



*Is India's Financial System Ready to  
Support the Growth Strategy?*

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ICRIER Conference, New Delhi

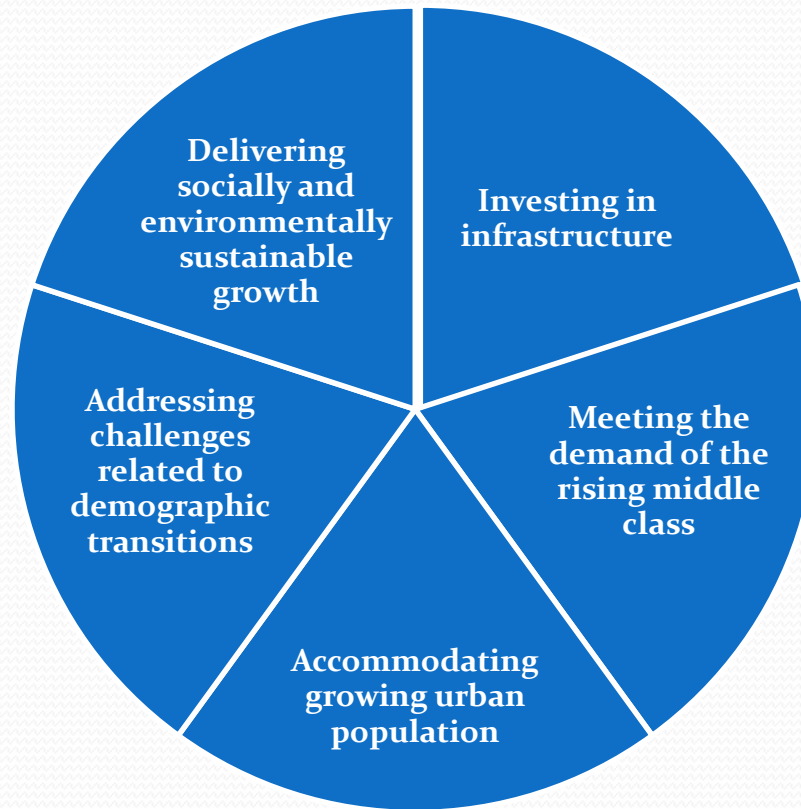
September 15, 2015

# Outline

- Financing needs and source of financing—  
India in a regional perspective.
- Is India's financial system up to the task?
- Planned reforms and unfinished agendas?

# Financing: Needs and Sources

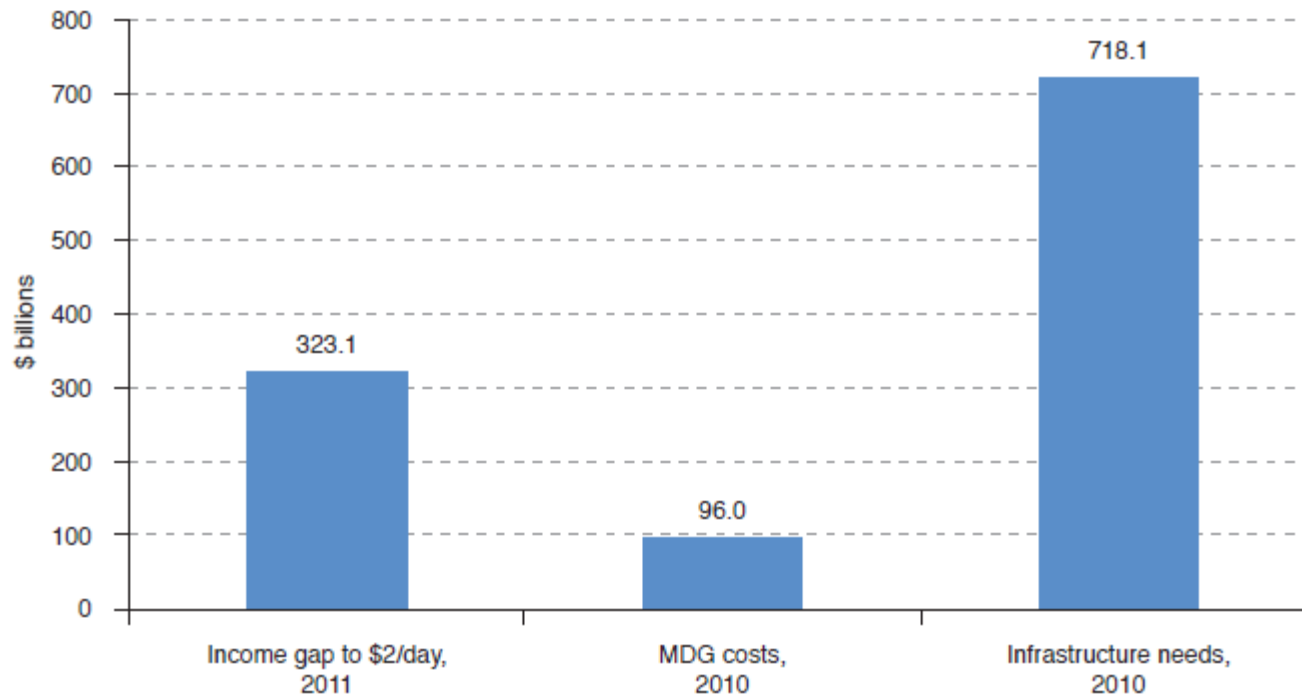
# Financing needs to address long run challenges: A trillion dollar question



# For a trillion dollars more...

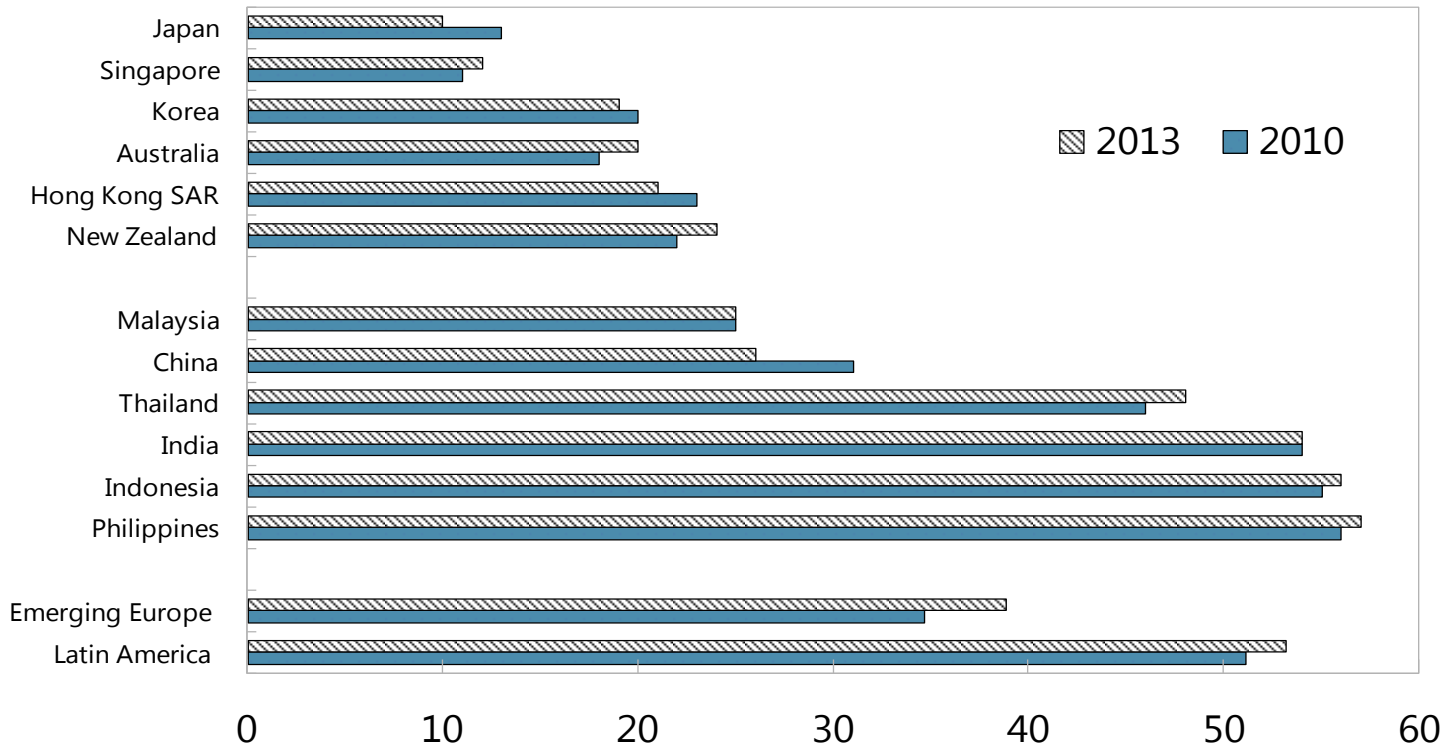
- Funding requirement in Asia about \$1 trillion per annum, estimated by the UN and ADB.

**Figure III-1 Asia-Pacific investment needs, \$ billions**



# Infrastructure Gap in Emerging Asia

## Infrastructure Ranking



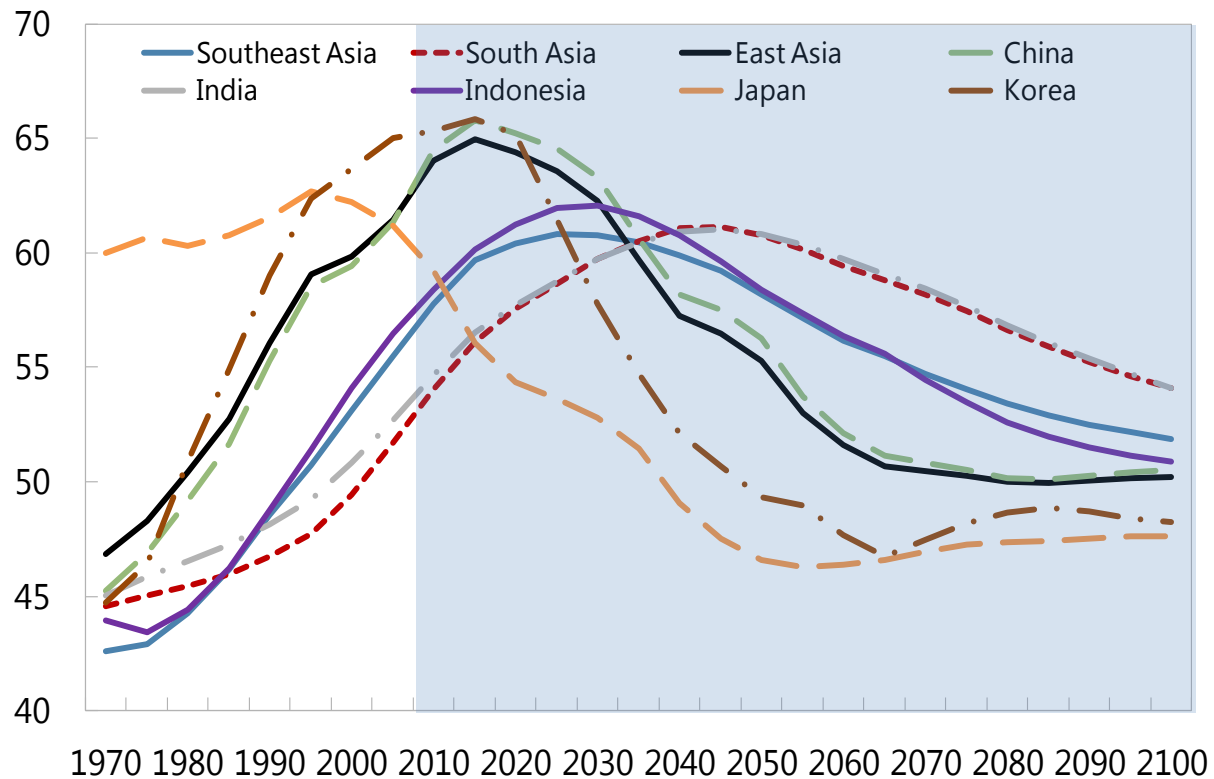
Source: IMD *World Competitiveness Online*.

Note: A lower ranking indicates a better score out of sample countries.

