# *Infrastructure Finance, Investor Base and Credit Gaps: Role of Bond Market in Asia*

– OECD-ADBI Roundtable –

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# Infrastructure Investment Needs

- McKinsey estimated in 2013 that in 2010–2030, world needs to invest \$57–\$67 trillion, 3.5 %–4.1% of GDP, led by emerging markets.
- ADB and ADBI (*Infrastructure for a Seamless Asia, 2009)* estimated that in 2010–2020, Asia needs to invest
  - \$8 trillion in national infrastructure.
  - \$290 billion on regional infrastructure projects in transport and energy that are in the pipeline.
  - \$750 billion per year. But China's *Belt & Road Initiative* may push it up.

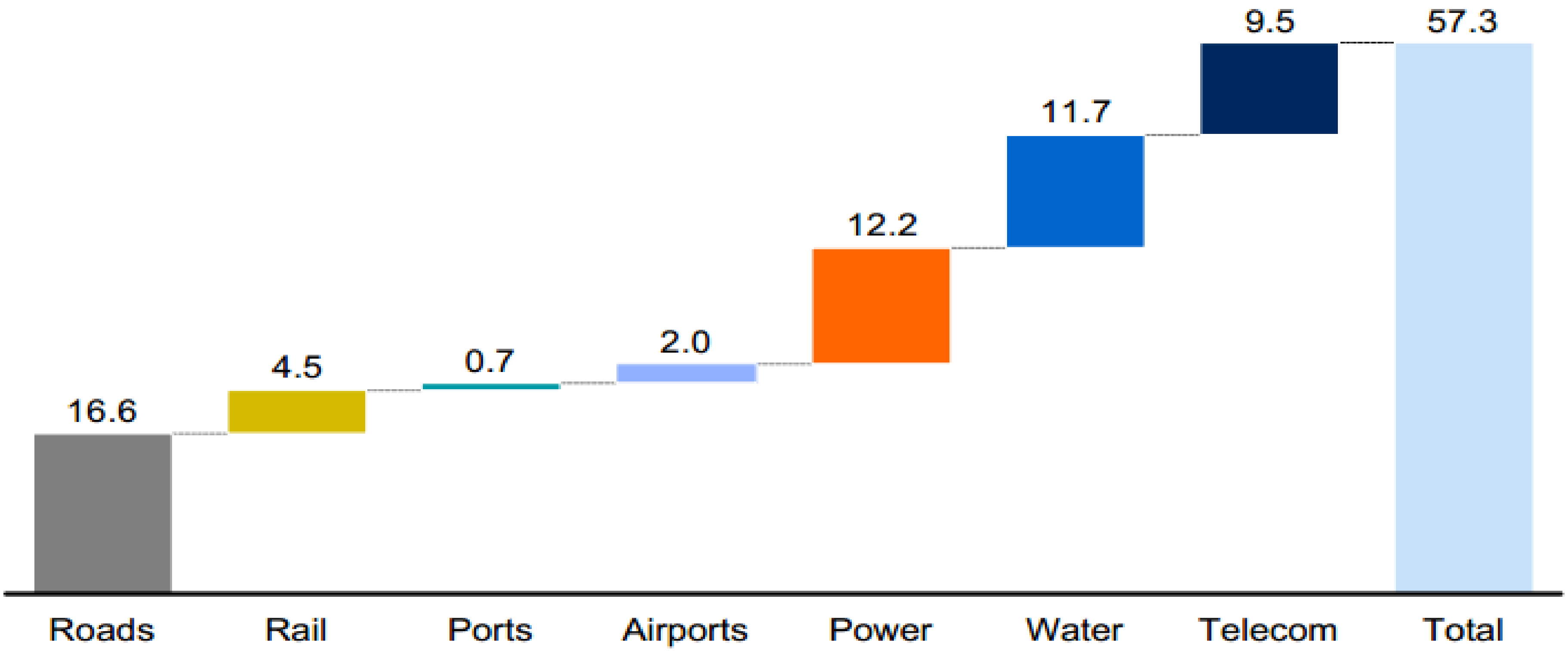
❖ The ADB – ADBI study covers 30 ADB DMCs: 7 in Central Asia (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan); 10 in East and Southeast Asia (Brunei Darussalam, Cambodia, PRC, Indonesia, Lao PDR, Malaysia, Mongolia, Philippines, Thailand, and Viet Nam); 6 in South Asia (Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka); and 7 in the Pacific (Fiji Islands, Kiribati, Papua New Guinea, Samoa, Timor-Leste, Tonga, and Vanuatu).

## Exhibit 5

**Based on projections of demand by infrastructure segment, about $57 trillion, or 3.5 percent of global GDP, is needed through 2030**

