

# Public-Private Participation in Infrastructure Projects: *Global and CAREC Experience*

Presentation by

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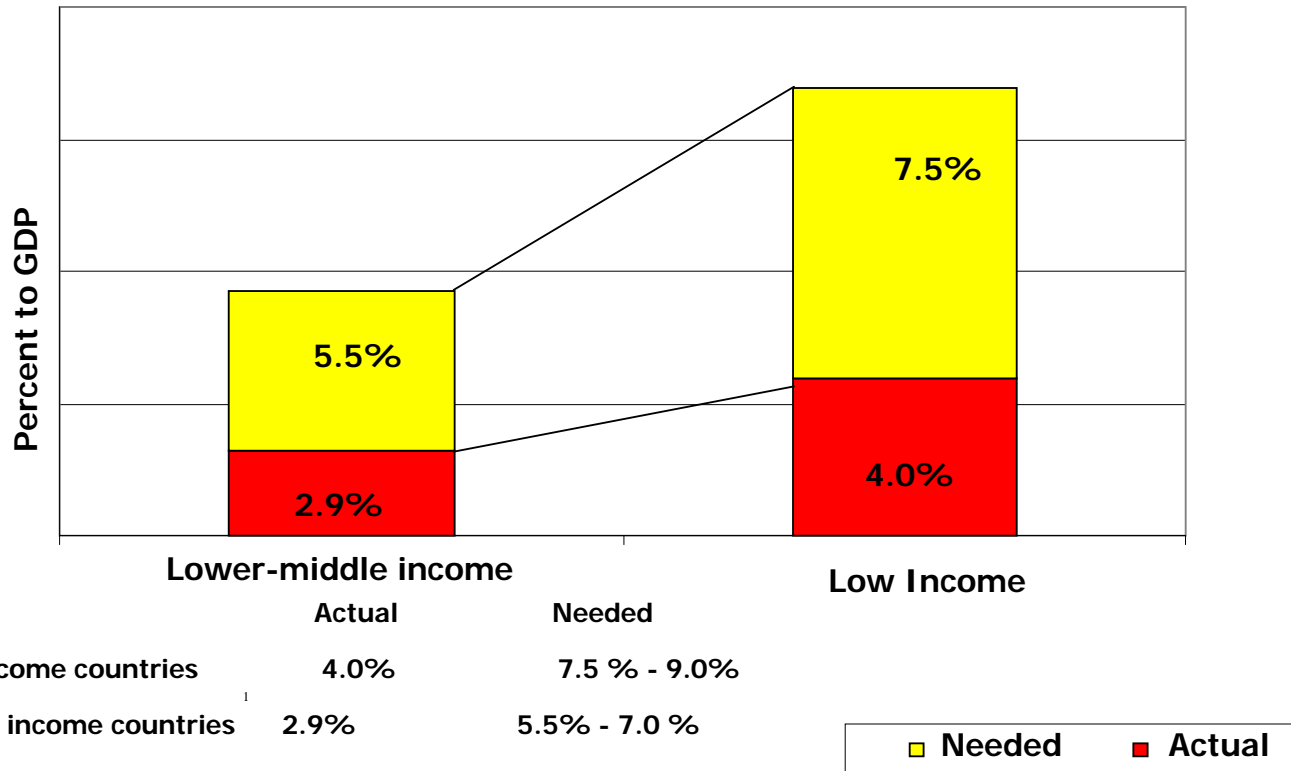
June 2010

# Global Infrastructure Challenges

- Developing countries invested 4% of national output in infrastructure  
**BUT:**
  - 1.1 billion lack adequate access to clean water
  - 2.4 billion lack adequate sanitation
  - 4 billion lack sound wastewater disposal
  - 2 billion lack electric power
- Investment, O&M needs considerable – between 5.5 to 9% of GDP

# Infrastructure Financing Gap - Asia

Annual Expenditures on Infrastructure as Share of 2003 GDP  
(Actual versus Needed 2003)



ADB. 2007. *Survey of Market for Subnational Finance in Asia and the Pacific*

# Why PPPs?

- Access to private financing to support increased public sector infrastructure investment *to free up government's financing for other priority uses or scaling up government investment without increasing debt*
- Access to private sector management expertise and innovation *to achieve better quality services, and greater value and cost effectiveness of public sector service delivery*

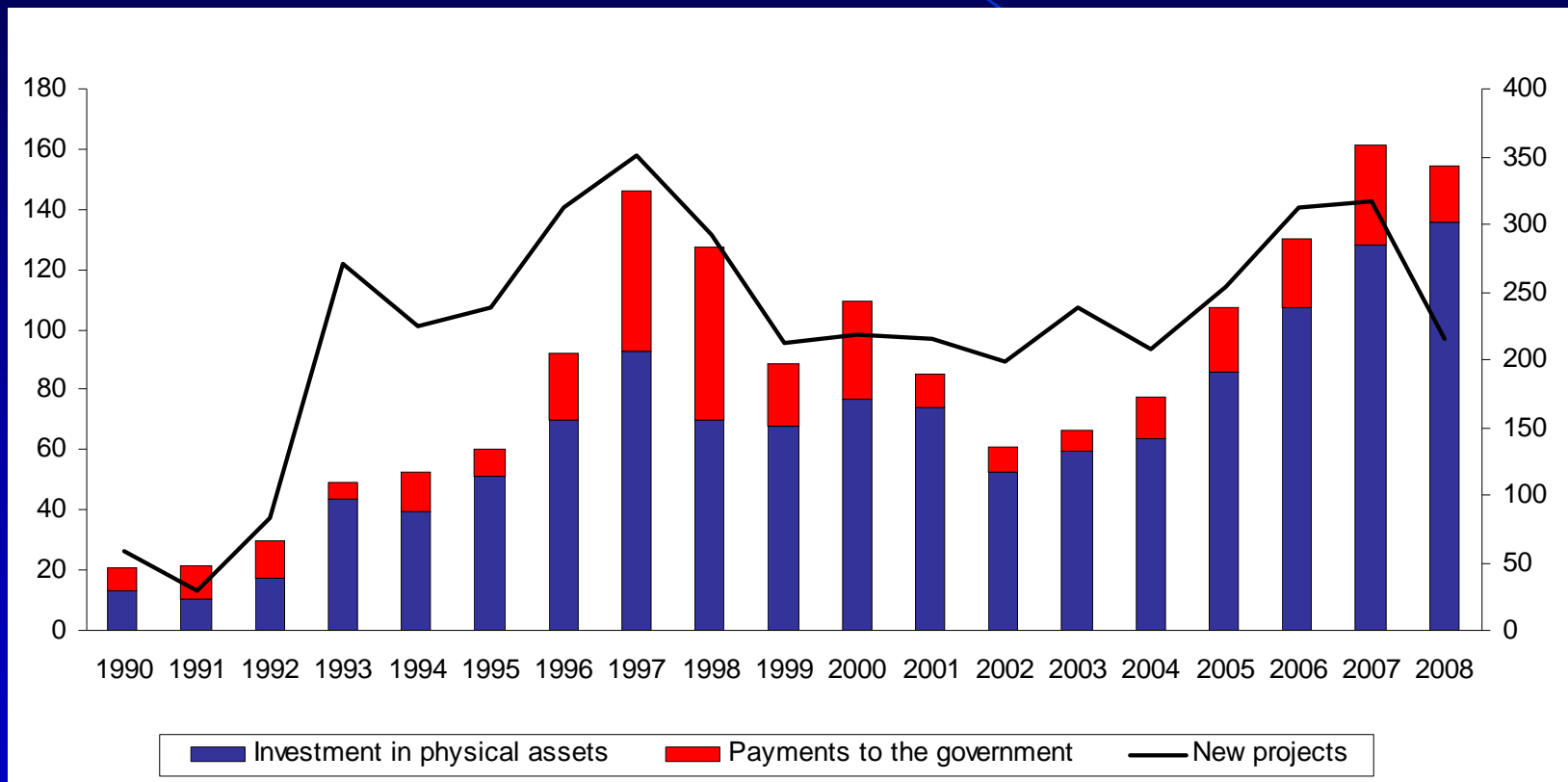
# PPP Global Trends and Changing Landscape

- Growth in Developing Countries Worldwide
  - Across Regions
  - Across Sectors
  - By PPP Modality
- 10 Top PPP Developing Countries
- 10 Top Private Sector Investors
- Performance