# Asia's Demographic Transitions

**Figure 8.1 Working-Age Population Ratio in Asia**

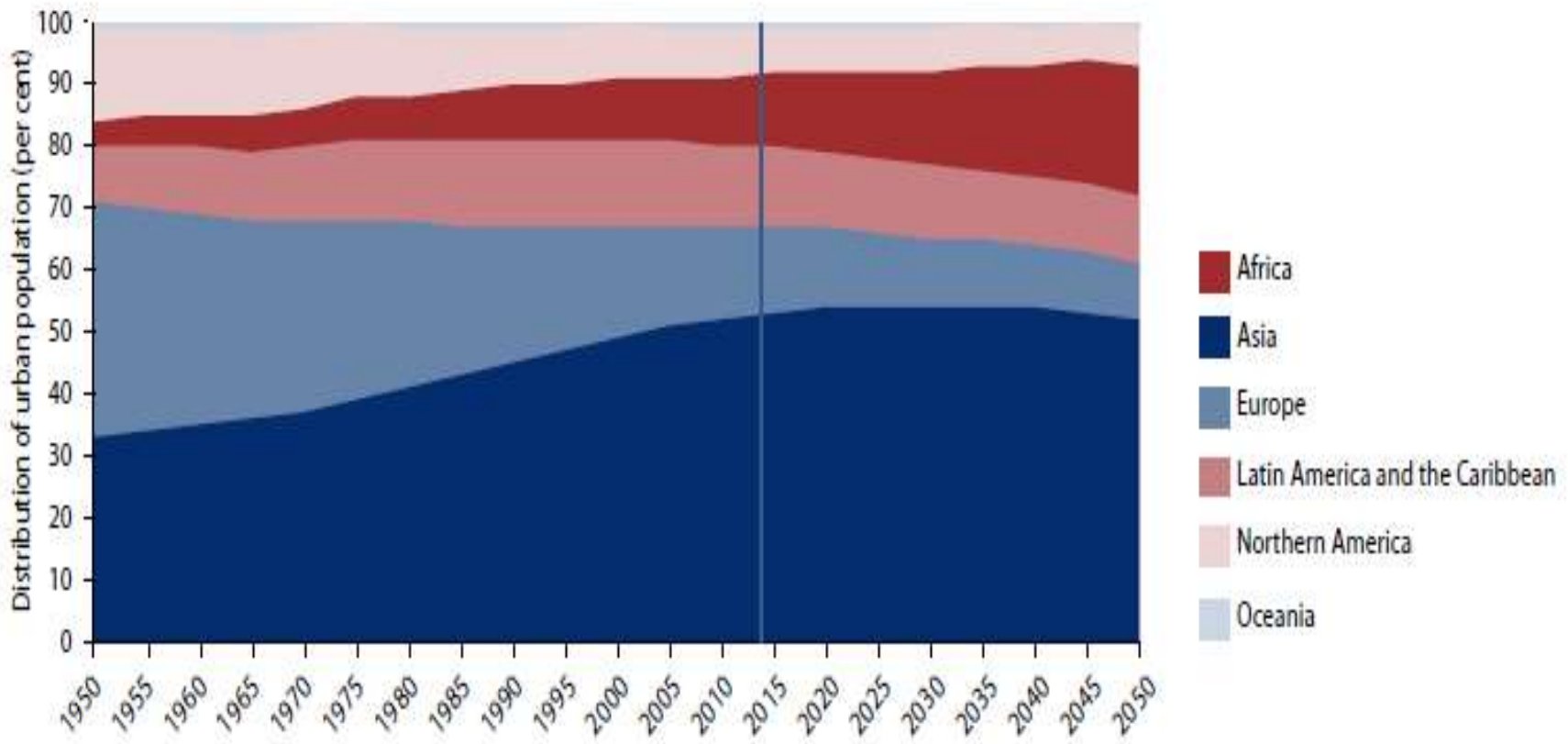
(in percent)



Source: United Nations *World Population Prospects 2012*

# Asia's Urbanization—Much More to Come

Asia will continue to host nearly one half of the world's urban population



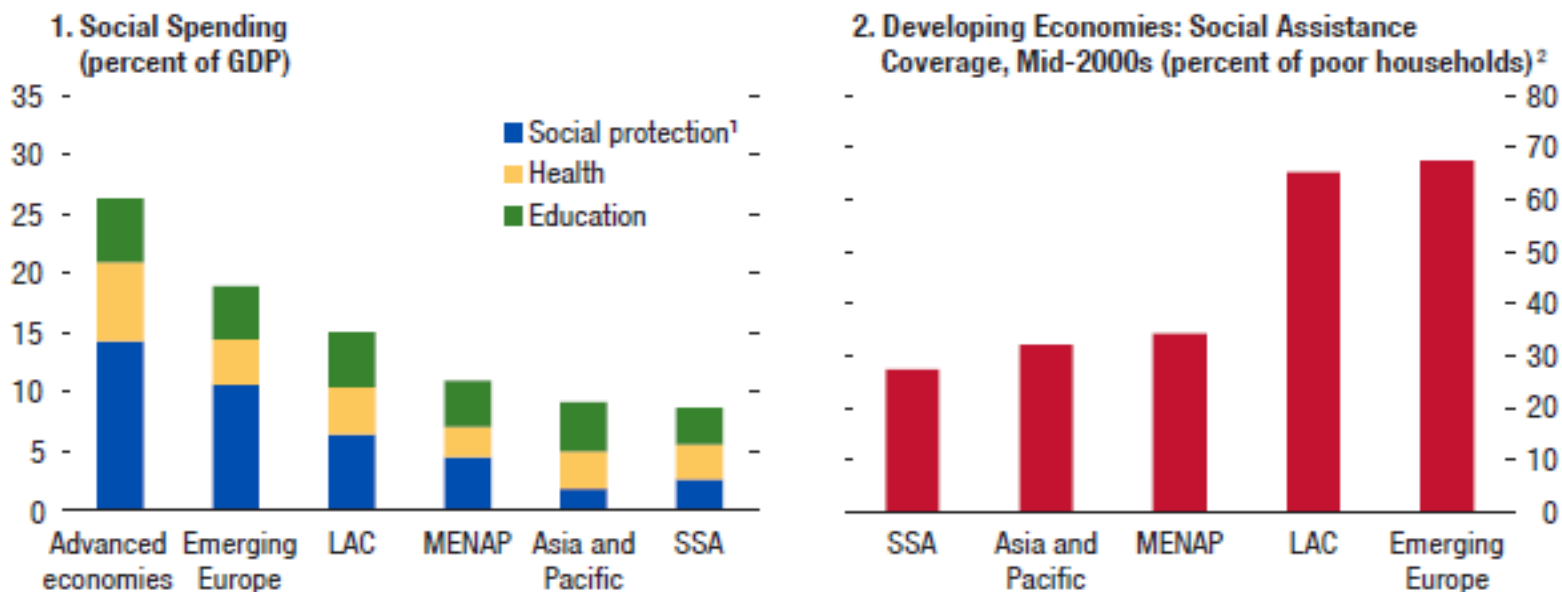
# Asia's Rising Middle Class

**The middle class: size and distribution**  
(millions of people, global share)

	2009		2020		2030	
North America	338	18%	333	10%	322	7%
Europe	664	36%	703	22%	680	14%
Central and South America	181	10%	251	8%	313	6%
Asia-Pacific	525	28%	1,740	54%	3,228	66%
Sub-Saharan Africa	32	2%	57	2%	107	2%
Middle East and North Africa	105	6%	165	5%	234	5%
World	1,845	100%	3,249	100%	4,884	100%

# Delivering Inclusive Growth

**Figure 2.11. Social Assistance Coverage and Social Spending**



Sources: World Bank; and IMF staff estimates.

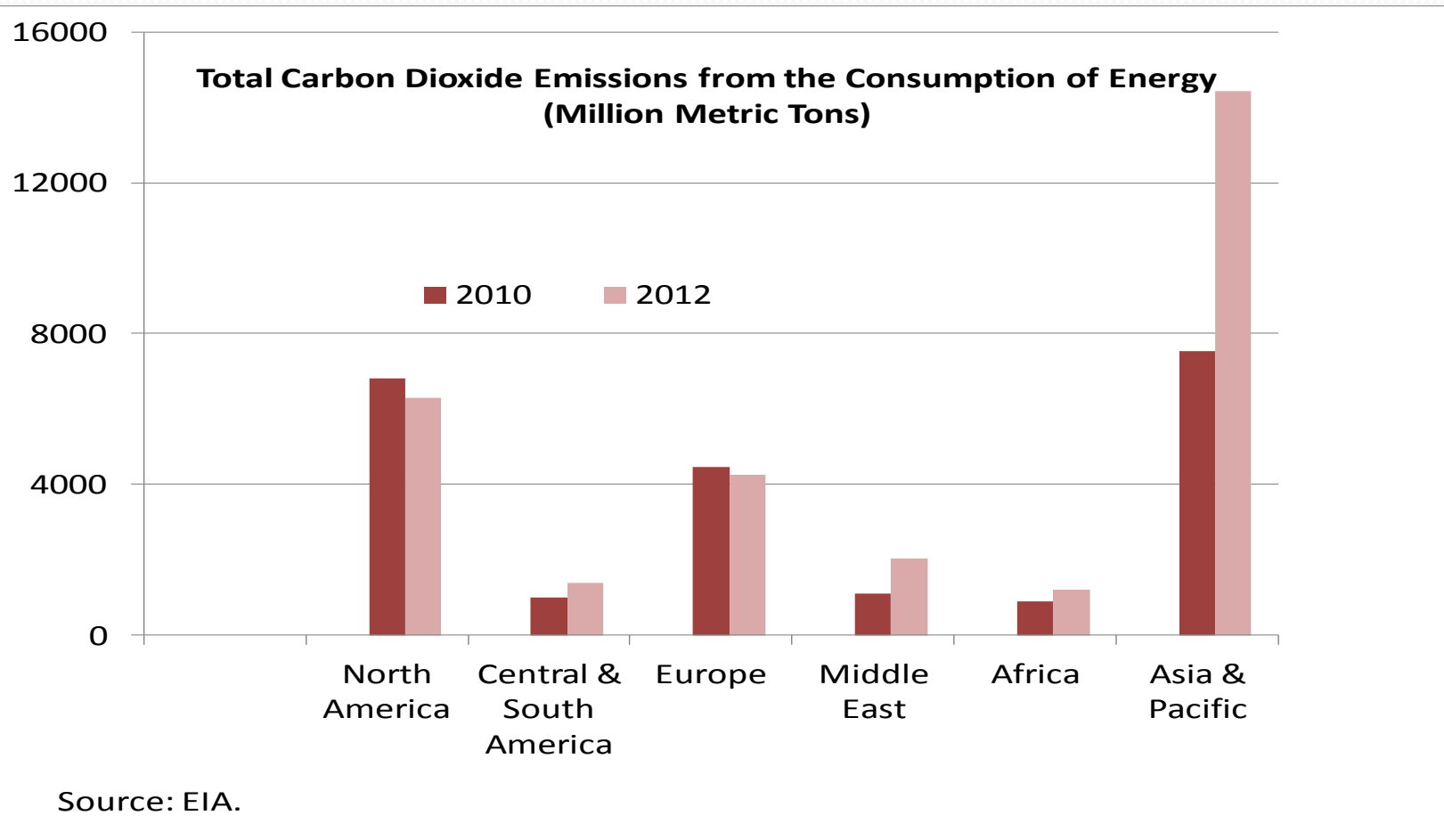
Note: LAC = Latin America and the Caribbean; MENAP = Middle East and North Africa and Pakistan; SSA = Sub-Saharan Africa.

Developing economies include emerging market and middle-income economies and low-income developing countries.

<sup>1</sup> Social protection spending includes spending on pensions and transfers.

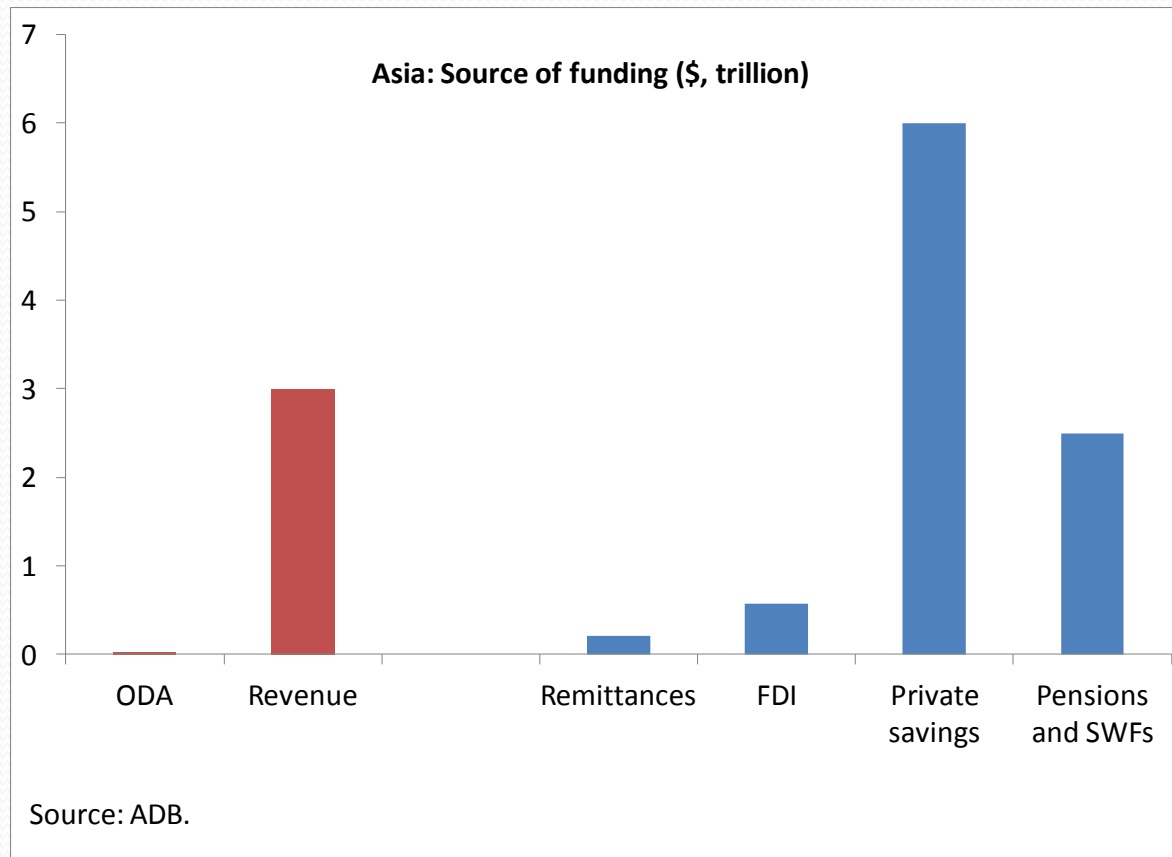
<sup>2</sup> Coverage indicates the share of the poorest 40 percent of households that receive a social protection transfer.