**Global investment, 2013–30**

$ trillion, constant 2010 dollars




1 OECD telecom estimate covers only OECD members plus Brazil, China, and India.

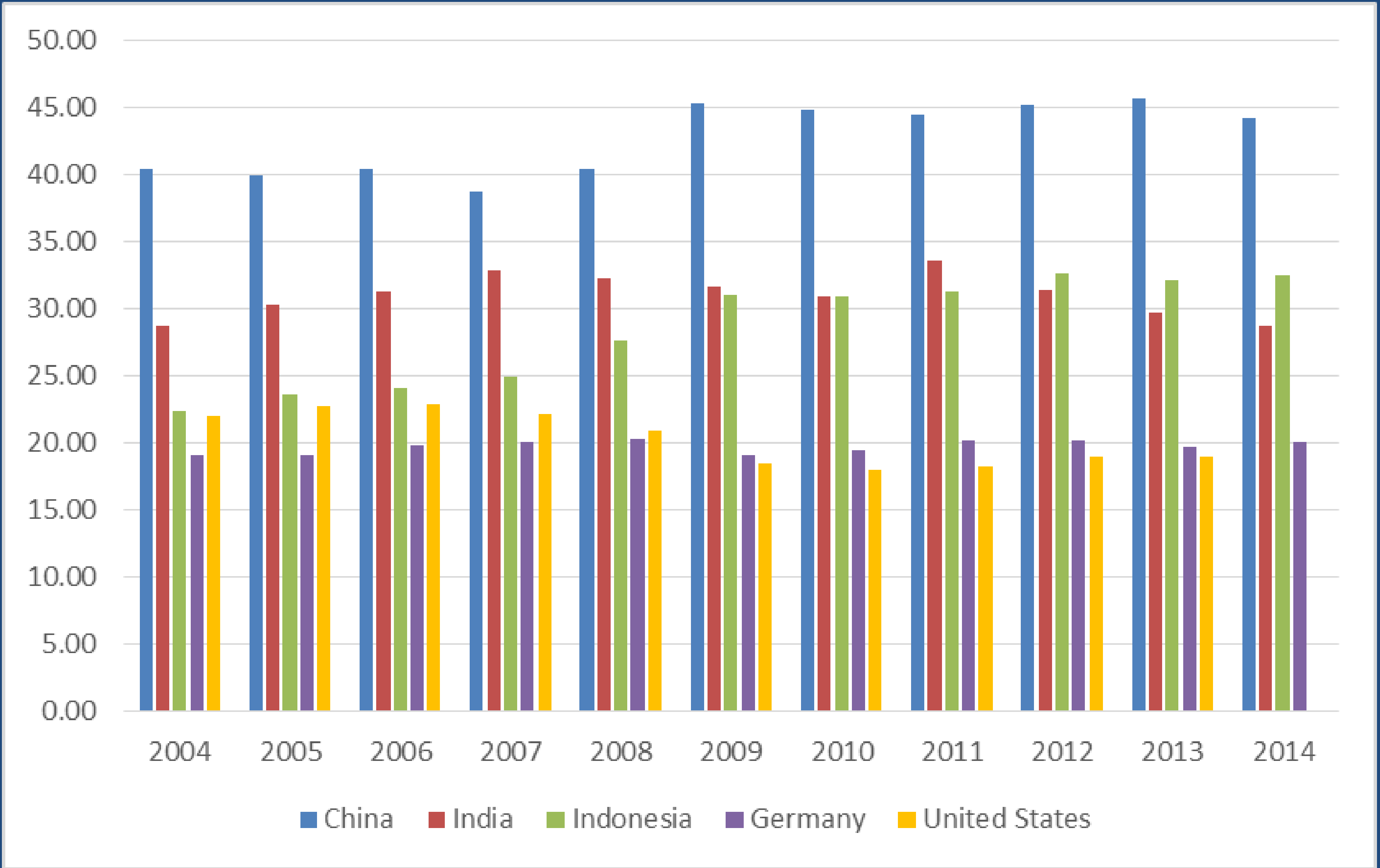
NOTE: Figures may not sum due to rounding.

SOURCE: OECD; IHS Global Insight; GWI; IEA; McKinsey Global Institute analysis

But The share of public and private capital varies across countries and types of infrastructure.