# Global Investment Commitments for PPP Infrastructure Projects in Developing Countries – All Sectors

2008 US\$ billions

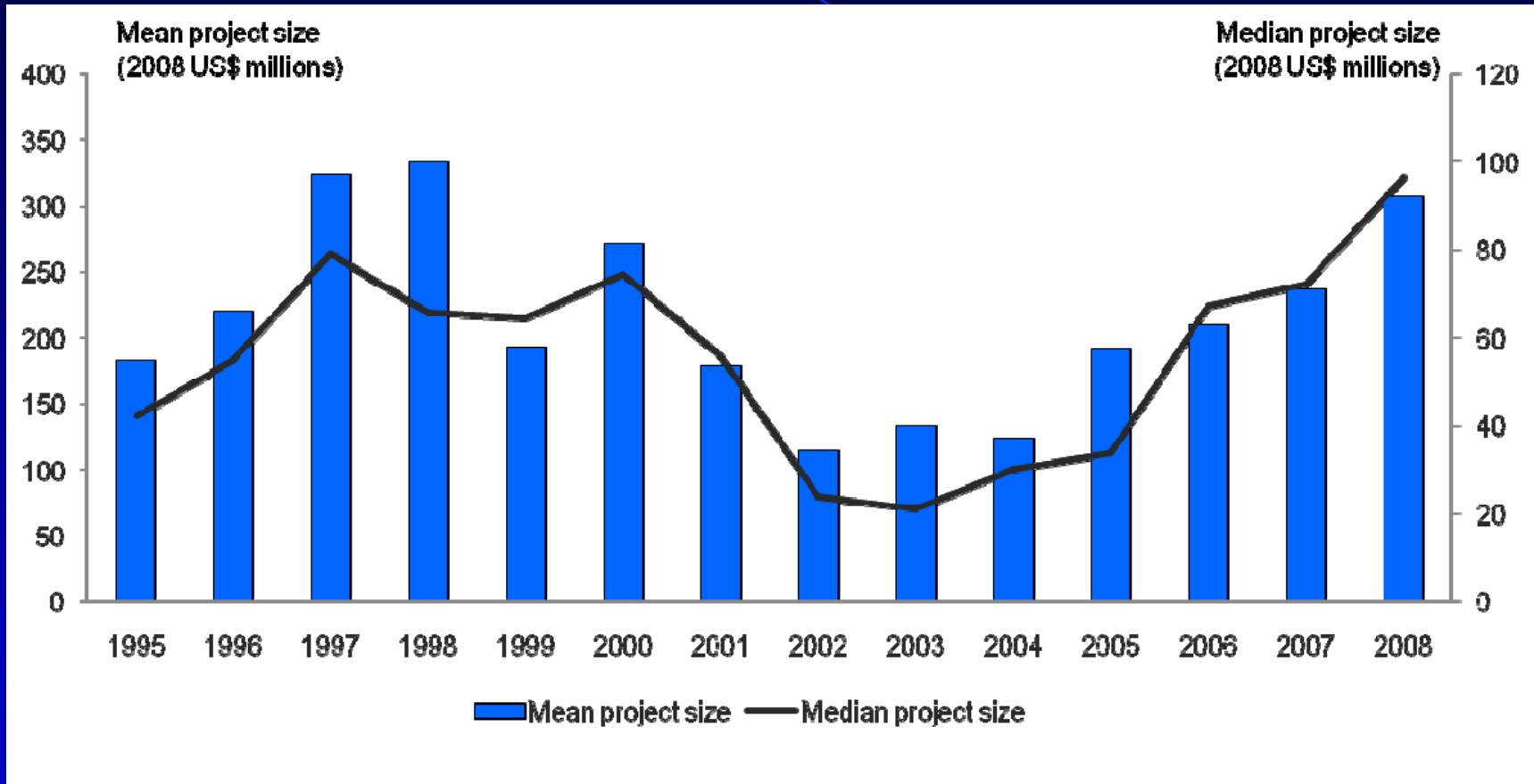
New Projects



Source: World Bank and PPIAF, PPI Project Database, <http://ppi.worldbank.org>



# Size of PPP Infrastructure Projects in Developing Countries

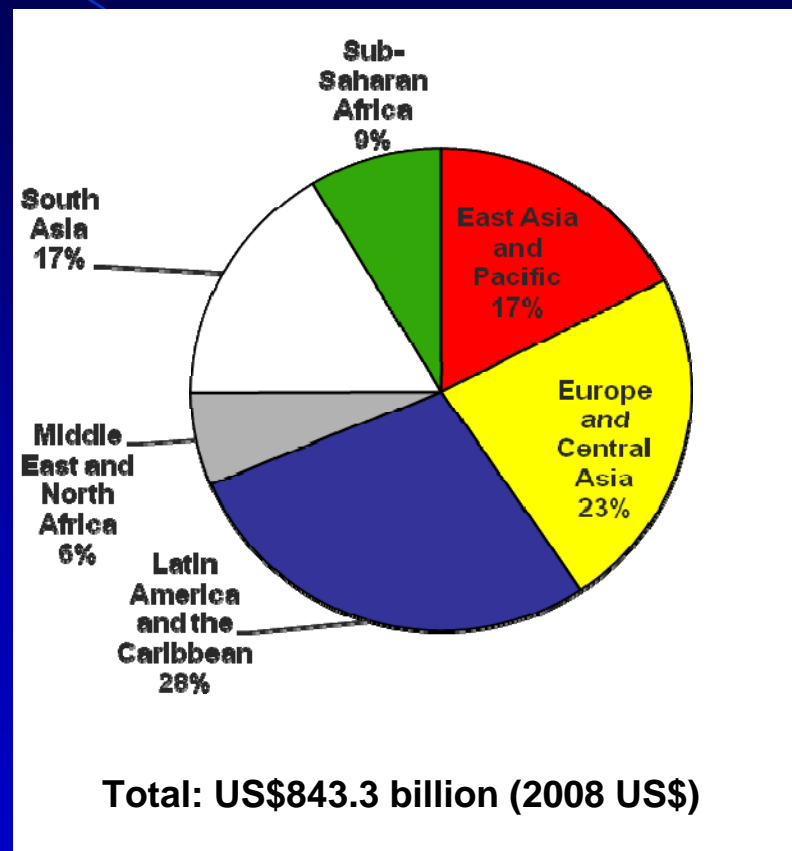
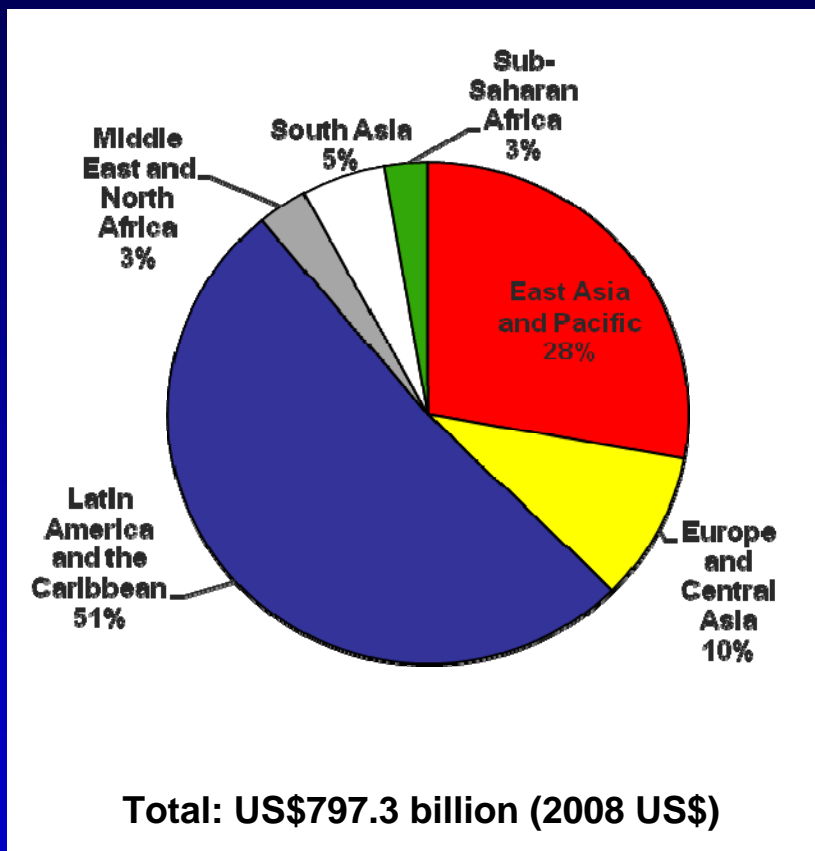