# And Environmentally Sustainable Growth



# Source of Funding in Asia

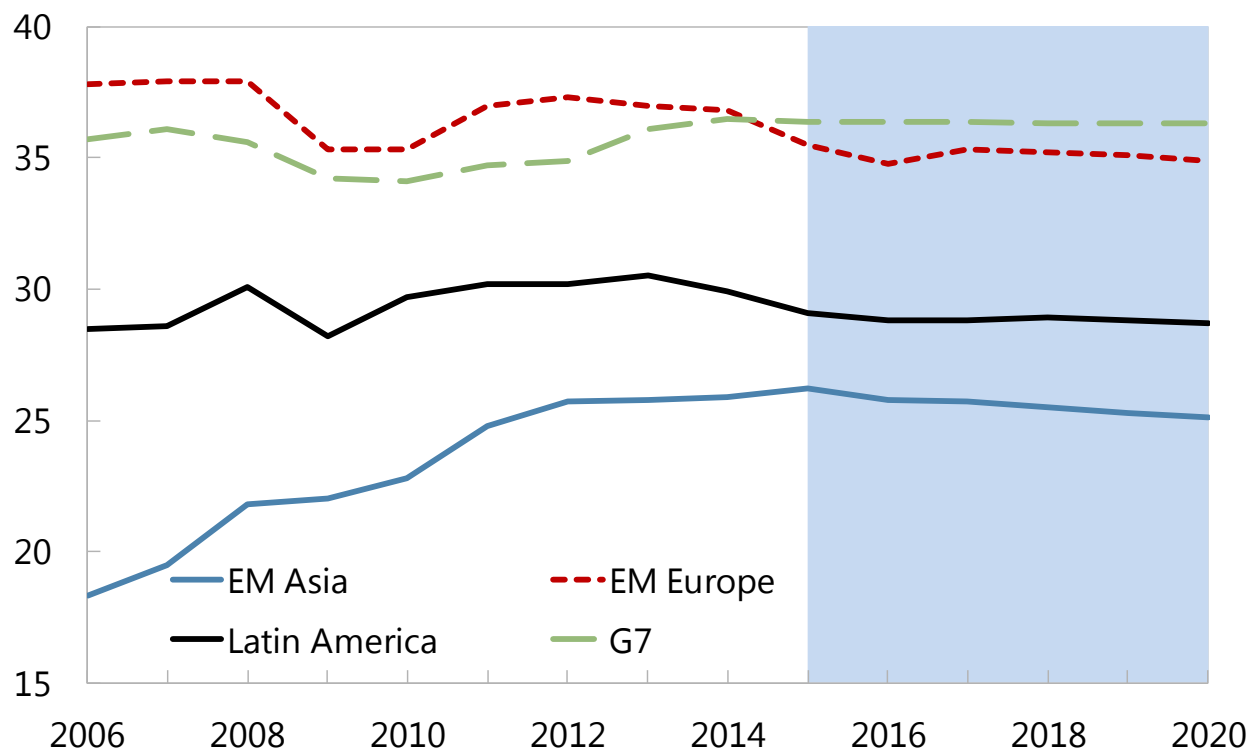
- For Asia the bulk of funds are in private hands



# Mobilizing Domestic Resources: Bolstering Revenue Collection in Asia

## General Government Revenue

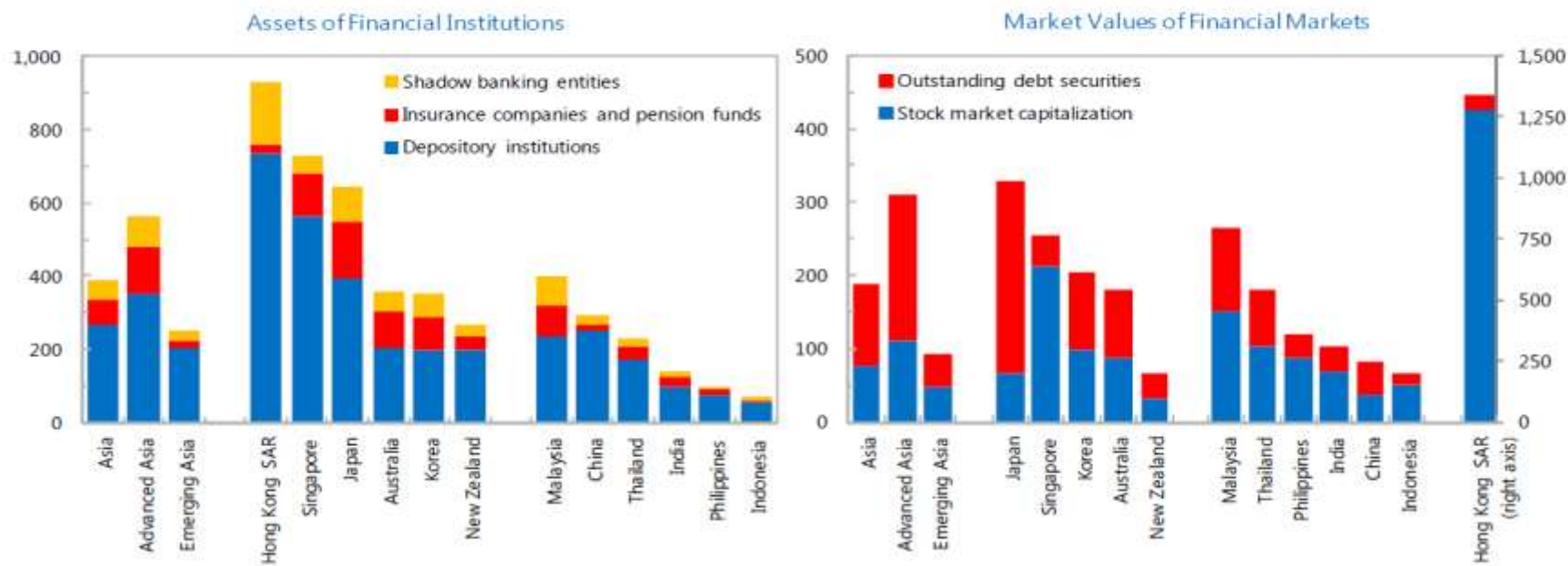
(In percent of GDP)



Source: Fiscal Monitor.

# Mobilizing Domestic Resources: Financial Market Development

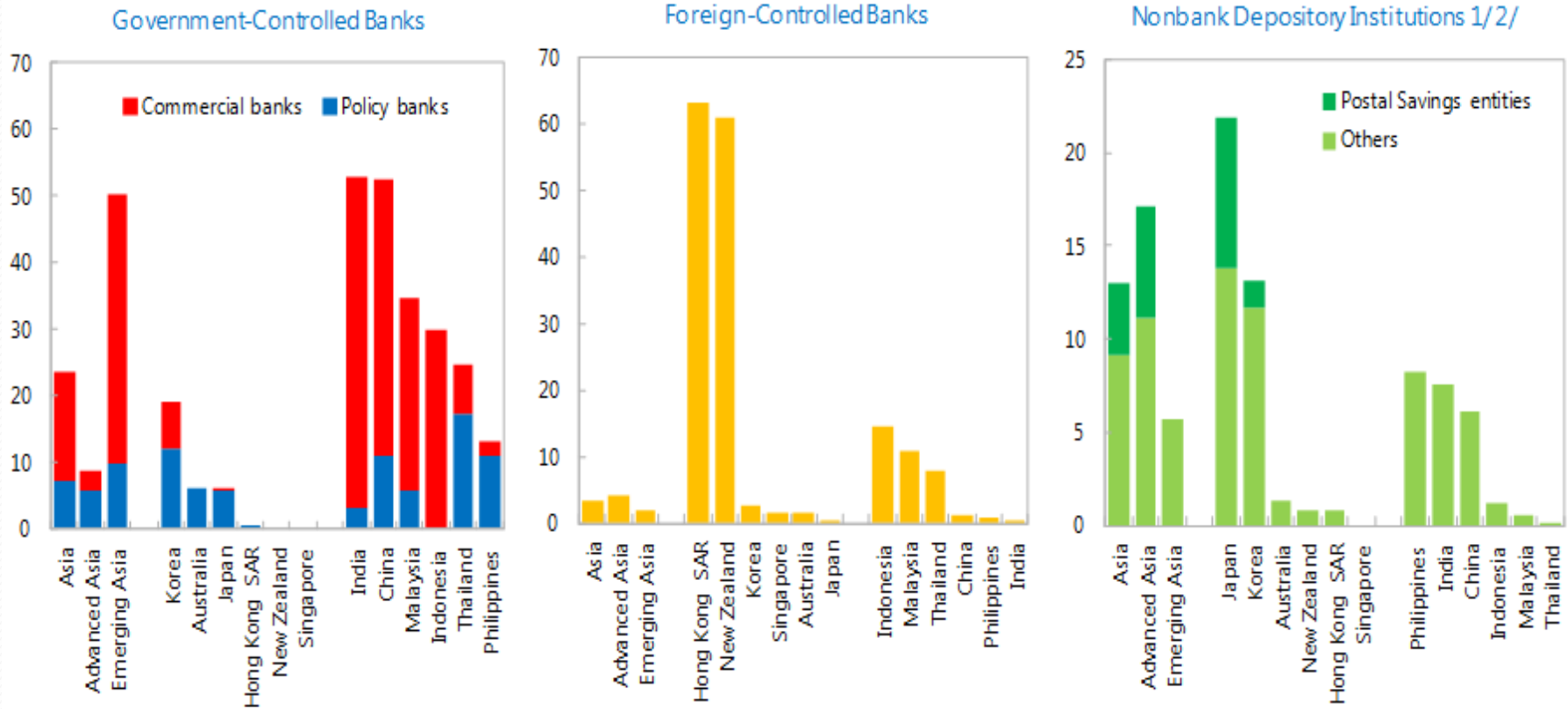
Asia: Structure of Financial Sector  
(In percent of GDP, at end-2012)



Sources: Bankscope; BIS, Debt Securities Statistics; Bloomberg; IMF, World Economic Outlook database; Various authorities' reports; and IMF staff estimates.