# Gross Fixed Capital Formation

## (% of GDP)

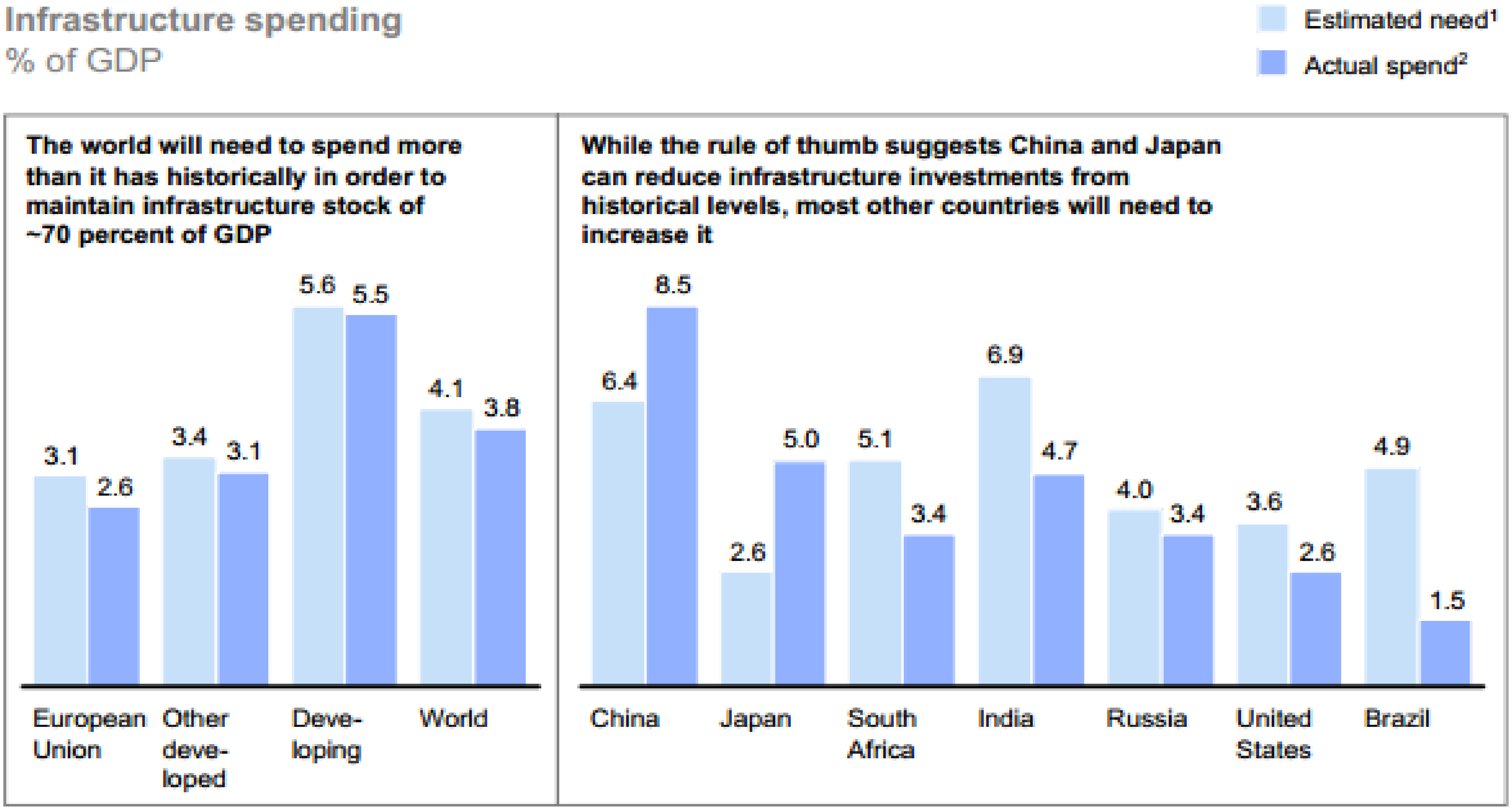



Source: *World Development Indicators*, World Bank

## Exhibit 4

# Using the 70 percent rule of thumb, infrastructure investment would need to rise to 4.1 percent of GDP to keep pace with growth through 2030

Infrastructure spending
% of GDP




1 Estimated need based on projected growth, 2013–30.
2 Weighted average annual expenditure over years of available data, 1992–2011.

SOURCE: ITF; GWI; IHS Global Insight; *Perpetual inventory method*, OECD, 1998; McKinsey Global Institute analysis

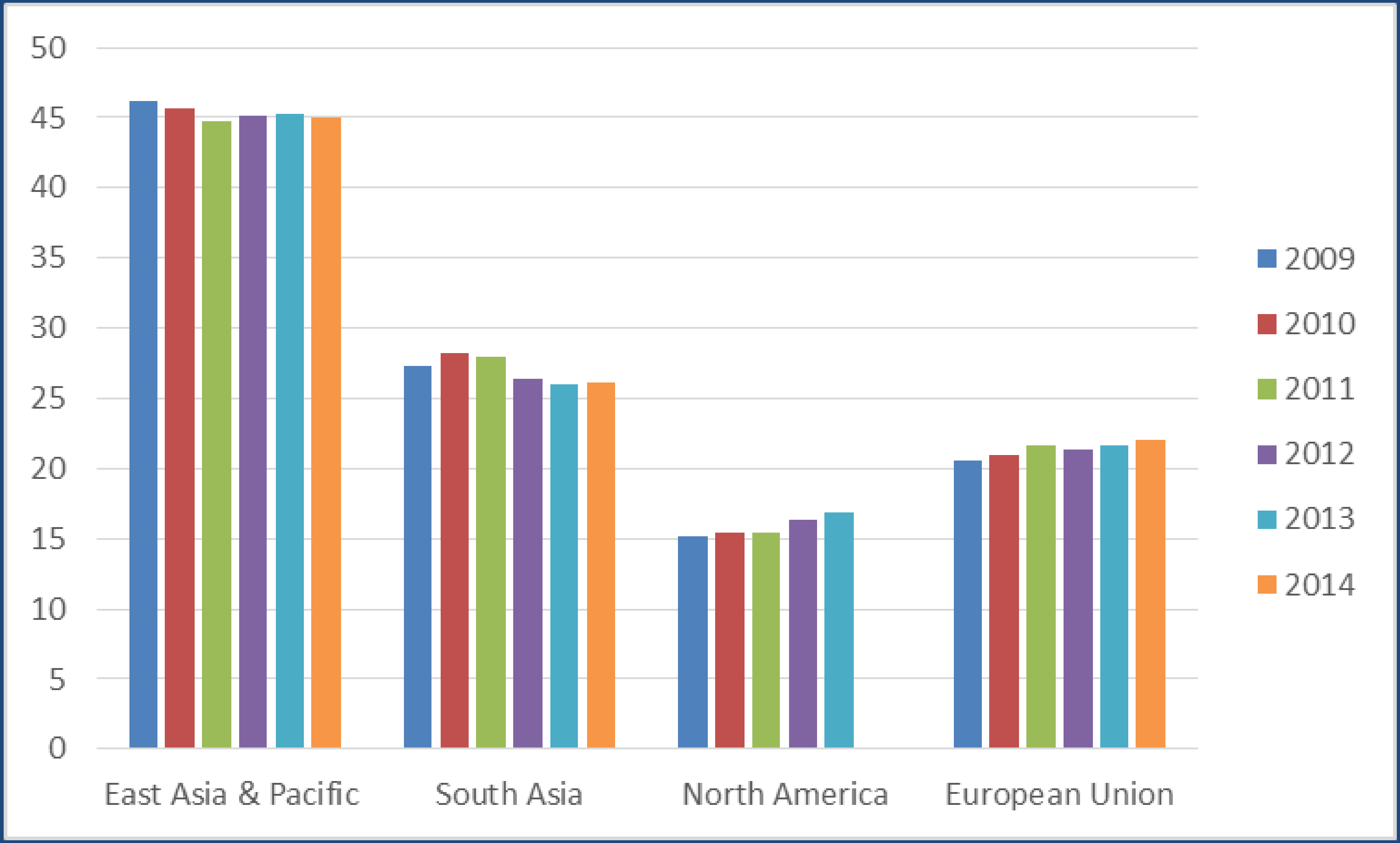
# Challenges

- Strategize the role of the public / private sectors and identify Bankable / bankable projects.
  - Commercial / economic viability
- Currency risk if FX-financed => Need LCY financing
- Asia has high savings but not high L-T savings due to the bank-centric financial sector and underdeveloped capital markets and contractual savings.
- Bank prudential regulation: a) increases the cost of financial intermediation, b) limits maturity transformation and c) reduces the liquidity of the secondary bond market.
- Interest rate spreads have widened in developing countries. Equity requirement increased as countries try difficult projects.