Source: World Bank and PPIAF, PPI Project Database, <http://ppi.worldbank.org>

# Total Investment in PPP Infrastructure Projects in Developing Countries by Region

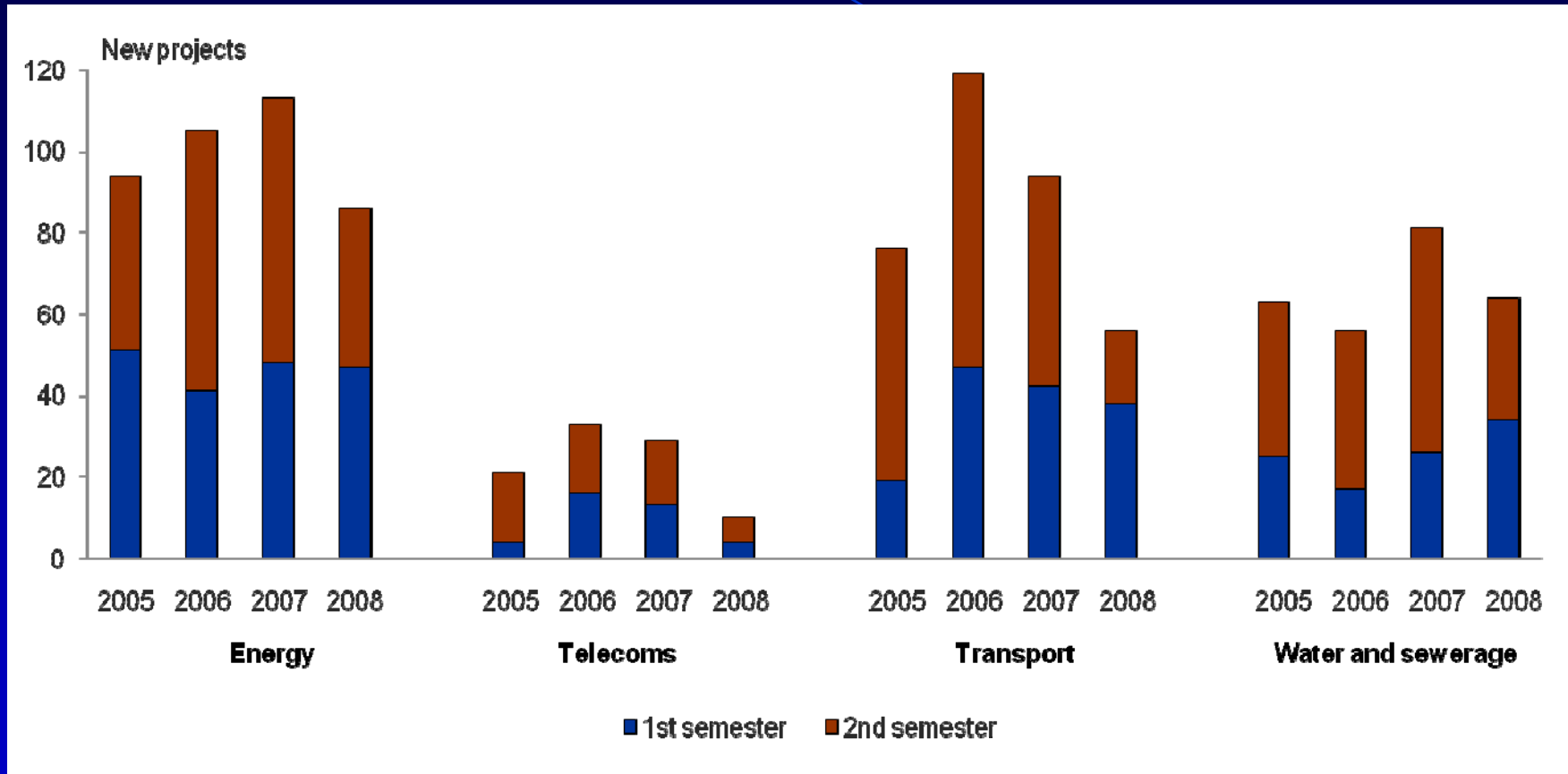
1990–2000

2001–2008



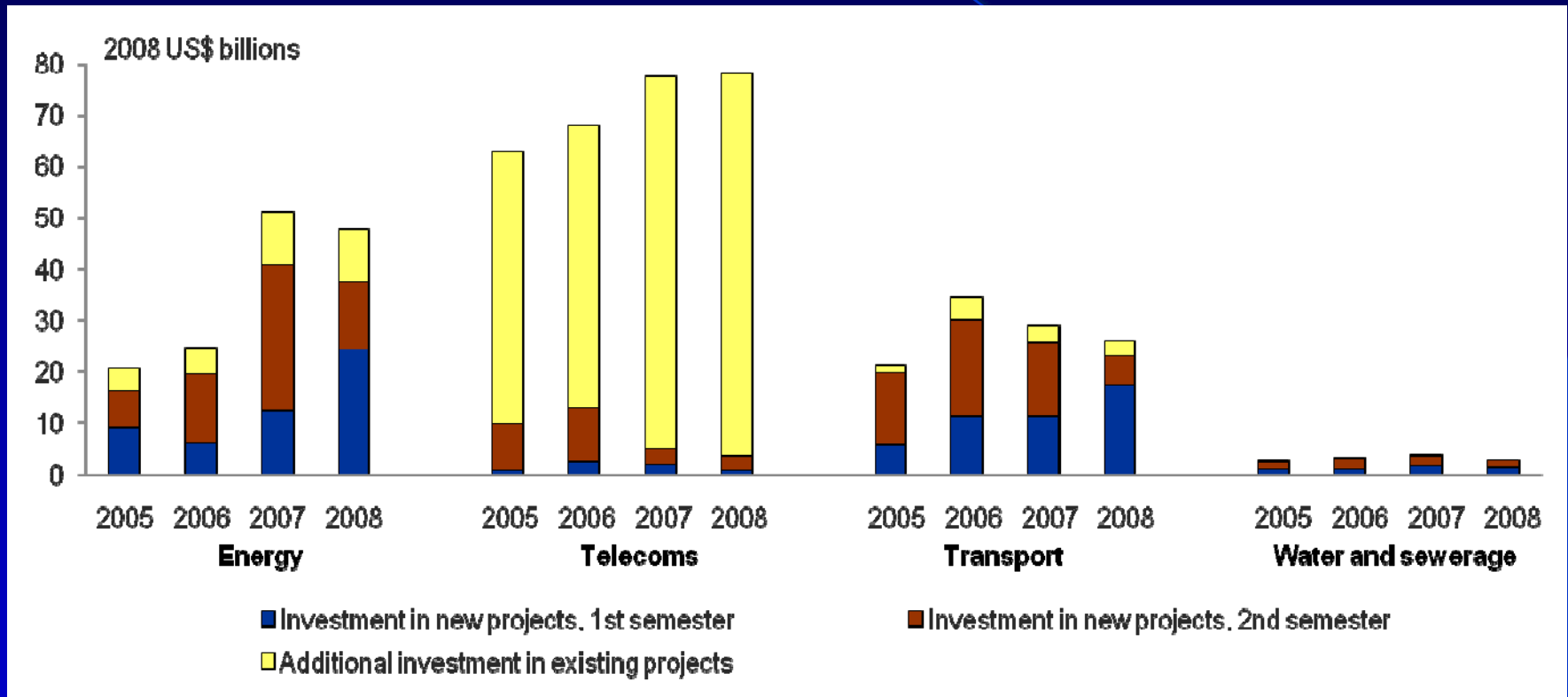


# New PPP Infrastructure Projects in Developing Countries, by Sector, 2005–08



Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

# Investment Commitments to PPP Infrastructure Projects in Developing Countries by Sector and Implementation Status, 2005–08

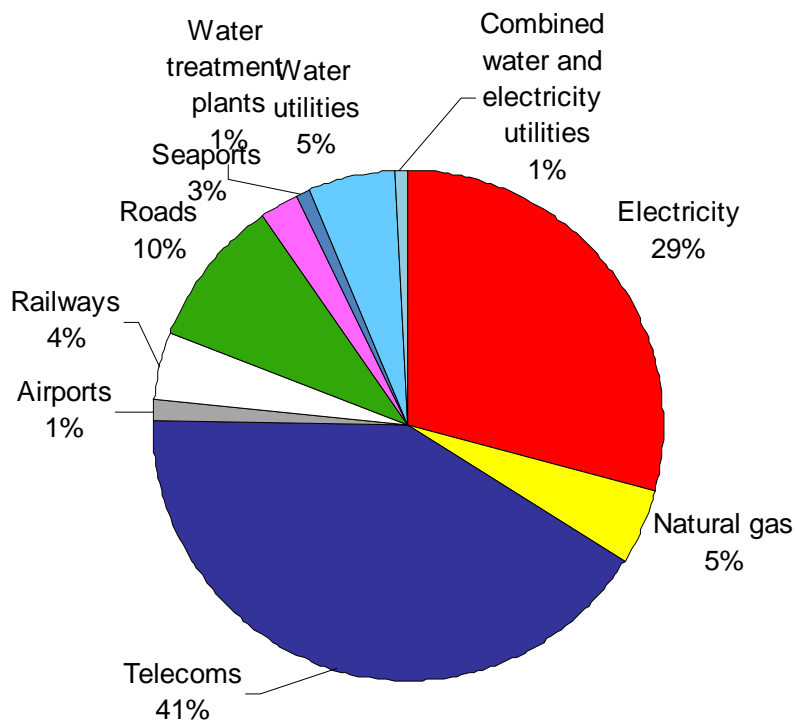


Note: Includes investment in projects reaching financial closure in 1990–2008.

Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

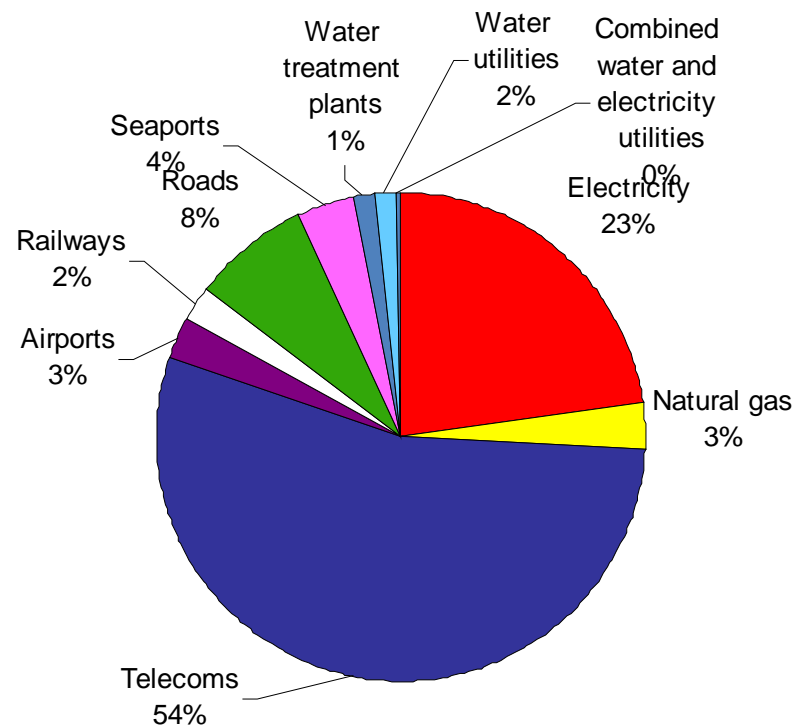
# Total Investment Commitments to PPP Infrastructure Projects in Developing Countries, by Subsector

1990–2000



Total: US\$797.3 billion (2008 US\$)

2001–08



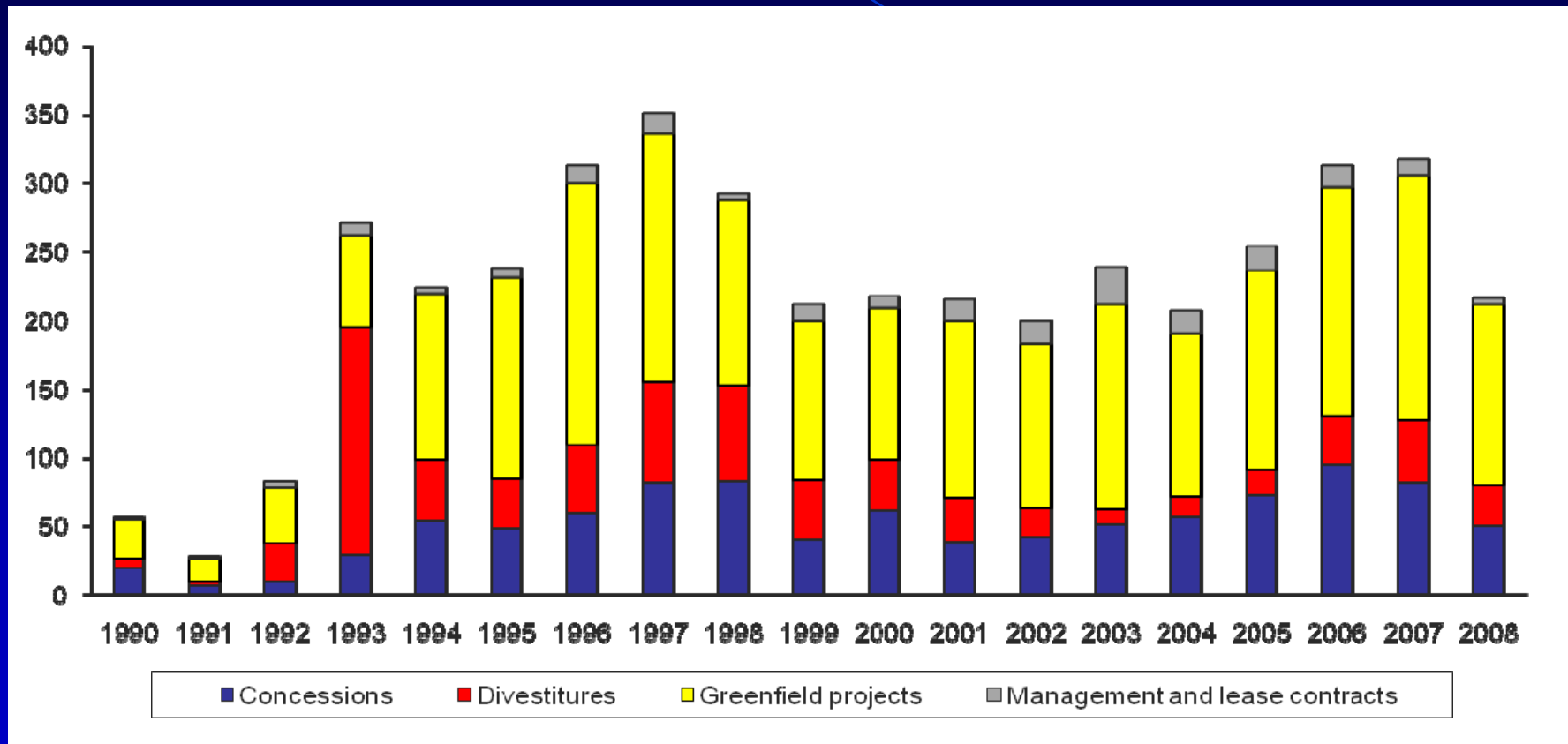
Total: US\$843.3 billion (2008 US\$)

Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>



# New PPP Infrastructure Projects by PPP Modality

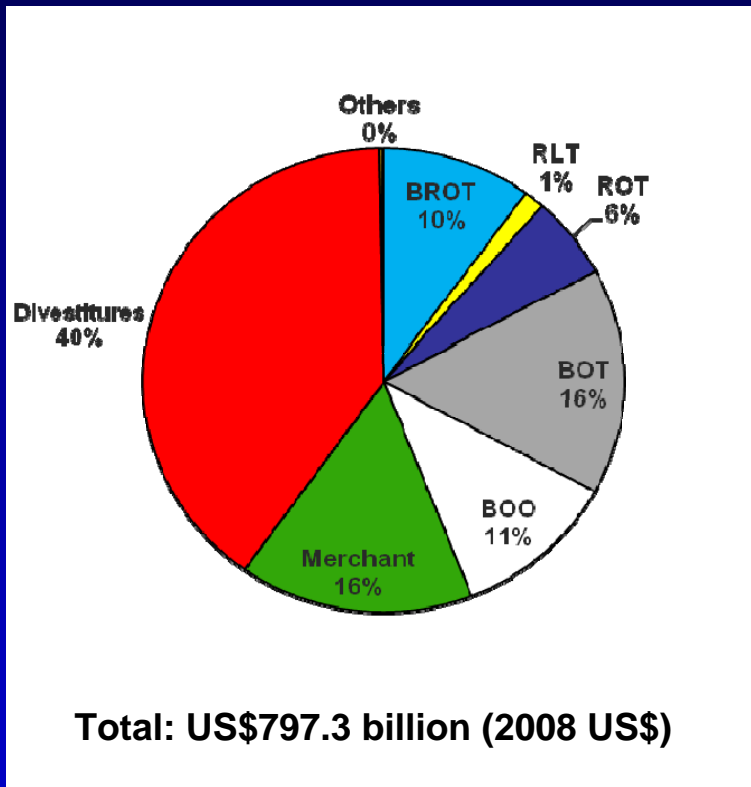
## New Projects



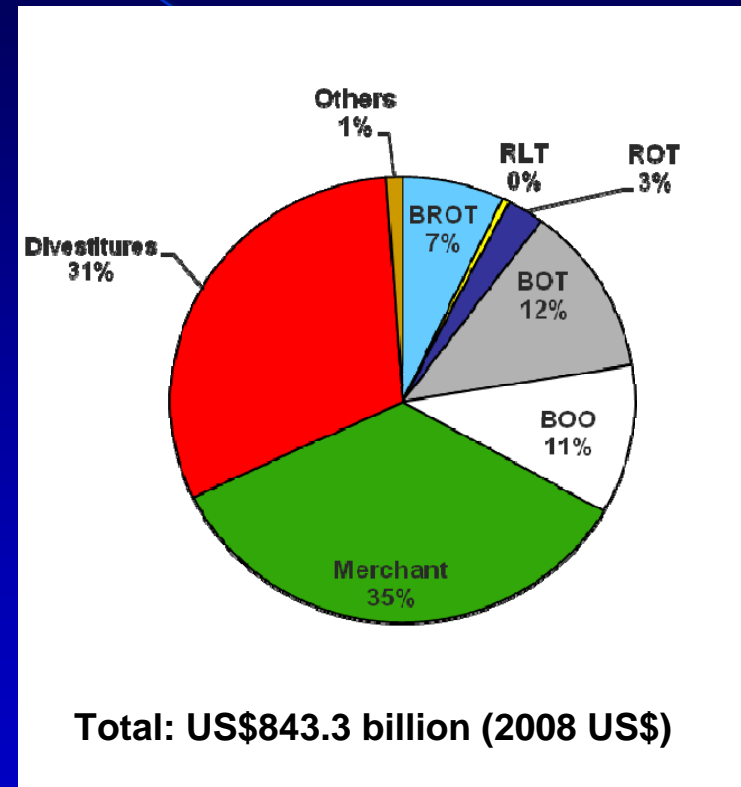
Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

# Investment Commitments for PPP Infrastructure Projects in Developing Countries, by PPP Type

1990–2000



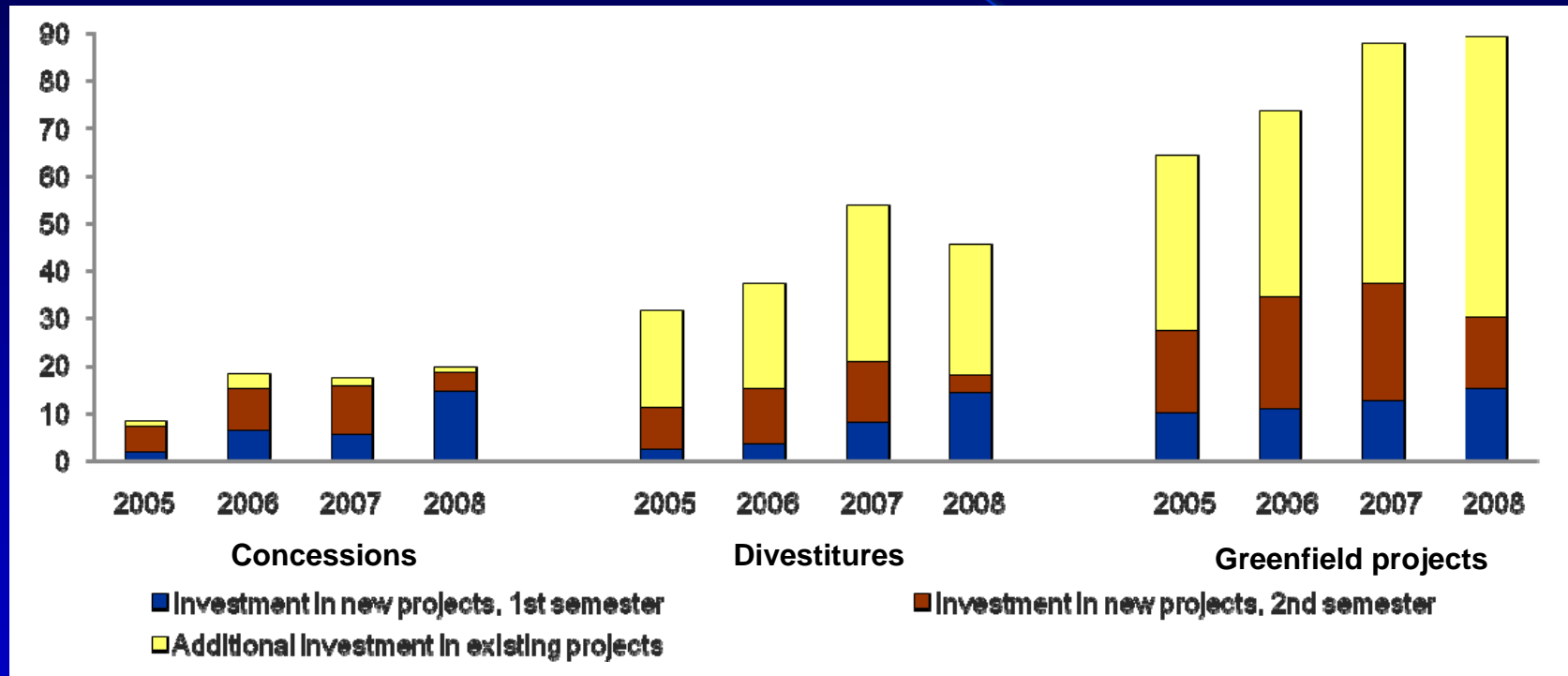
2001–2008



Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

# Investment Commitments for PPP Infrastructure Projects by PPP Modality and Implementation Status, 2005–08

2008 US\$ billions



Note: Includes investment in projects reaching financial closure in 1990–2008.

Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>



# Top 10 Developing Countries by PPPI Activity

By \$ Investment, 2001–08

Country	Investment* (2008 US\$ billions)	Share of total (%)
Brazil	111.9	13.3
India	110.2	13.1
Russian Federation	74.7	8.9
China	57.2	6.8
Mexico	49.3	5.9
Turkey	32.0	3.8
Poland	24.8	2.9
Indonesia	22.9	2.7
Nigeria	22.2	2.6
South Africa	21.4	2.5
<b>Total</b>	<b>526.7</b>	<b>62.5</b>

\* Includes investment in projects reaching financial closure in 1990–2008.

By New Projects, 2001–08

Country	New projects	Share of total (%)
China	602	30.6
India	232	11.8
Brazil	141	7.2
Russian Federation	56	2.8
Mexico	54	2.7
Nigeria	45	2.3
Colombia	43	2.2
Chile	35	1.8
Indonesia	32	1.6
Malaysia	32	1.6
<b>Total</b>	<b>1,272</b>	<b>64.6</b>

Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

# Top 10 Sponsors of PPPI Projects

1990-2001

2001-2005\*

Sponsor	Investment (2001 US\$ billions) No. Projects
Telefonica (ESP)	35.2 (12)
Carso Global Telecom (MEX)	34.8 (5)
SUEZ (FRA)	32.6 (79)
Telecom Italia (ITA)	30.7 (16)
France Telecom (FRA)	26.6 (26)
AES Corporation (USA)	21.6 (58)
Deutsche Telekom (GER)	18.4 (18)
Enron Corporation	16.9 (48)
Electricité de France	15.5 (28)
Andrade Gutierrez	14.7 (9)

Sponsor	Investment (2005 US\$ billions) No. Projects
Reliance ADA Group (INDIA)	8.1 (3)
Saudi Oger Ltd	7.5 (2)
RWE (GER)	5.1 (9)
America Movil (MEX)	4.9 (5)
Telecom Italia	4.0 (1)
Electricité de France	3.8 (10)
Malakoff Bhd (MALAYSIA)	3.9 (4)
E.ON (GER)	3.7 (6)
Akfen Construction (TKY)	3.7 (4)
Orascom (EGYPT)	3.4 (2)