# Asia: Assets of Depository Institutions by Types

(In percent of the aggregate assets of financial institutions, at end-2012)

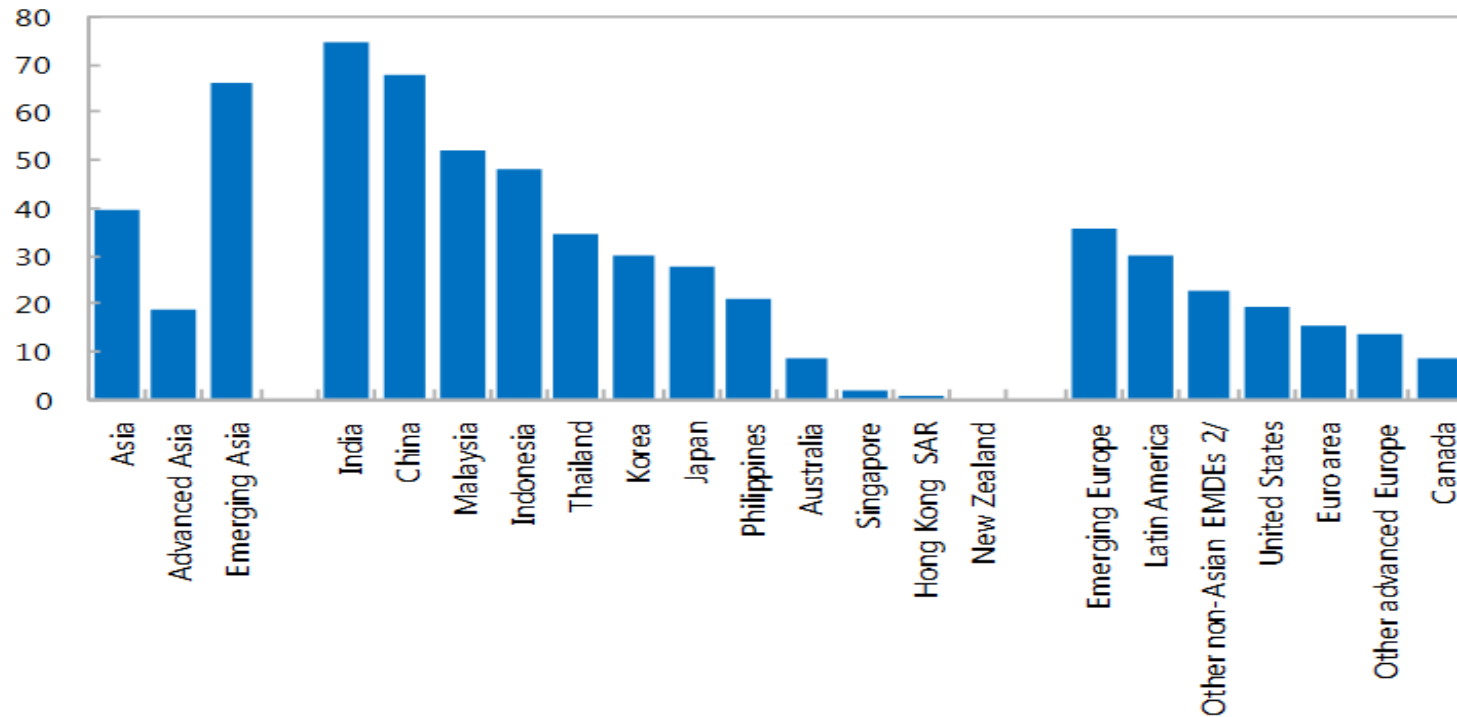


1/ Data on nonbank depository institutions are not available for Thailand.

2/ In Japan and Korea, Postal Savings entities are considered as nonbank depository institutions, with assets of 8.1 and 1.4 percent of aggregate assets of financial institutions, respectively. Both are government-owned.

Sources: Bankscope; Various authorities' reports; and IMF staff estimates.

# Government Ownership of Financial Institutions



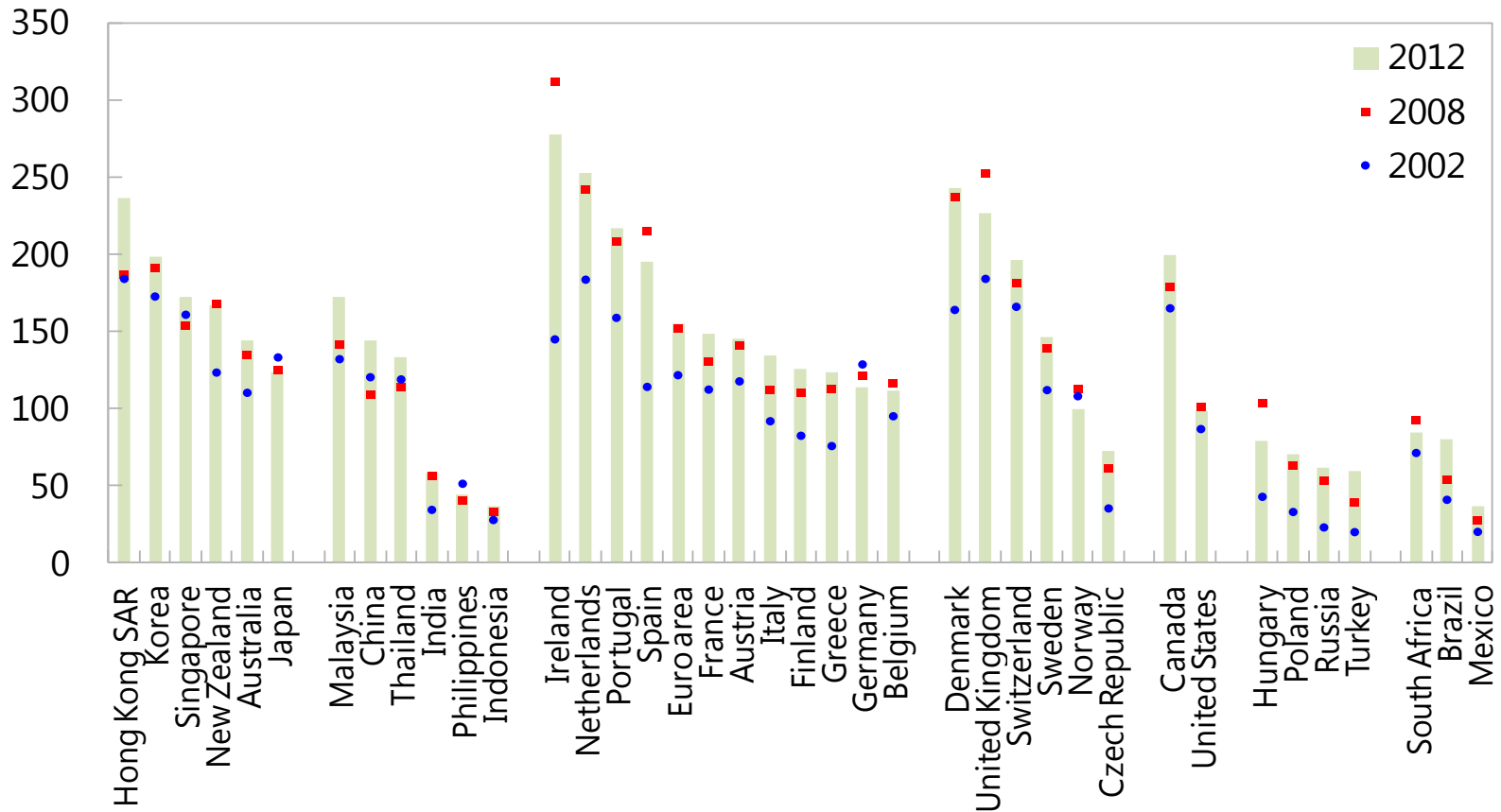
1/ The analysis covers credit institutions with assets of greater than 5 billion U.S. dollars available from the Bankscope database.

2/ EMDEs stand for emerging market and developing economies.

Sources: Bankscope database; and IMF staff estimates.

# Private Credit to GDP Ratio

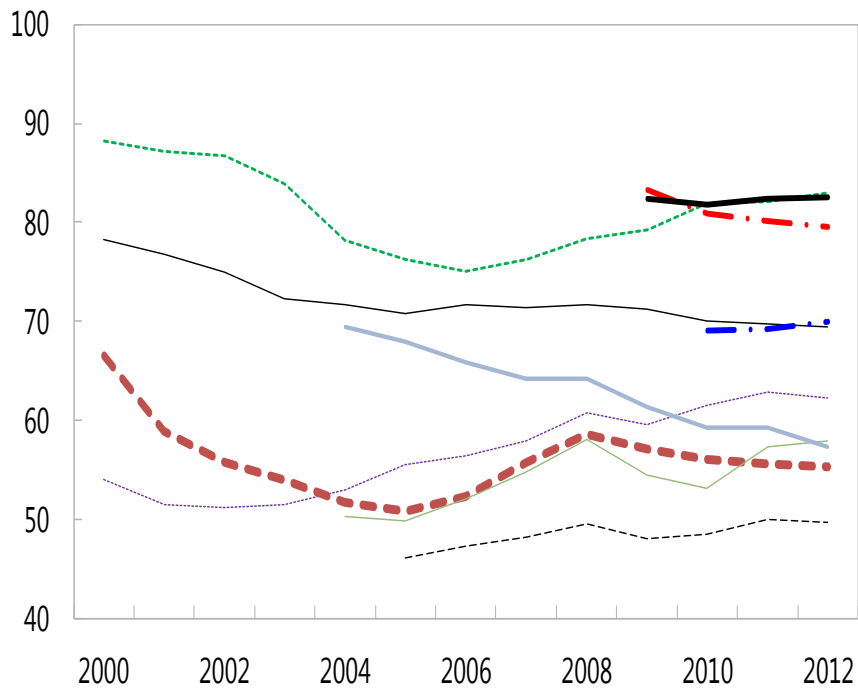
(In percent of GDP)



Sources: International Financial Statistics; BIS Debt Security Statistics; BIS Consolidated Banking Statistics; WEO; and IMF staff calculations.

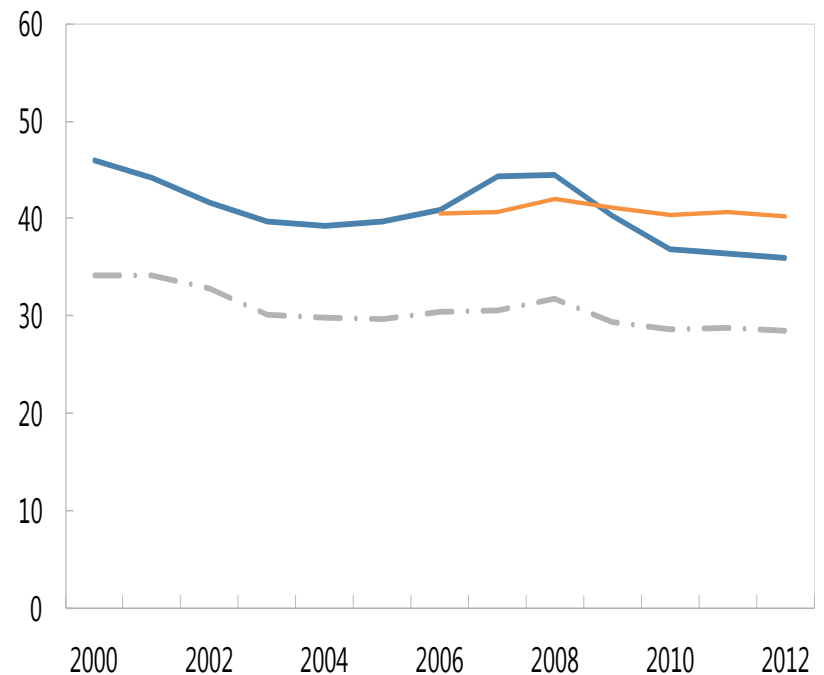
# Asia: Share of Corporate Loans

(In percent of total bank loans to private sectors)



— China      - - - India      — Philippines      - - - Hong Kong SAR  
— Japan      - - - Korea      — Singapore      - - - Taiwan PoC  
— Indonesia      — Thailand

Sources: CEIC; Haver Analytics; and IMF staff calculation.



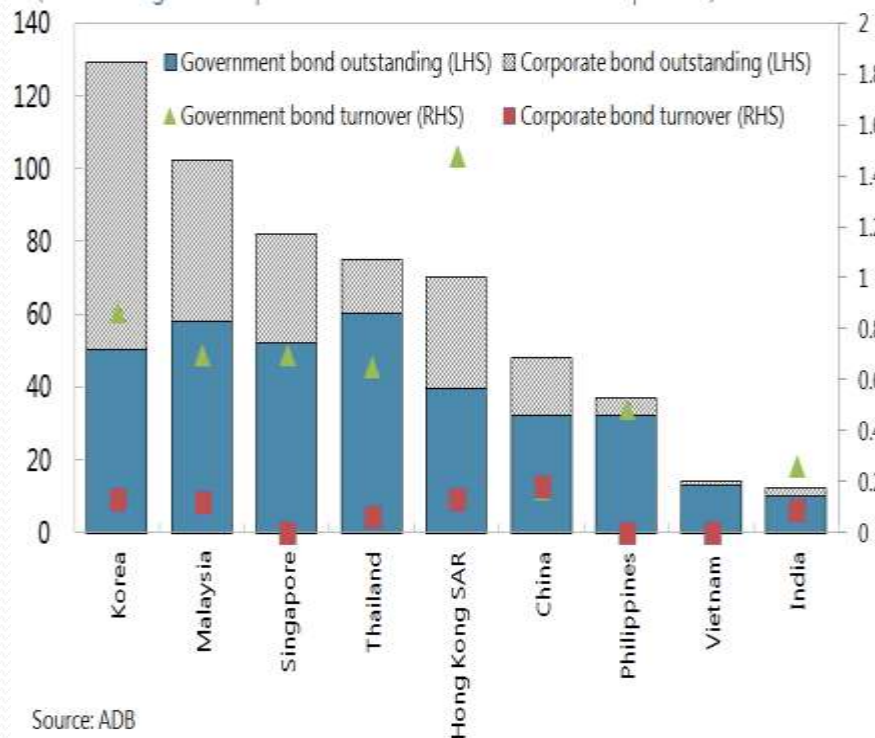
- - - New Zealand      — Australia      — Malaysia

Sources: CEIC; Haver Analytics; and IMF staff calculation.