# Challenges

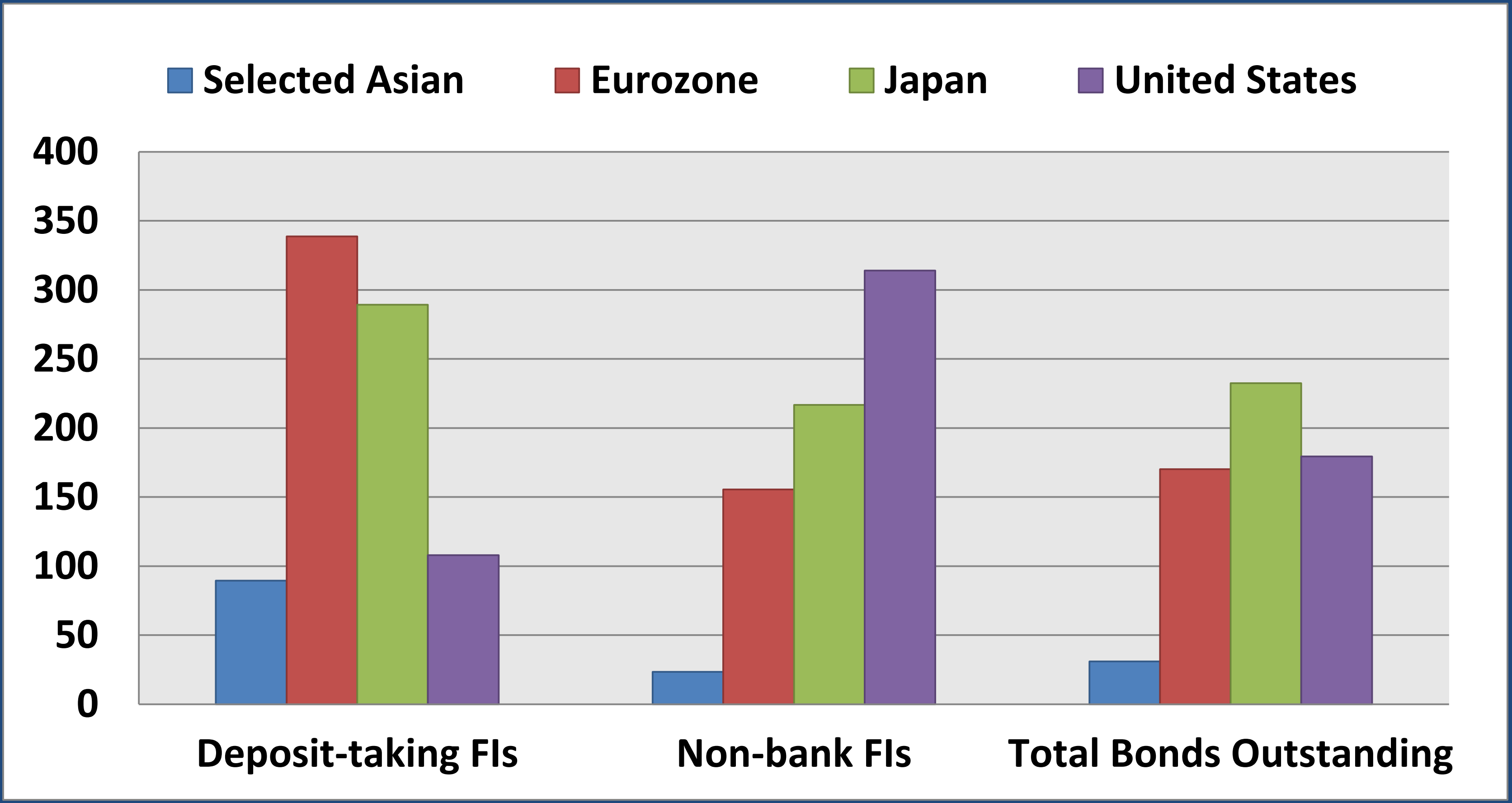
- Cross-border L-T lending has been reduced by deleveraging European banks.
  - Asian (including Japanese) banks are filling the funding gaps.
- Corporate bond markets grew in response to GFC but are still small.
  - Basel III is not corporate bond-friendly, e.g., Liquidity framework
- Emerging markets are less able to fund in long-term.
  - Longer tenor segments of their bond markets are less developed and less liquid due to the underdeveloped institutional investor base.
- Need to promote contractual savings. In particular, pension funds are underdeveloped (vs. OECD, LAC).
  - Turn the ageing population challenge into an advantage.