\* Includes investment in projects that reached financial closure in 2001-2005

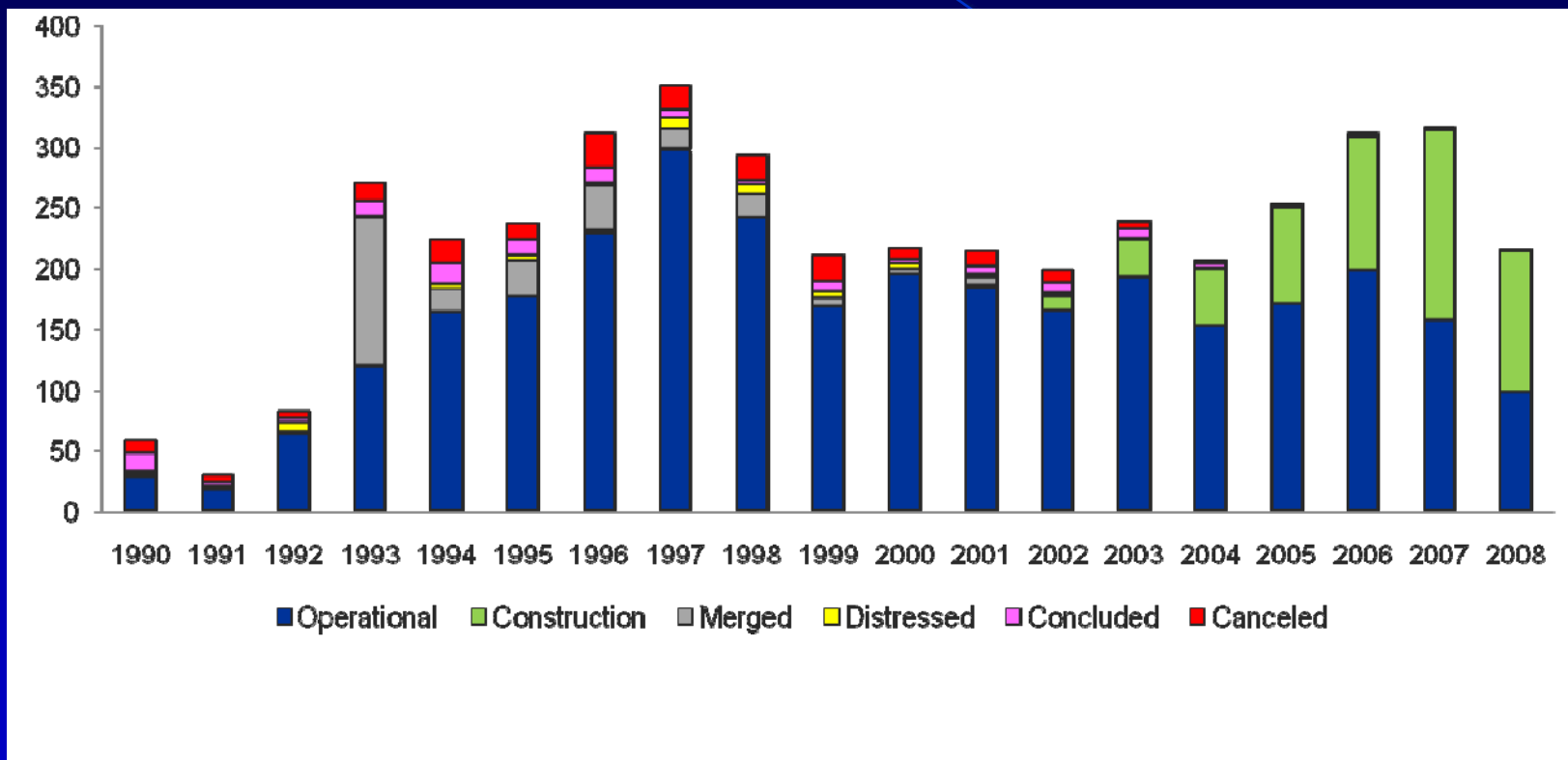


# Diversification of Private Sponsors

- 30% of total investment involve Top 10 sponsors on both lists
- EdF and Telecom Italia only European firms on both lists
- Emerging market firms increased from 2 in 1990-2001 to 4 in 2001-05

# Completion Status of PPP Infrastructure Projects in Developing Countries, as at end-2008

## New Projects



Note: Projects are reported by year of financial closure.

Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

# Canceled or Distressed PPP Infrastructure Projects in Developing Countries

By Region , 1990–2008

Region	Projects		Investment	
	Number	As % of total	In 2008 US\$ billions	As % of total
East Asia and Pacific	80	6.0	44.8	12.2
Europe and Central Asia	21	3.1	4.5	1.6
Latin America and the Caribbean	118	9.1	68.8	10.6
Middle East and North Africa	6	4.9	1.3	1.7
South Asia	8	1.8	5.3	2.9
Sub-Saharan Africa	34	9.2	2.7	2.9
<b>Total</b>	<b>267</b>	<b>6.3</b>	<b>127.4</b>	<b>7.8</b>

By Sector, 1990–2008

Sector	Projects		Investment	
	Number	As % of total	In 2008 US\$ billions	As % of total
Energy	95	5.8	41.8	8.4
Telecoms	45	5.7	30.6	3.9
Transport	67	5.8	27.4	9.8
Water and sewerage	60	9.1	27.5	37.1
<b>Total</b>	<b>267</b>	<b>6.3</b>	<b>127.4</b>	<b>7.8</b>

# PPI Global Trends ... in Summary

Global markets recovering – different risk-sharing arrangements evolving

Greater regional diversification of private sponsors with new non-traditional players

Retreat by foreign investors creating opportunities for regional/local financial sources

# PPI Global Trends ... in Summary

Emerging market investment flows increasing rapidly in certain infrastructure sectors, and specific countries and regions, e.g., parts of Africa are attracting increasing investment by China

Increase in number of greenfield projects rather than privatization of existing assets

# PPI Global Trends ... in Summary

Activity in telecom, energy & transport sectors continues to expand, average project size increased

- a few large deals accounted for a large share of total investments

In water sector, private sector interest continues with focus on smaller projects, a few countries and bulk facilities

# All This in the Context of...

**PPPI performance in terms of service impact** – largely positive but did not meet expectations

**Negative public opinion** – driven by high expectations, perceptions of corruption, and need for inter-distributional transfers

## **A few high profile failures over 1990-2008**

- *SA: 8 projects cancelled/under distress, 3% of investment*
- *EAP: 80 projects cancelled/under distress, 11% of investment*
- *LAC: 118 projects cancelled/under distress, 10% of investment*
- *SSA: 34 projects cancelled/under distress, 3% of investment*