# Mobilizing Domestic Resources: Financial Market Development

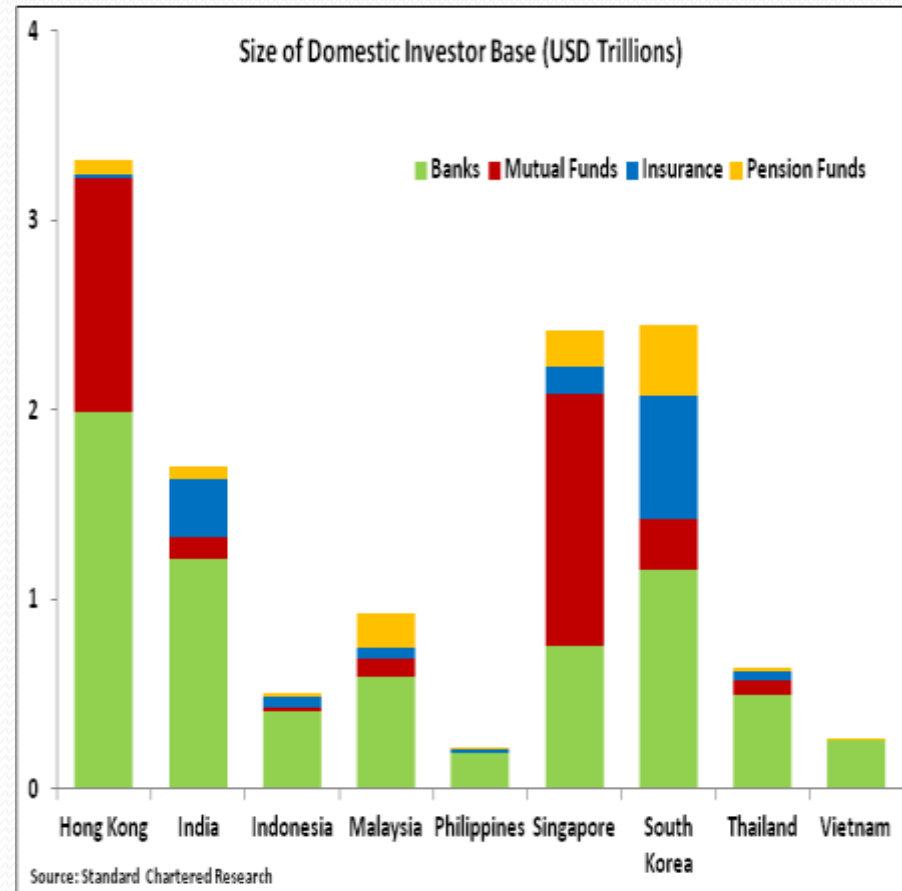
## Bond Markets in Selected Asian Economies

(outstanding stock in percent of GDP and turnover ratio in percent) <sup>1/</sup>



Source: ADB

<sup>1/</sup> Turnover ratio is the outstanding stock of bonds divided by its turnover volume.

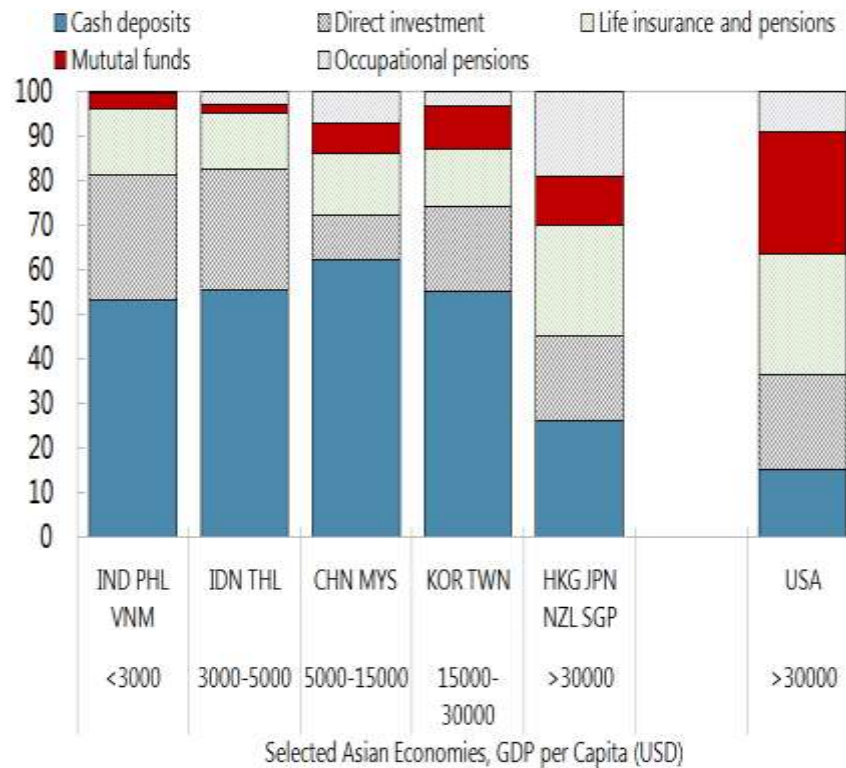


Source: Standard Chartered Research

# Mobilizing Domestic Resources: Channeling saving to productive use

## Household Asset Allocation

(in percent of asset allocation)



Sources: OECD, Oliver Wyman, and staff estimates.

# Mobilizing Domestic Resources: Unleashing private sector potential

## Selected Indicators of Financial Inclusion

	Households with Access to Banks (percent)	Adult Population Not Using Formal Financial Services (millions/percent)	SMEs Lacking Access to Loans from Financial Institutions (millions/percent)
East Asia and Pacific	42	876 / 51-75	140-170 / >59
South Asia	22	612 / 51-75	60-70 / >59
Middle East and North Africa	42	136 / 26-50	12-15 / >59
Sub-Saharan Africa	12	326 / 75-100	26-30 / >59
Latin America and the Caribbean	40	250 / 51-75	11-12 / 40-59
Central Asia and Eastern Europe	50	193 / 26-50	5-7 / 20-39
High-Income Countries	90	60 / 0-25	10-12 / <20

Source: Consultative Group to Assist the Poor and the World Bank Financial Access 2010.

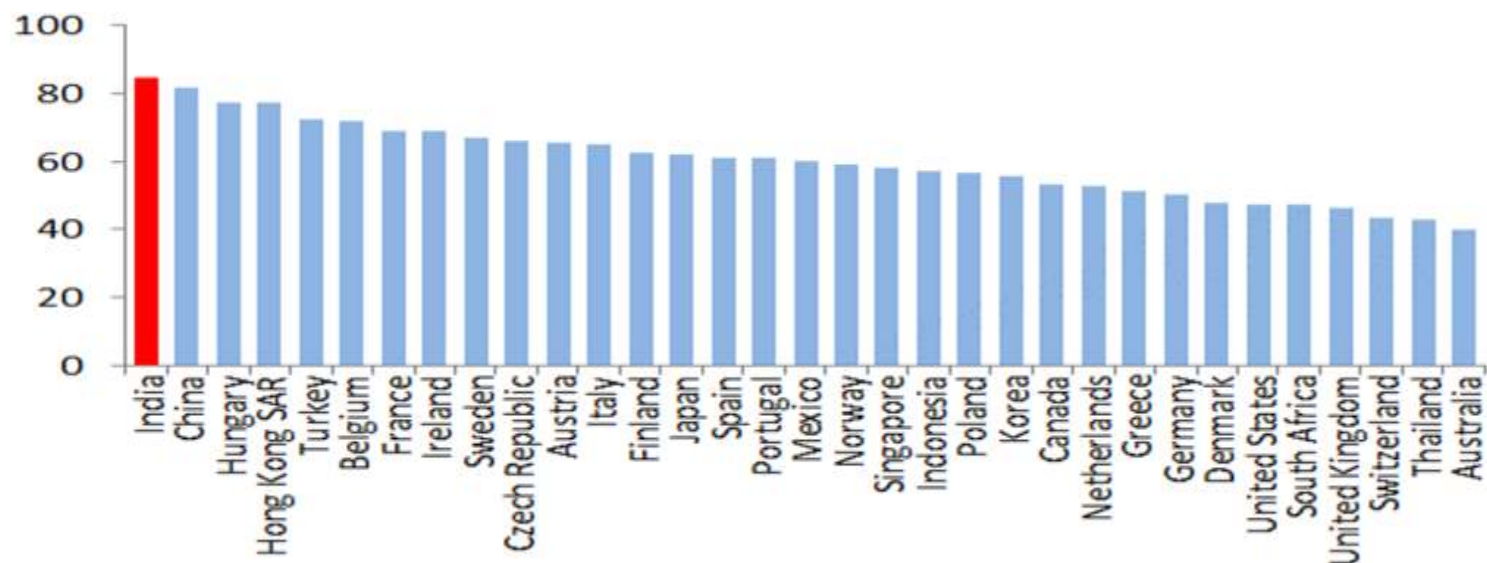
Is India's financial sector  
ready for the challenges?

# India's Corporate-Banking Sector Nexus

- Bank credit mostly directed to the corporates
- Continued concerns about asset quality and profitability

## Credit to Non-Financial Corporations

(As percent of total credit to the private sector)

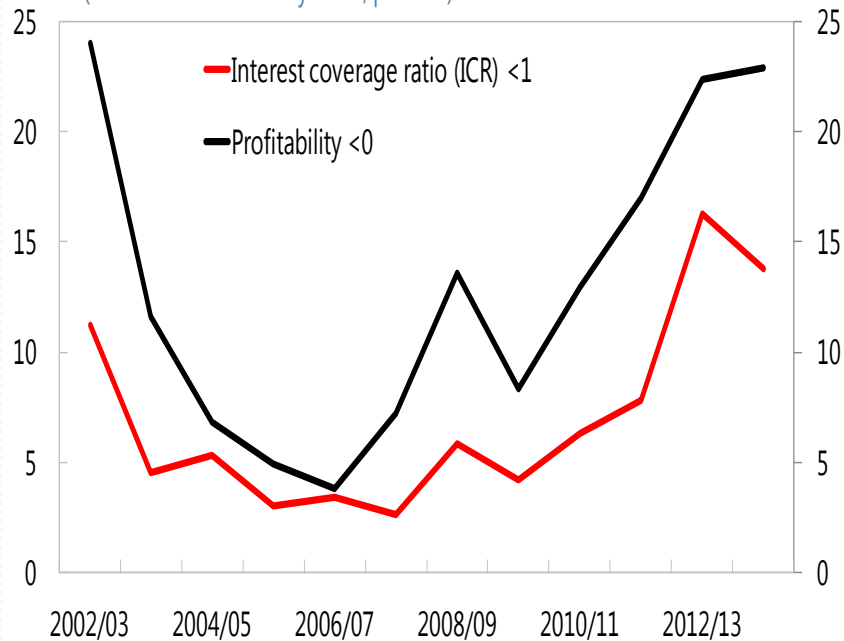


Sources: BIS; and IMF staff calculations.

# Corporate Sector Financial Health

## Indian Corporate Financial Health Indicators

(Share of debt owed by firms, percent)

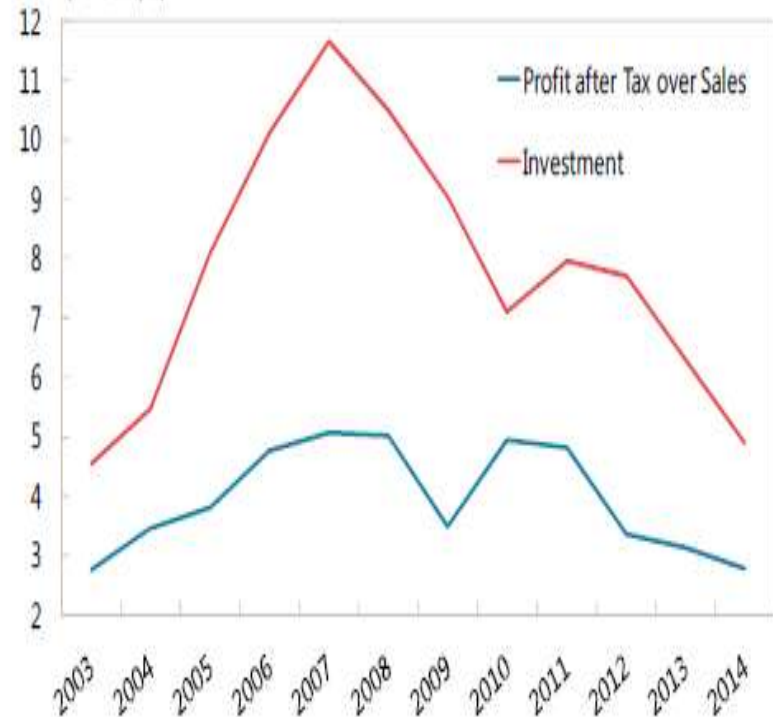


Sources: P. Lindner and S. Jung (2014), "Corporate Vulnerabilities in India and Banks' Loan Performance".