# Gross Domestic Savings
(% of GDP)



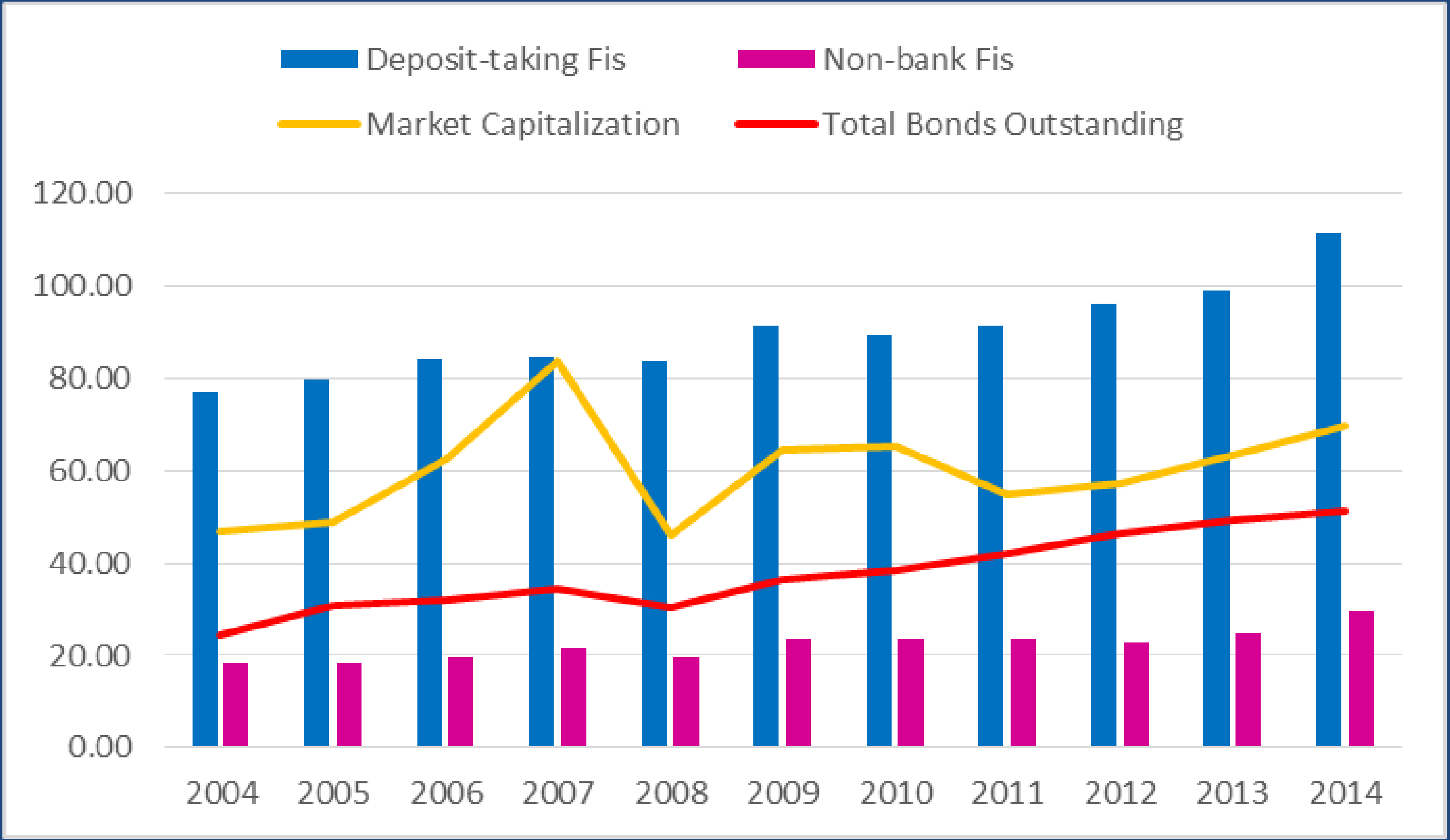

Source: *World Development Indicators,* World Bank

# Developing Asia's financial sector is underdeveloped (% of GDP)




* Selected DMCs include Bangladesh, China, India, Indonesia, Kazakhstan, Lao PDR, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Solomon Islands, Sri Lanka, Thailand, and Tonga.
Source: ADB calculations using data from national sources, AsianBondsOnline, World Bank, BIS, EIU, International Financial Statistics, and European Central Bank.

# It is also bank-dominated (% of GDP)




* Selected DMCs include Bangladesh, China, India, Indonesia, Kazakhstan, Lao PDR, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, and Thailand.
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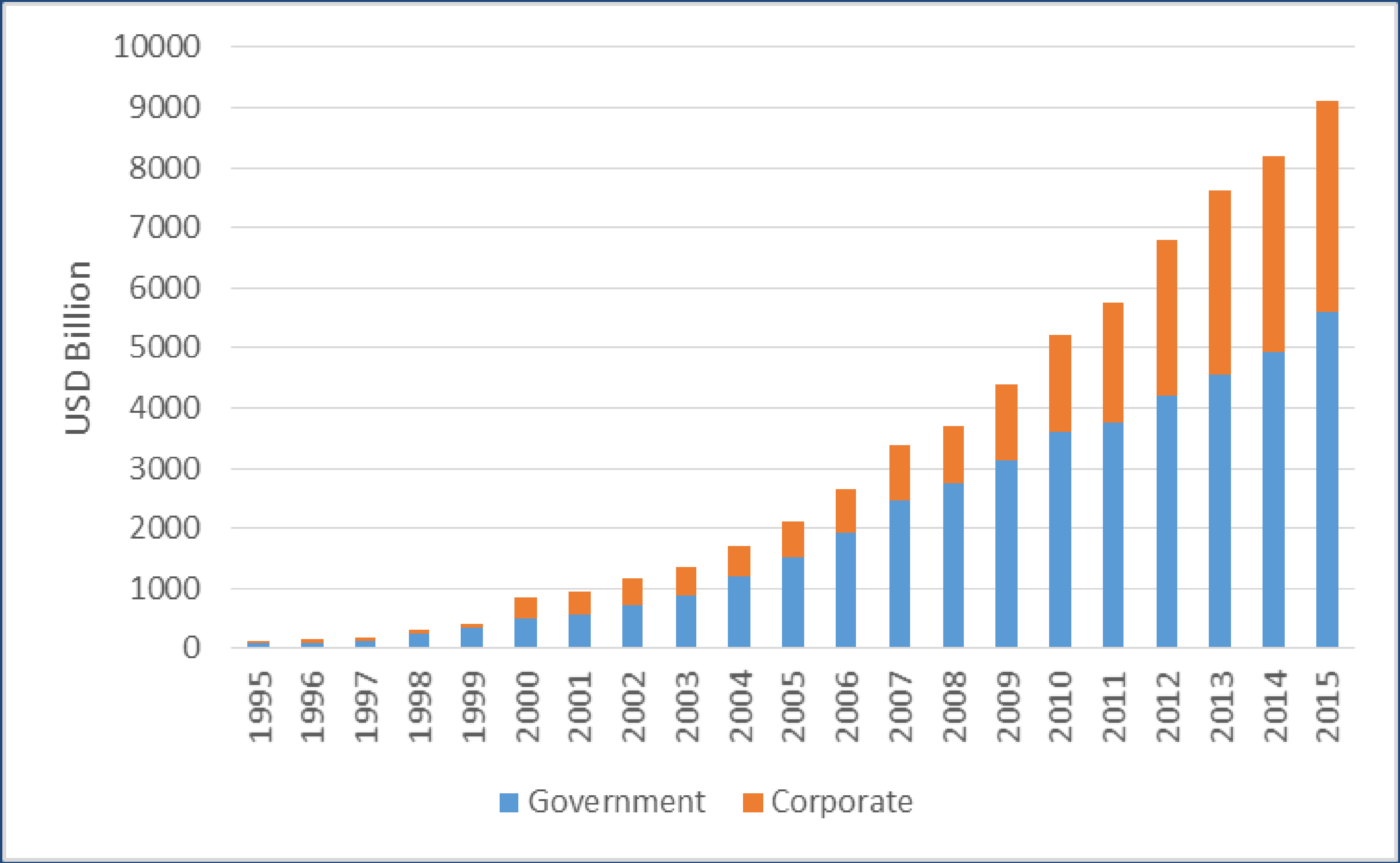
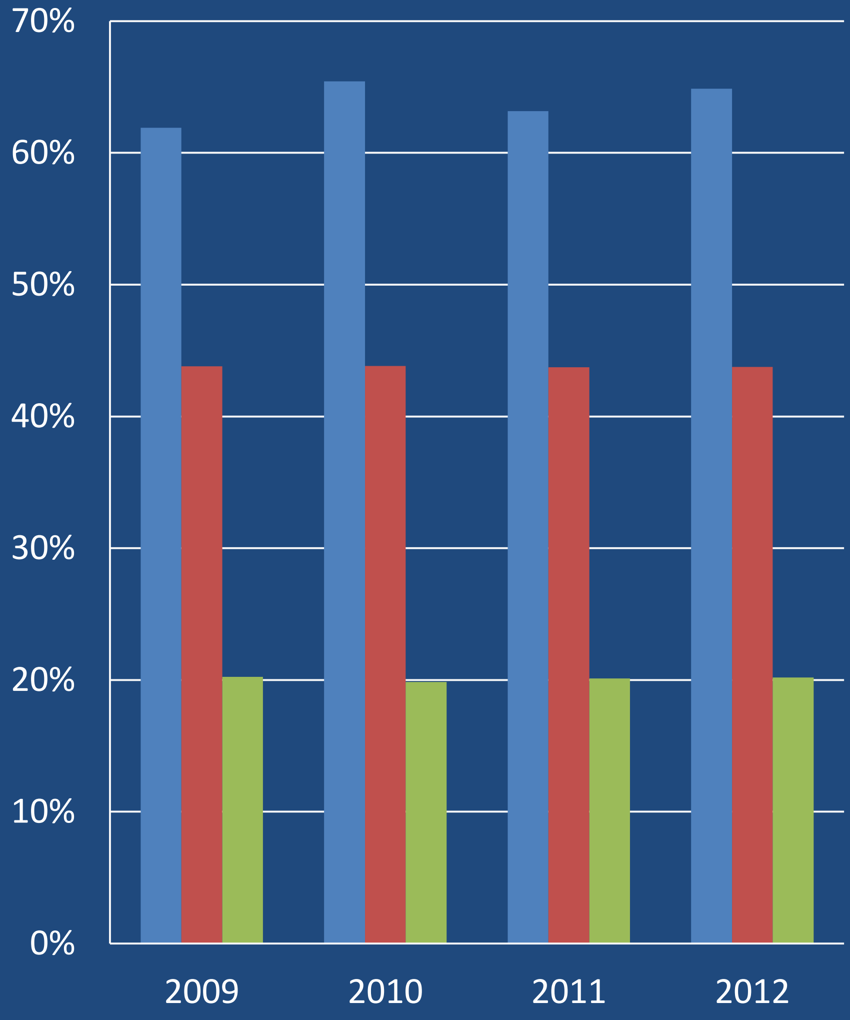
# Growth of ASEAN+2 LCY Bond Market