... with these challenges

... PPP advantages  
continue to drive new  
growth in PPPI

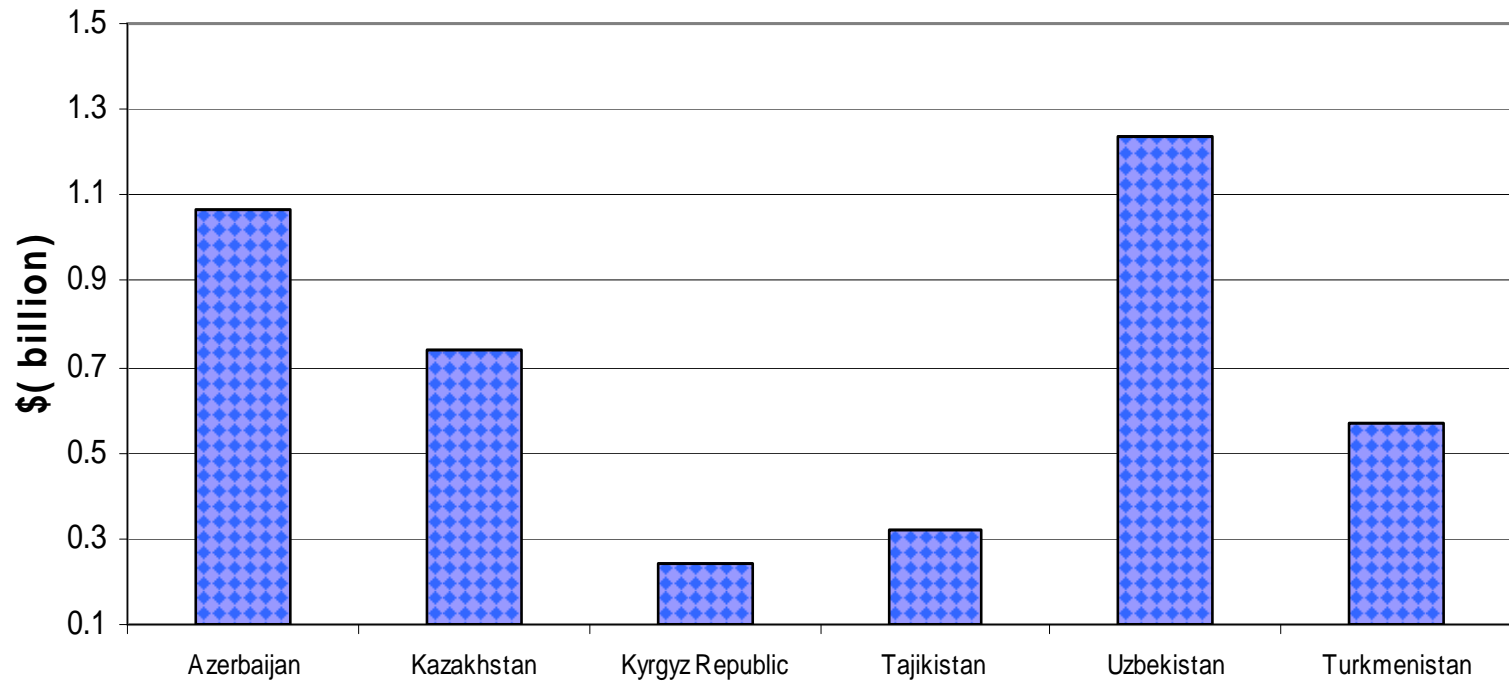


# PPPs for Infrastructure: CAREC Experience

- CAREC Infrastructure Needs
  - by Country
  - by Sector
- CAREC PPPs for Infrastructure
- Key Lessons for Success and Sustainability

# CAREC's Infrastructure Financing Needs

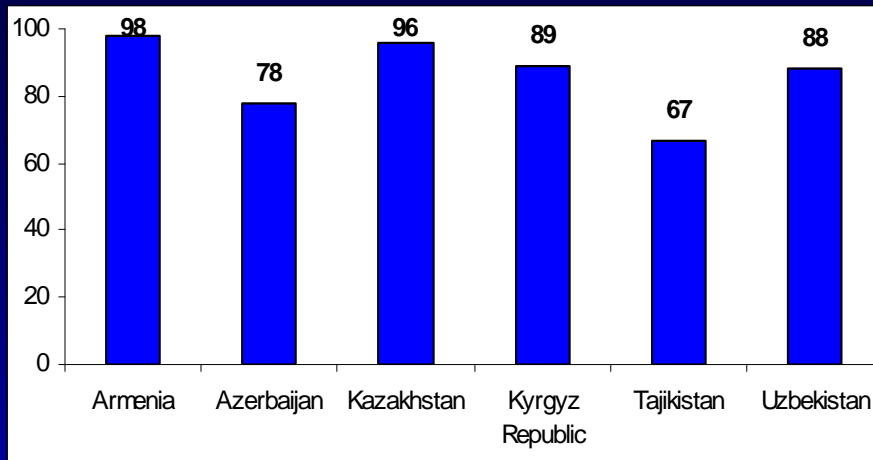
Annual Infrastructure Demand, Central Asia  
in US\$ billion



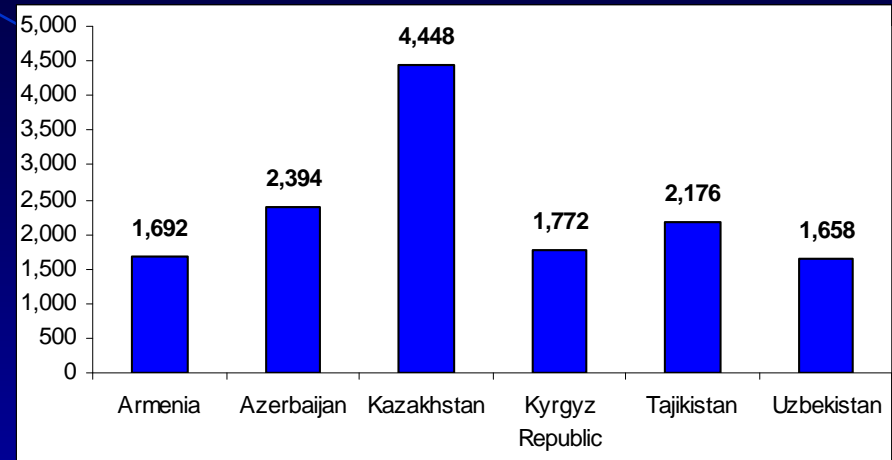
Source: ADB. 2007. Survey of Market for Subnational Finance in Asia and the Pacific

# Variation in Current Access to Services across CAREC

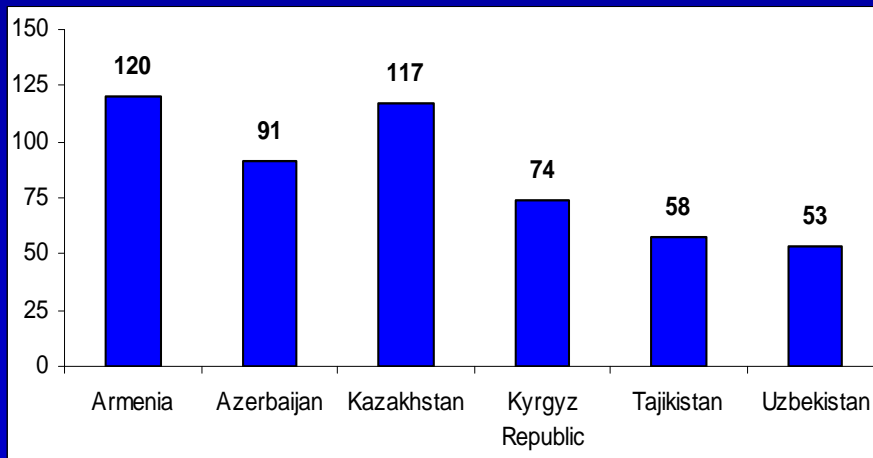
## Water Supply Access (% , 2006)



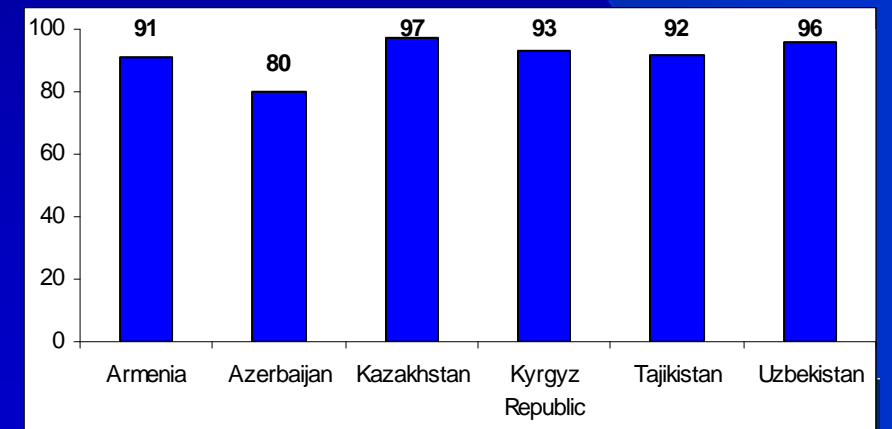
## Electricity Access (kwh/capita, 2007)