Note: Interest coverage ratio = EBITDA/interest expenses.

## Profit Margin and Investment

(Percent) 1/

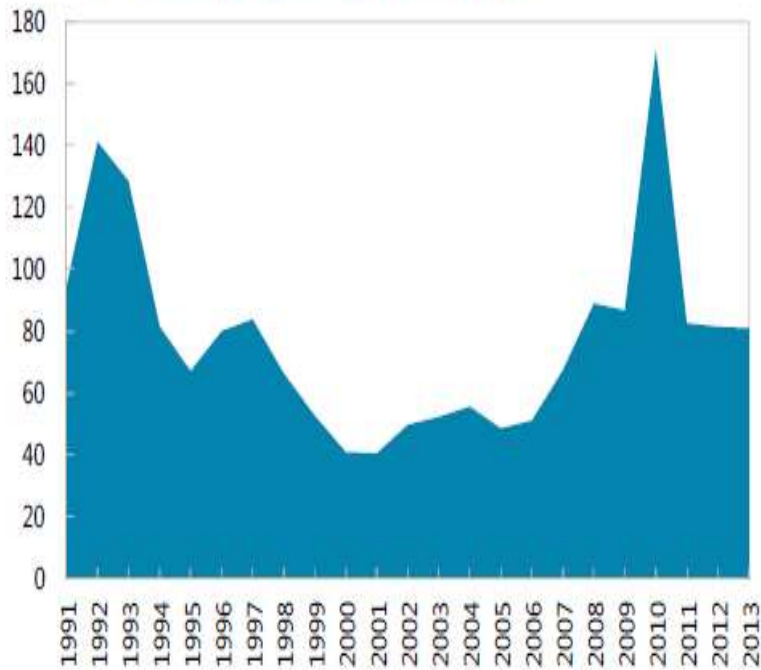


Source: CMIE, IMF staff.

1/ Based on a sample of 762 firms.

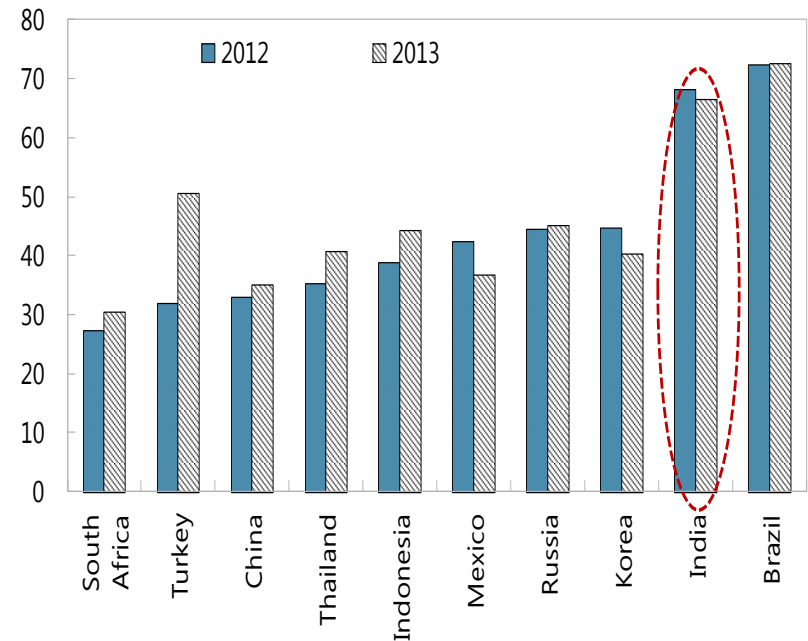
# Corporate Leverage

**Leverage Ratio for Indian Non-Financial Corporates**  
(Capital-weighted mean ratio of debt-to-equity)



Source: IMF, Corporate Vulnerability Utility.

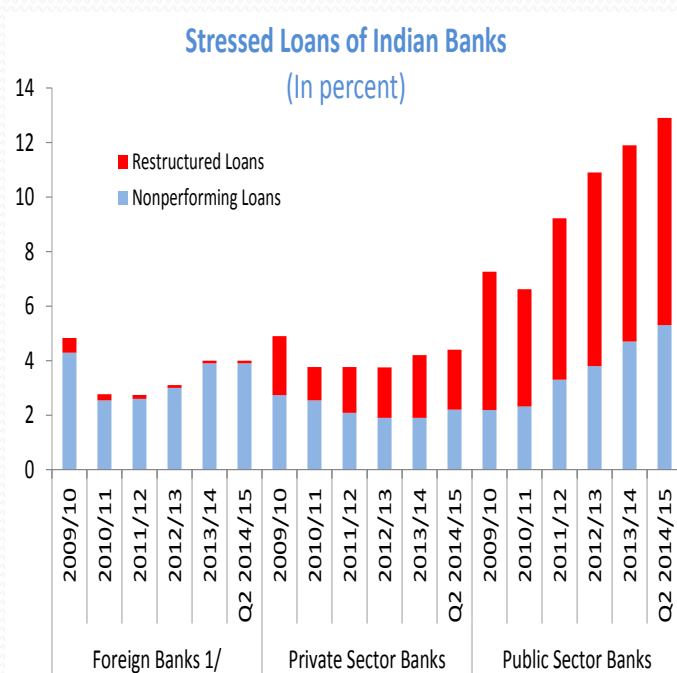
**Corporates: Median Debt to Equity**  
(In percent)



Sources: IMF, Corporate Vulnerability Utility.

# Banking Sector Vulnerabilities - I

- Asset quality is weak especially in public banks
- Provisioning levels are relatively low

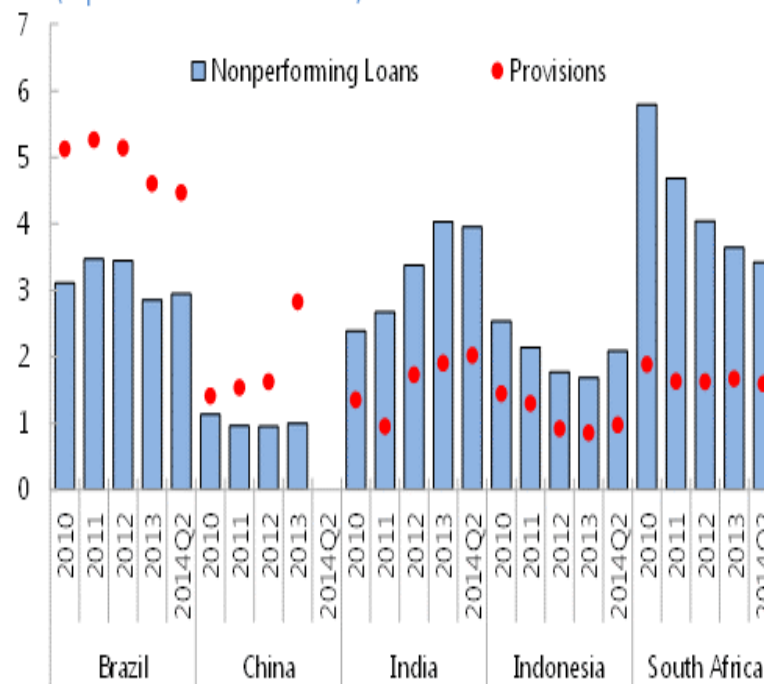


Sources: RBI; and IMF Staff Estimates

1/ Foreign bank data for Q2 2014/15 are estimated to equal the 2013/14 data.

## Nonperforming Loans & Loan Loss Provisions

(In percent of Total Gross Loans)

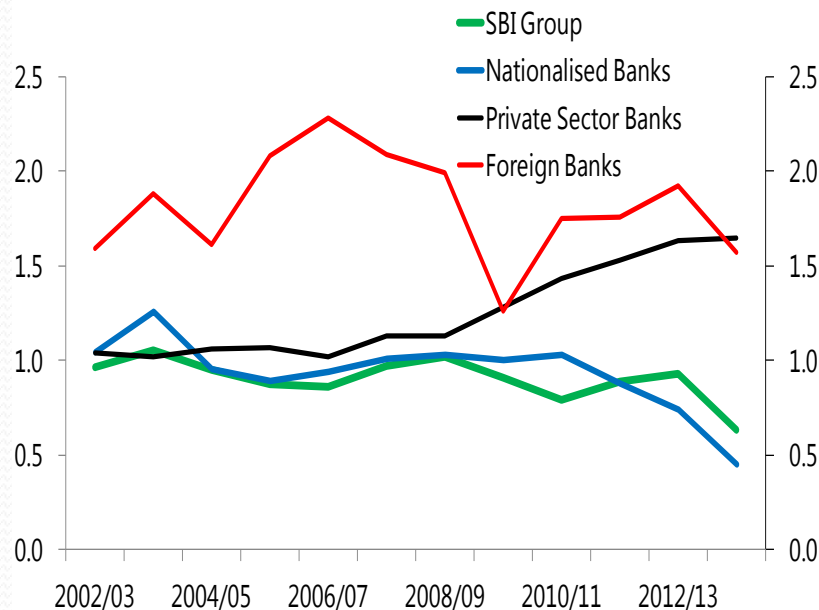


Source: IMF, Financial Soundness Indicators.

# Banking sector vulnerabilities-II

## Banking Sector Profitability: Return on Assets

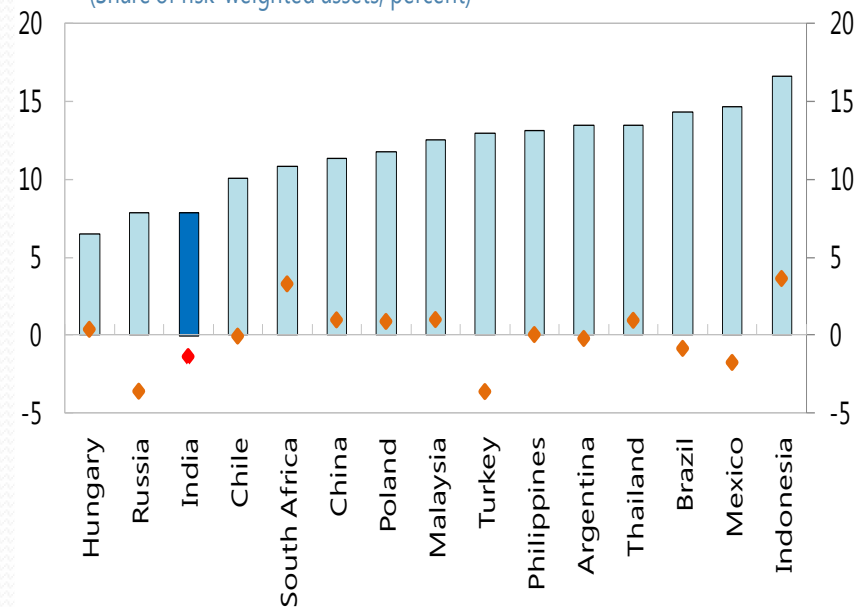
(Percent)



Source: CEIC.

## Bank Loss-Absorbing Buffers in Emerging Markets

(Share of risk-weighted assets, percent)



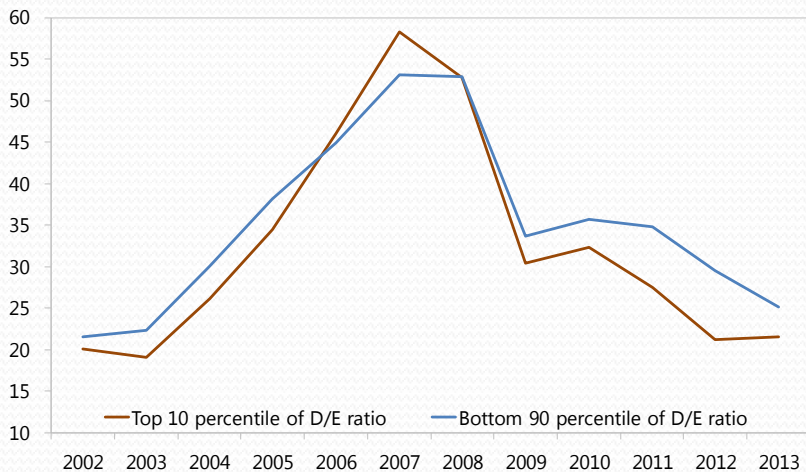
Sources: IMF Global Financial Stability Report, April 2015

Note: Loss-absorbing buffers = (Tier 1 capital + loan loss reserves – nonperforming loan)/(risk weighted assets). Data are for 2014 or latest available (2013 for China, Poland, and Thailand).