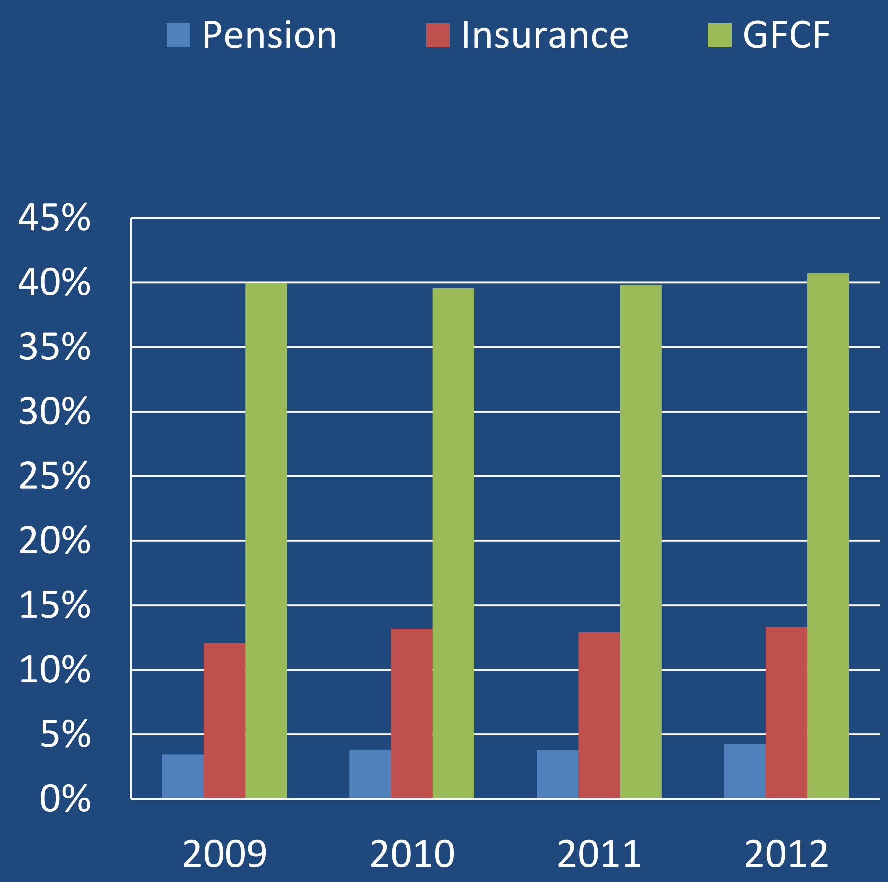



Source: AsianBondsOnline, ADB

# OECD vs Asia: Pension, Insurance, GFCF

(% of GDP)




