15**	0.13**
$\Delta(\text{Volatility of S\&P options}_t)$	-0.00*	-0.00*	-0.00*
$\Delta \ln(\text{SENSEX}_t)$	0.00	-0.00	-0.00
$\Delta \ln(\text{S\&P500}_t)$	-0.20***	-0.22***	-0.22***
$\Delta \ln(\text{Fed Assets}_t)$	0.08**	0.07**	0.07**
$\Delta \ln(\text{RBI Assets}_t)$	0.47***	0.46***	0.43***
$\Delta \ln(\text{FII}_t)$	-0.11***	-0.10***	-0.09***
$\Delta \ln(\text{TBond yield}_t)$		0.01	0.01
“Tapering talk” (May – Nov 2013 = 1)			0.00
$\Delta \ln(\text{TBond yield}_t) * \text{“Tapering talk”}$			0.09***
\widehat{u}_{t-1}	-0.09**	-0.09**	-0.09**
Observations	117	117	117
Adjusted R ²	0.62	0.63	0.67

Exchange rate: *** p<0.01, ** p<0.05, * p<0.1

Thank you!