# Ensuring Growth Recovery

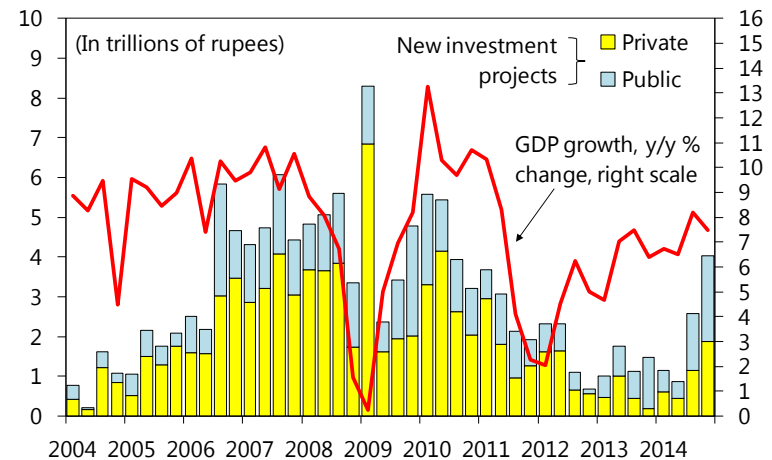
- Investment outlook remains challenging
- Public infrastructure investment to enhance productivity and crowd in private investment
- Further reforms to alleviate supply bottlenecks and enhance investment environment

**Corporates: Average Investment for Highly Leveraged and Less Leveraged Firms** (In percent)



Source: Das and Tulin, 2015, "Corporate Leverage and Investment in India".

**New Investment and GDP Growth**



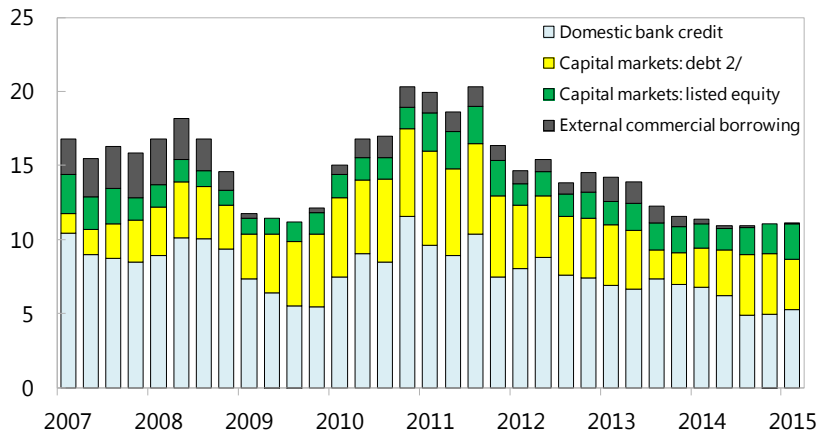
Sources: CAPEX; Haver Analytics; and IMF staff calculations.

# Assessing Capital Needs: Financing Growth

- Anemic credit posing headwinds to growth recovery
- Capital injections into PSBs of about  $\frac{1}{4}$  percent of GDP to sustain credit growth of 15 percent per year (with internal profit generation)
- Capitalizing on oil price collapse

## India's Corporate Sector Financing Sources, Net 1/

(In percent of GDP, 4-quarter moving average)



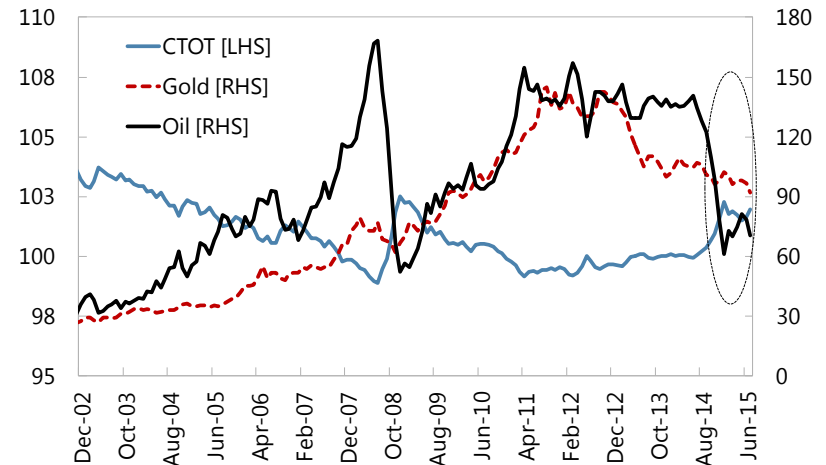
Sources: CEIC; Haver Analytics; Dealogic; and IMF staff estimates.

1/ Non-internal sources of finance.

2/ Includes corporate bonds, commercial paper, syndicated loans.

## Commodity Terms of Trade (CTOT) and Price Indices

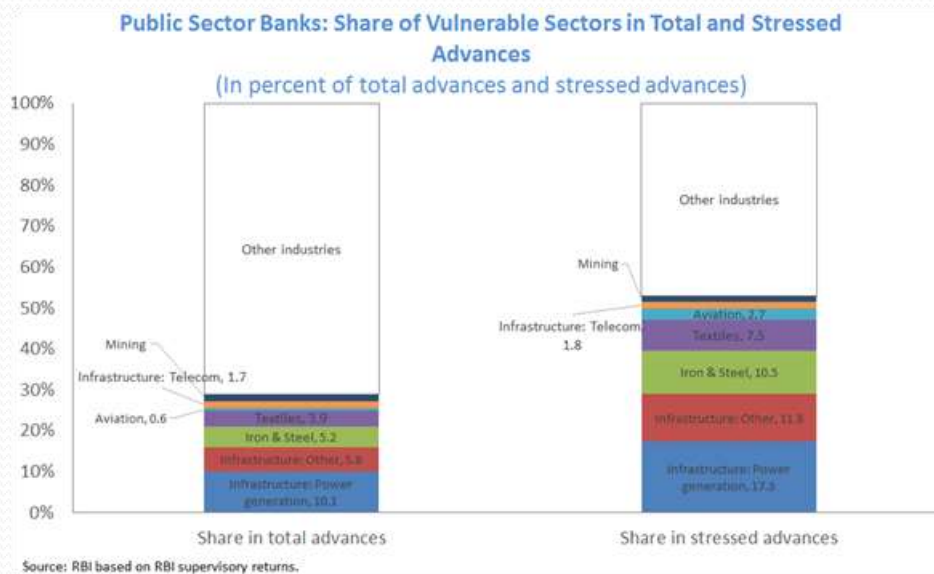
(Index number, 2010=100)



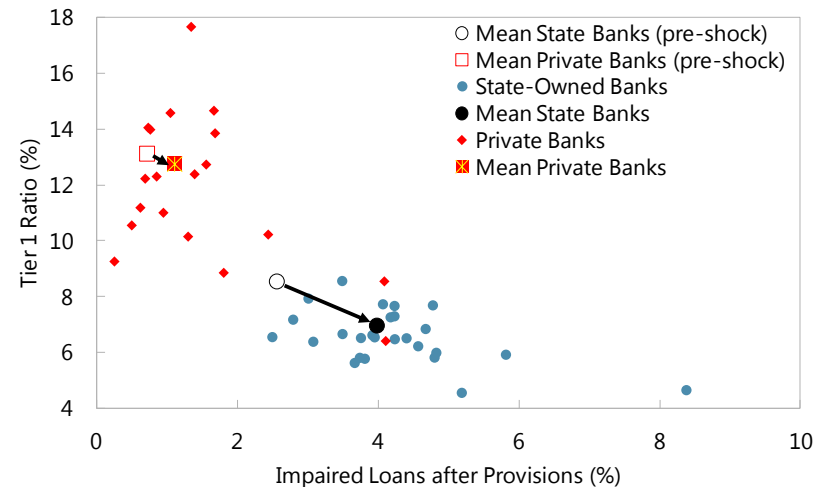
Source: Cavalcanti, Mohaddes, and Raissi (2014); and IMF, International Financial Statistics.

# Assessing Capital Needs: Financial Stability

- Rapid rise in restructured assets in recent years.
- PSBs: weaker capital buffers and higher level of stressed assets
- Under a sharp deterioration in macroeconomic conditions, post-stress, the average Tier 1 decreases by:
  - 1.6 percent in PSBs
  - 0.4 percent in private banks



**Loan Impairments vs. Tier 1 Ratio, March 2014 (post-shock)**



Sources: Bankscope; Reserve Bank of India; and IMF staff calculations.

# Assessing Capital Needs: Adding Basel III

Capital injections likely moderate provided the private sector supplies a considerable share

**PSBs' Additional Capital Requirements: Basel III and Transition of Restructured Loans to NPLs.**  
(In percent of 2019 GDP) 1/ 2/

<b>Return on Assets-Based Simulations</b>							
<b>Total Capital in 2019 (%) 3/ 4/</b>	<b>Credit Growth (Multiple of GDP)</b>			<b>Total Capital in 2019 (%) 3/ 4/</b>	<b>Credit Growth (Multiple of GDP)</b>		
	<b>Slow</b>	<b>Base</b>	<b>Fast</b>		<b>Slow</b>	<b>Base</b>	<b>Fast</b>
	<b>(GDP)</b>	<b>(1.4*GDP)</b>	<b>(1.8*GDP)</b>		<b>(GDP)</b>	<b>(1.4*GDP)</b>	<b>(1.8*GDP)</b>
<b>Minimum Common Equity Tier1</b>				<b>Minimum Common Equity Tier1 plus CCB</b>			
<b>Government's Share</b>				<b>Government's Share</b>			
5.5 (0)	0.00	0.01	0.12	8 (0)	0.11	0.45	1.04
6.5 (1)	0.01	0.09	0.40	9 (1)	0.28	0.79	1.47
7.5 (2)	0.05	0.28	0.82	10 (2)	0.55	1.14	1.90
<b>Total for Public Sector Banks</b>				<b>Total for Public Sector Banks</b>			
5.5 (0)	0.00	0.01	0.16	8 (0)	0.16	0.66	1.56
6.5 (1)	0.01	0.13	0.58	9 (1)	0.39	1.18	2.21
7.5 (2)	0.07	0.41	1.23	10 (2)	0.81	1.71	2.87

Source: RBI, BankScope, Bloomberg, Company reports; and IMF staff calculations

1/ Simulations based on 2014 data (except ROA and ROE, where 2013 & 2014 averages where used). 2/ A 15 percent transition rate from restructured loans to NPAs is assumed. 3/ Capital ratios presented with additional (0), (1), or (2) percentage points buffers. 4/ Numbers highlighted in grey represent budgeted capital increases.

# Are dominant PSBs the way forward?

- Herfindahl index of concentration has fallen; sector is now more competitive.
- On average, profitability and ROA of PSBs and private banks broadly comparable
- So what is the difference? PSBs lend a smaller share of their assets to the private sector; prefer to invest in government securities.
- So PSBs are (generally) profitable, well capitalized, and safe (low leverage)
- But PSBs “underlend” to the private sector and “overinvest in government securities.

# Why do PSBs “overinvest” in government securities and “underlend” to the private sector?

- Several possible explanations:
  - Lower risk weights and capital costs for these investments
  - No risk of default

These should imply positive correlation of profitability with investment in government securities

Results do not confirm this positive correlation. PSBs are less profitable mainly because of much higher overhead costs and lower efficiency.

Could be due to asymmetric incentive structures (no rewards for high profitability, large penalties for decisions that go bad); moral hazard associated with bailout guarantee; or that there really is such a thing as the “public sector character” of banks whereby banks are more sensitive to the needs of the government priorities.

Planned reforms: Do they  
go far enough?

# Financial Deepening and Financial Stability

- Positive correlation between financial development and the quality of the regulatory environment
- There is very little tradeoff between financial development and financial stability
- 25 of the 93 regulatory principles (BCP, ICP and IOSCO) are critical for financial stability. Of these 23 are also critical for financial development.
- These principles capture (1) the ability of regulators to set and demand adjustments to capital, provisions and employee compensation; (2) regulatory definitions of capital, NPAs and loan losses; (3) financial reporting and disclosures.