Note: Data covers 26 countries – Australia, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Switzerland, Turkey, and United States.
Source: *World Development Indicators*, World Bank, CEIC, OECD Statistics, National Accounts, ADB estimates

# Role of Bond Markets

- Government bonds to finance public infrastructure, and municipal (revenue) bonds for urban infrastructure
- Brown field financing, i.e., bonds to refinance bank loans.
- Securitization, covered bonds
  - E.g., Utilities with predictable cash flows, royalty revenues, CBO with private placements
  - Effective ring-fencing for covered bonds?
- Increasing focus on *local currency* to reduce FX risk
  - Countries are graduating from concessional resources and are increasingly faced with market-based cost of capital.
  - Need to diversify funding sources and reduce FX risk by developing LCY bond markets.
- Infrastructure funds to provide equity as well as debt
  - Need bankable projects
  - Take FX risk as well as commercial risk?

# Bridging credit gaps

- Credit guarantee to enable contractual savings to invest in corporate bonds / project bonds
- Credit Guarantee & Investment Facility (CGIF) under Asian Bond Market Initiative (ABMI) of ASEAN+3
  - Enable: a) marginal corporate issuers to issue and b) strong issuers to tap the international market by overcoming sovereign credit ceiling
  - Attempting to: a) guarantee securitization and b) finance green field infrastructure with LCY project bonds (by establishing a construction period guarantee facility)
- Proposed Bond Guarantee Corporation of India (BGCI):
  - Guarantees to bridge Indian corporate issuers to conservative Indian contractual savings
  - High (but legitimate) prudential requirements by the insurance regulator.

ADB

# Finance Ministers and Central Bank Governors Meeting

## Deputy Ministers and Deputy Governors Meeting

### CMIM*
### Regional safety net

* Chiang Mai Initiative Multilateralization

- Bond markets of ASEAN+2 have grown 17 times since 1997 financial crisis, now amounting to $8.2 tril (Nov 2014), cf. Japan $9.8 tril.
- Rule of 60%; i.e., 60% of GDP; 60% is PRC; and 60% is government bonds.
- Yet, the development is uneven across the members and the level of regional integration is limited.
- Efforts are continuing to assist less developed markets and to create an integrated regional market to enhance financial resiliency, finance long-term investments in local currencies and support regional economic integration.

### ABMI
### Asian Bond Market Initiative

#### TF 1 (Supply)

- **Credit Guarantee & Investment Facility (CGIF)**
- Infrastructure finance schemes

#### TF 2 (Demand)

- Developing government bond markets
- Building investor base and enhancing investment climate
- AsianBonds Online and Asian Bond Monitor

#### TF 3 (Regulation)

- **ASEAN+3 Bond Market Forum (ABMF)** incl. ASEAN+3 Multicurrency Bond Issuance Framework (AMBIF)
- SME access to bond market
- ASEAN+3 SRO Working Group

#### TF 4 (Infra.)

- Regional settlement intermediary **(Cross-border Settlement infrastructure Forum, CSIF)**
- Regional credit rating system Working Group
- Financial education

# Role of ADB

- Supports bond market development
  - Bangladesh, China, India, Indonesia, Philippines, Sri Lanka, Vietnam
  - Supports government, subnational and corporate bond market and contractual savings sector
  - Secretariat for the Asian Bond Market Initiative (ABMI) of ASEAN+3, and supports ASEAN Capital Market Forum (as well as ASEAN Central Bank Forum) leading AEC
- Stakeholder in CGIF ($130 million out of $700 million capital) and ASEAN Infrastructure Fund (AIF)
- Carried out a stock-taking study of infra. finance with LCY bonds in ASEAN+3
- Potential partner for the propose BGCI (and partner for India Infrastructure Finance Company Ltd.)

# Thank you.

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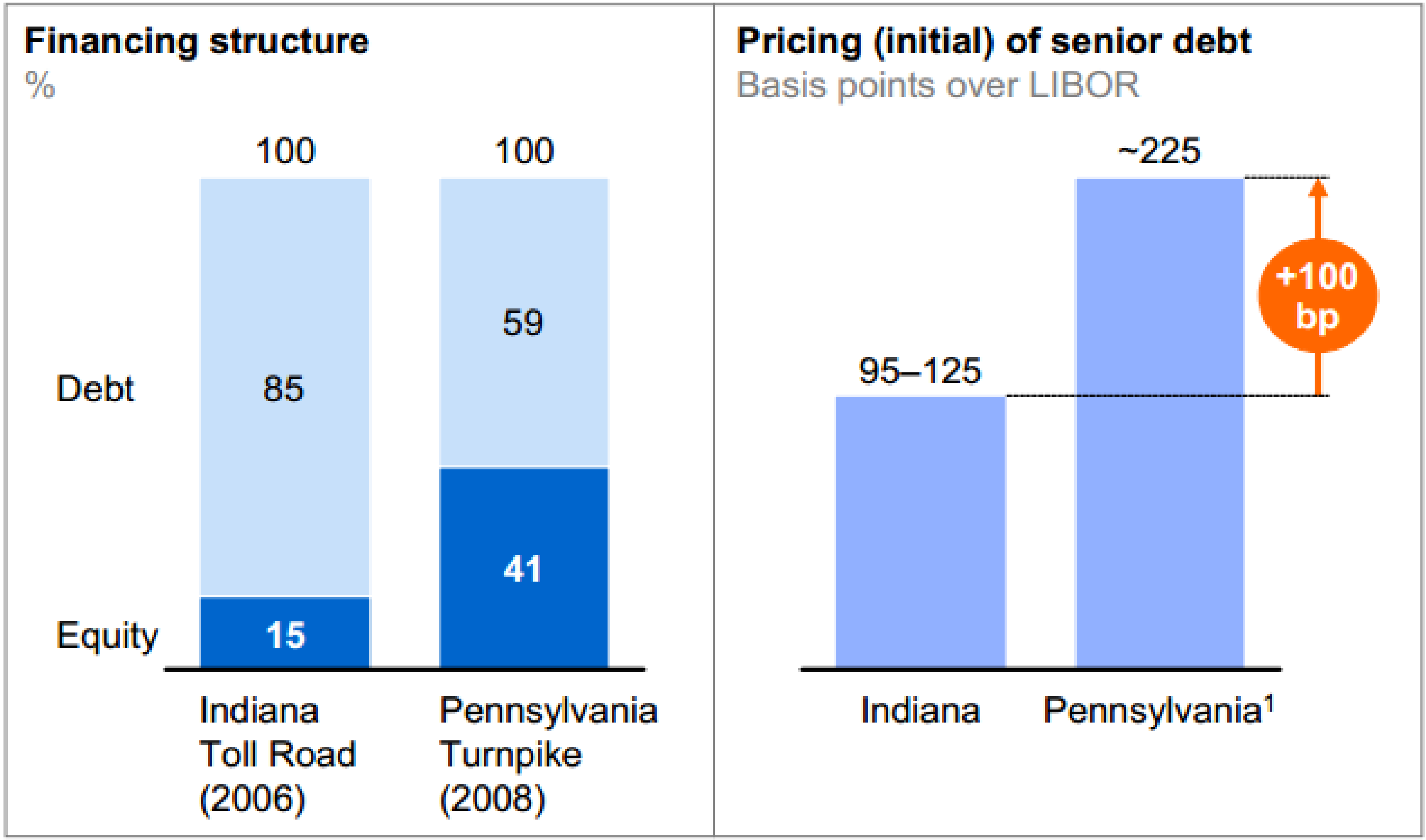
## Exhibit 12