# Policy Agenda

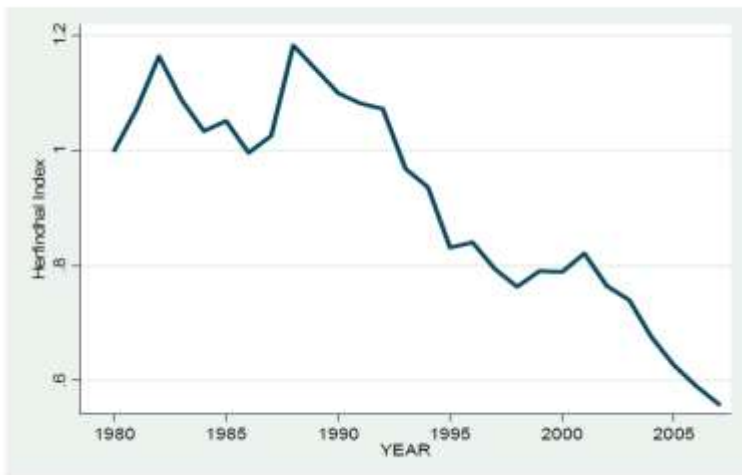
- **Recapitalized Banking System**
  - *Indradhanush (2015)*: 7 point Program to reform banks:
    - Strengthening corporate governance
    - Capitalization
    - Addressing the NPL issue and debt resolution
  
- **Enhancing bank finance**
  - Entry to private deposit-taking small finance banks
  - Specialized payment banks, savings products
  - Liberalized banking correspondence



Thank you

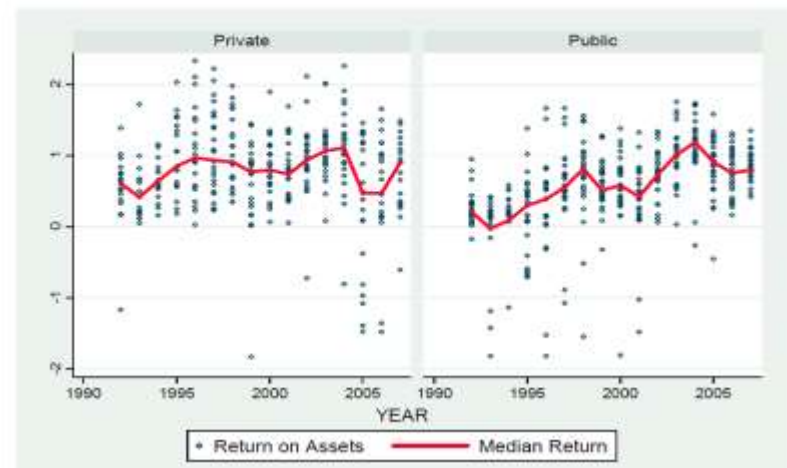
# Graveyard

**Chart 6: Herfindahl Index for the Banking Sector**



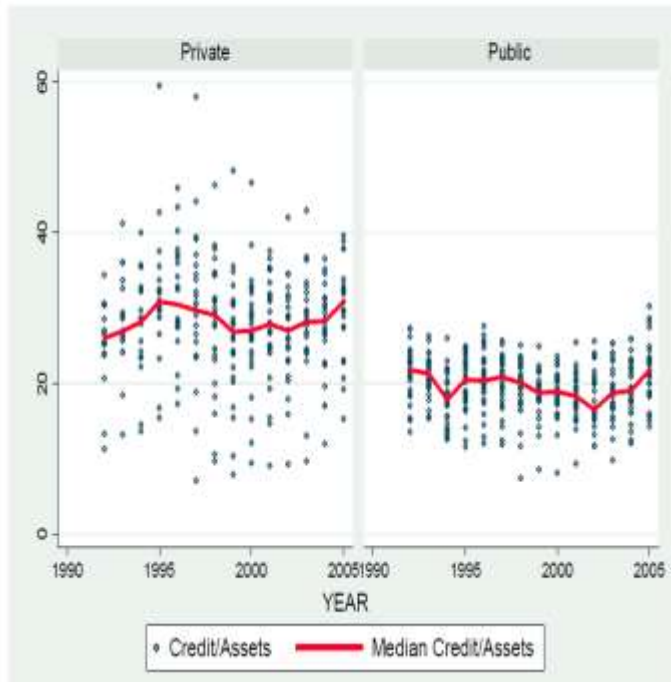
**Chart 7: Profitability of Public and Private Banks**

(Return on Assets in percent)



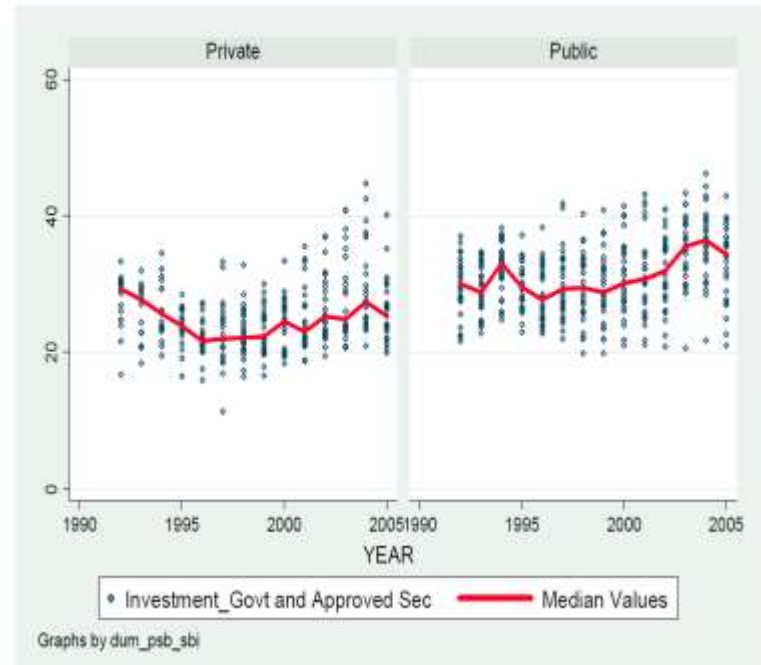
# Credit to the private sector

Chart 8: Credit to the Private Sector (percent of assets) by Private and Public Banks

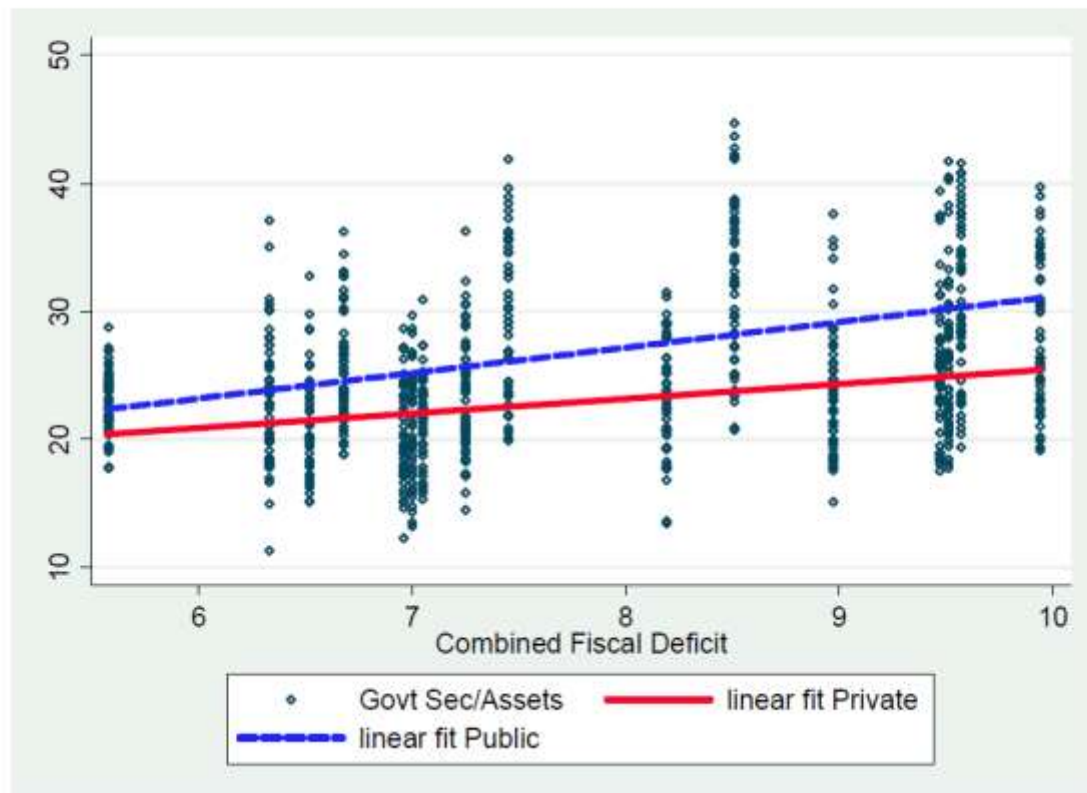


# Investment in government securities

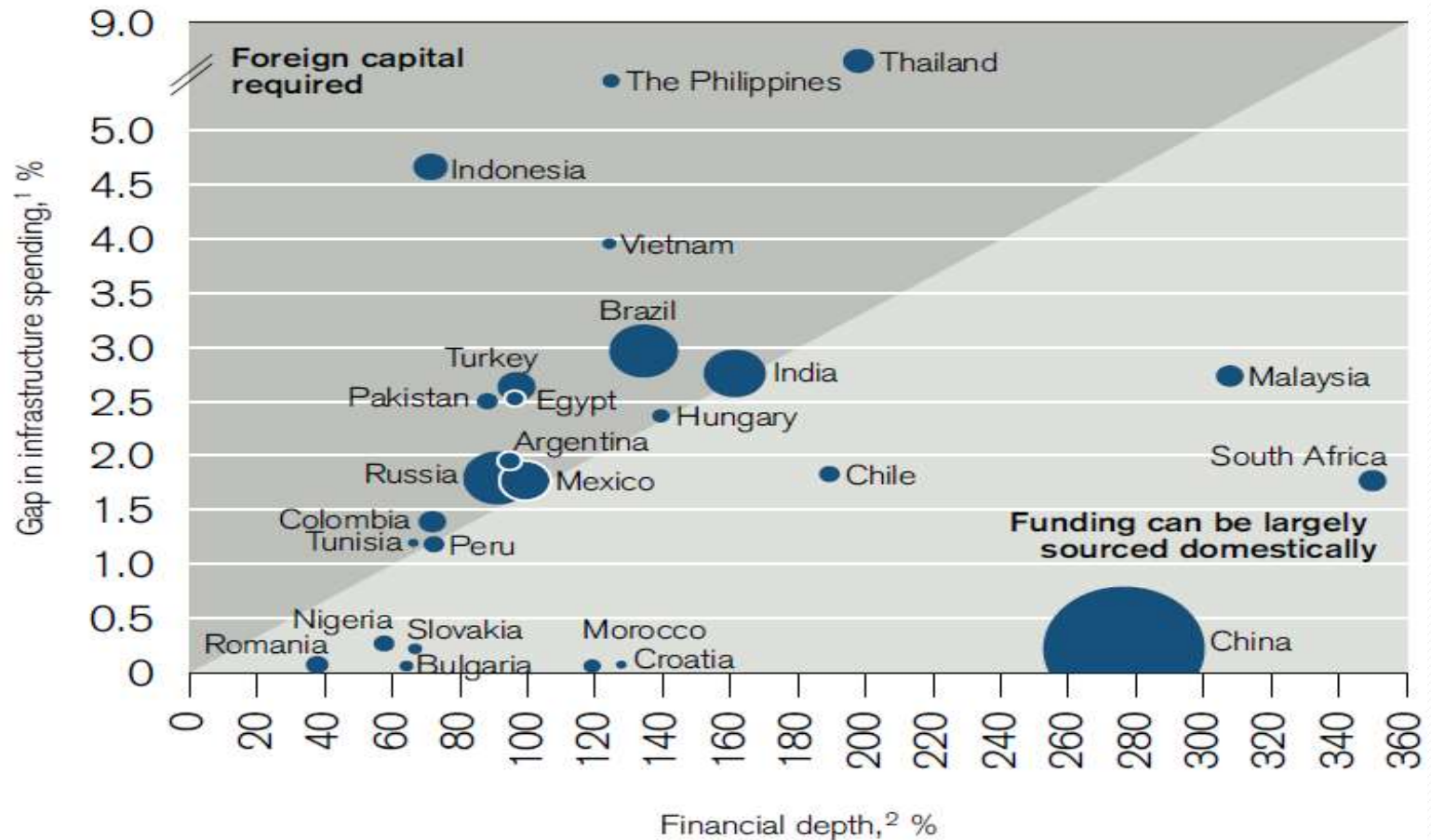
Chart 9: Investment in Government and Other Approved Securities (percent of assets) by Private and Public Banks



**Chart 10: Investment in Government and Other Approved Securities (% of assets) by Private and Public Banks and Fiscal Deficit (% of GDP)**



# The need for external financing



<sup>1</sup> Gap in needed vs. actual infrastructure spending as % of GDP, 2009

<sup>2</sup> Value of bank deposits, bonds and equity as % of GDP, 2009

Source: Credit Suisse (2012; 2013)