### Equity requirements and the cost of capital have increased for many infrastructure investments

US ROADS EXAMPLE

**Required equity for transaction tripled** **… and the cost of debt has increased**




1 Offer rescinded at end of September 2008.

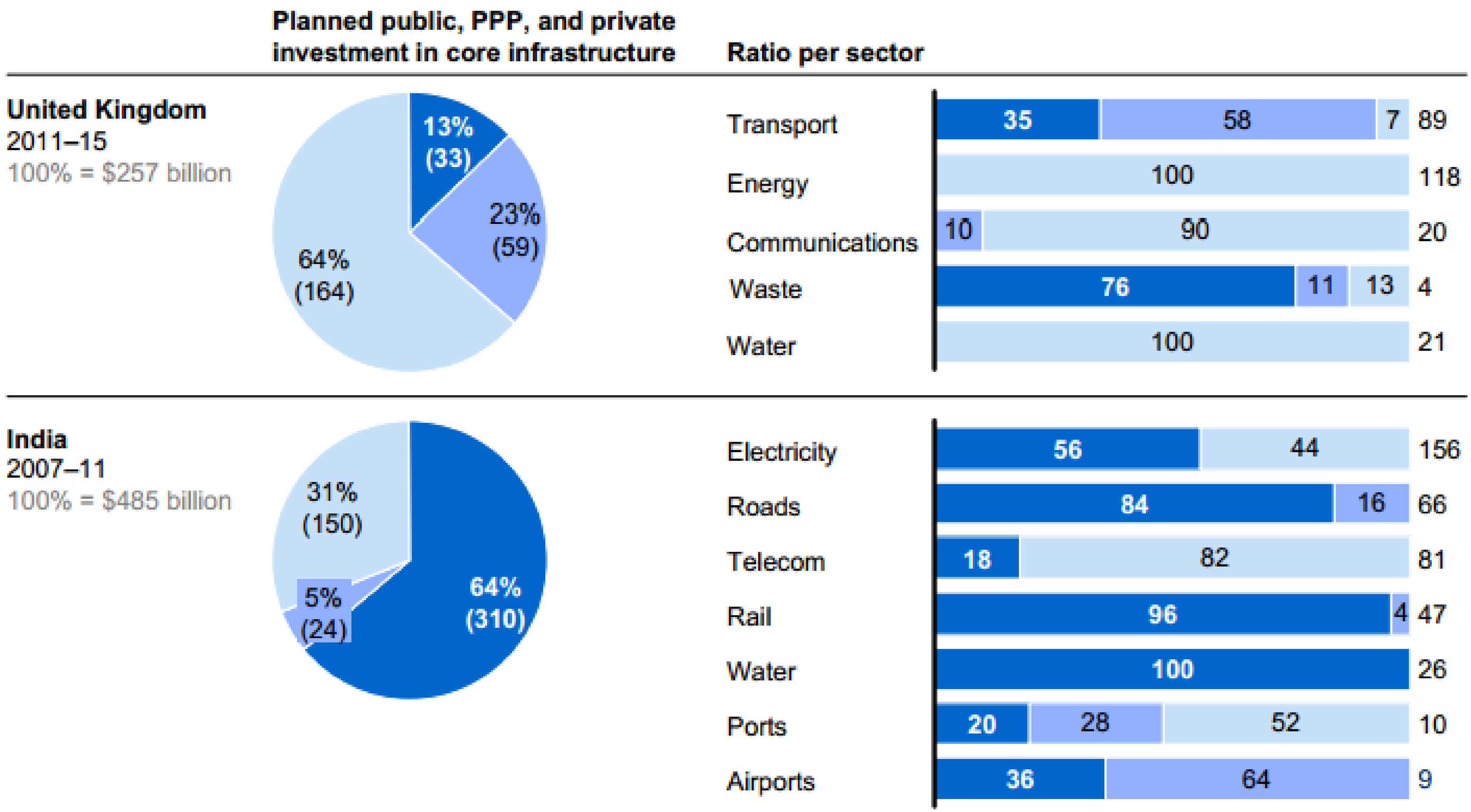
SOURCE: *Infrastructure Journal*; Bloomberg Data; McKinsey Global Institute analysis

## Exhibit 13

# The share of public and private capital in infrastructure development varies significantly across countries and assets

%; $ billion

Public
Public-private partnership (PPP)
Private




SOURCE: HM Treasury, United Kingdom; Planning Commission, India; McKinsey Global Institute analysis