## Telephone Access (subscribers/100 inhabitants, 2008)

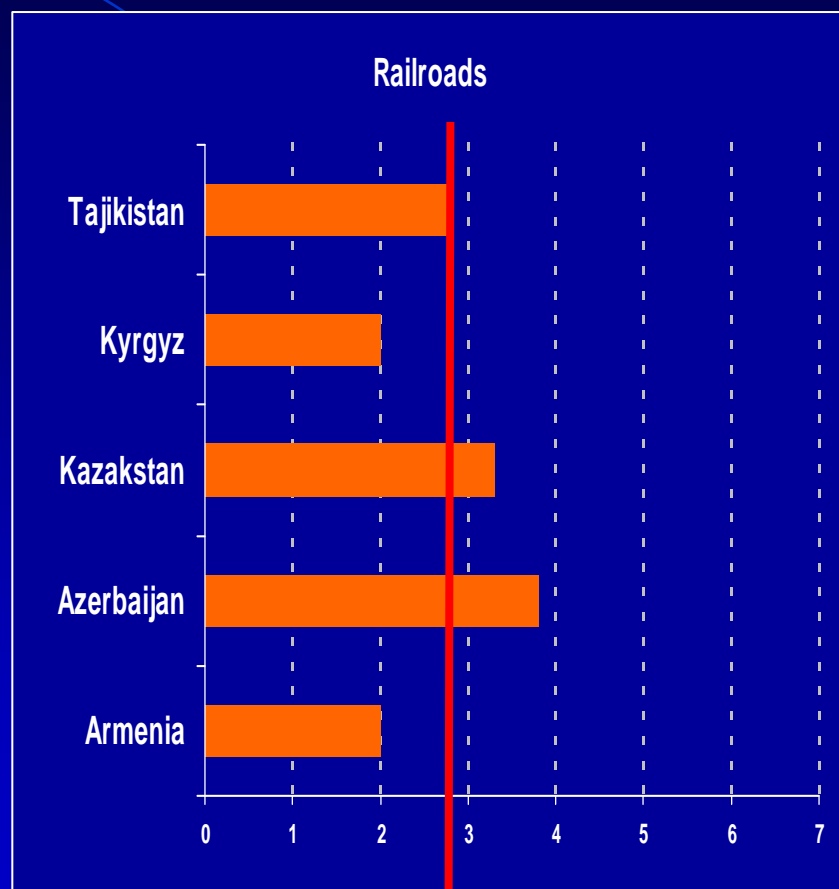
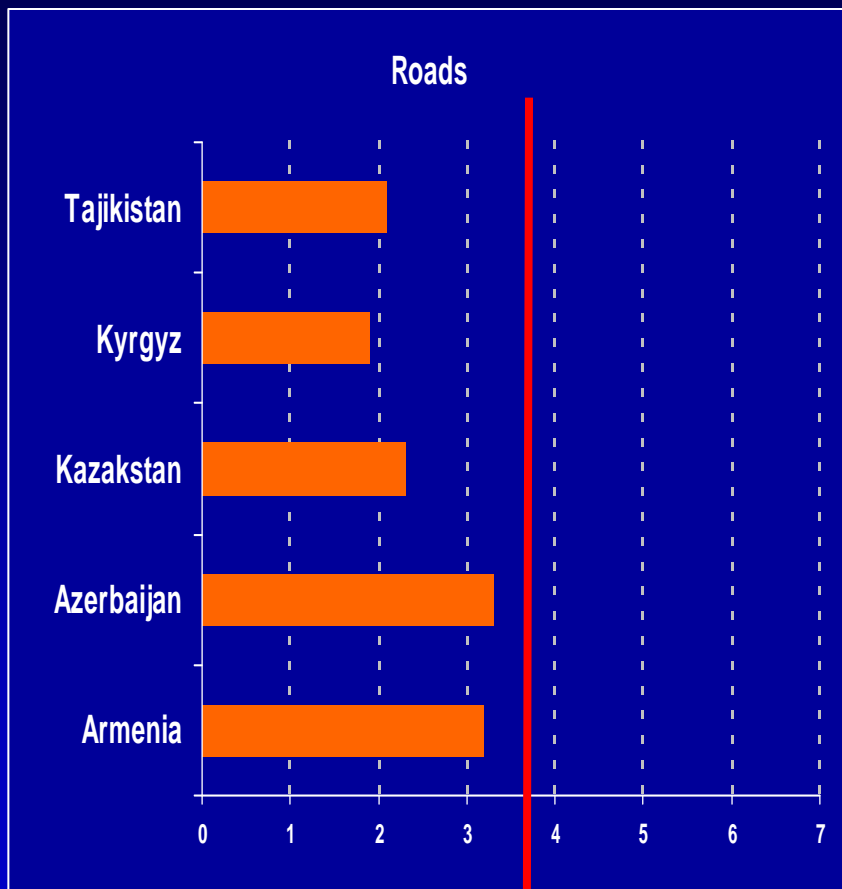


## Improved Sanitation (%, 2006)



# Roads and Railroads: Quality Ranking

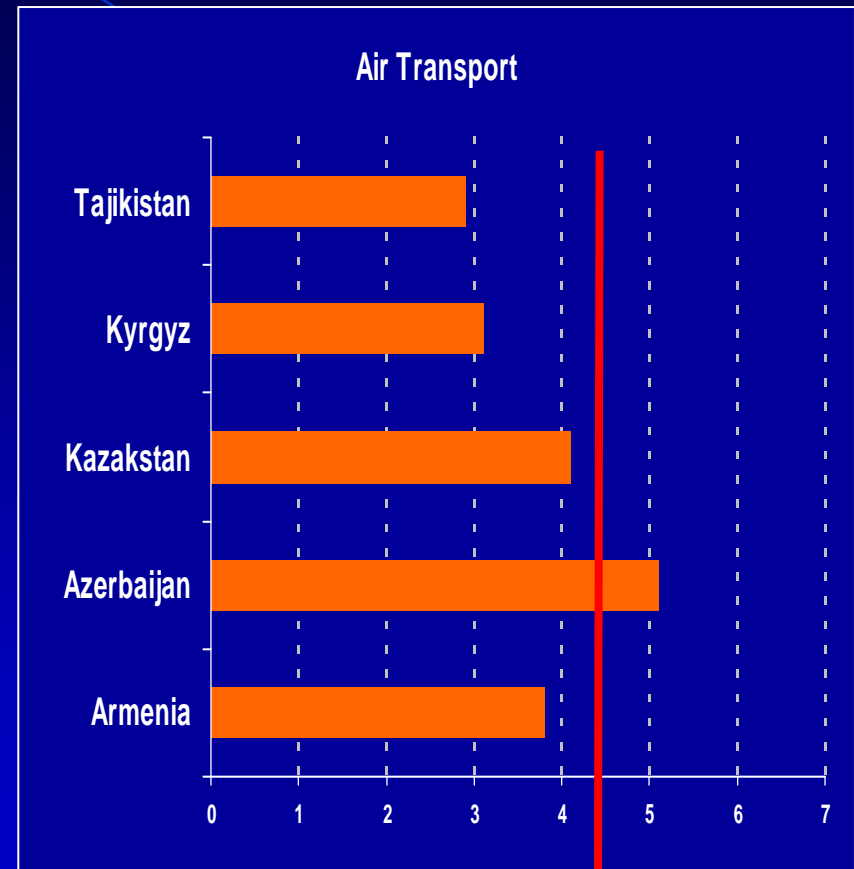
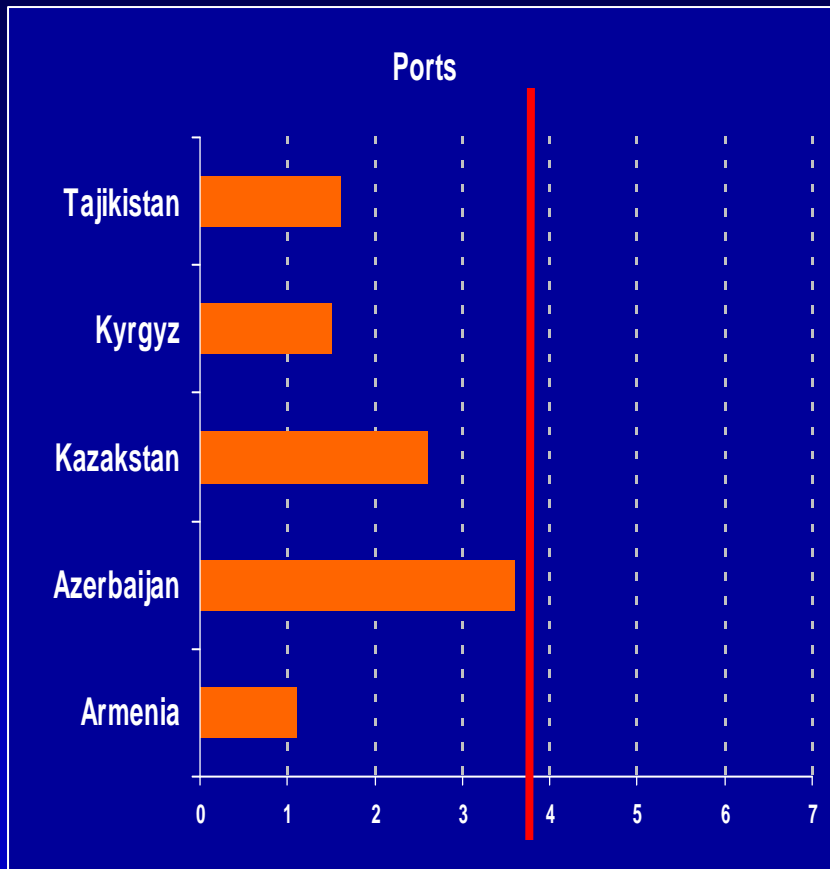
World Competitiveness Report Ranking, 2006-2007



Note: Vertical line is the average for all 125 surveyed countries, both within and outside of East Asia.

# Ports and Air Transport: Quality Ranking

World Competitiveness Report Ranking, 2006-2007

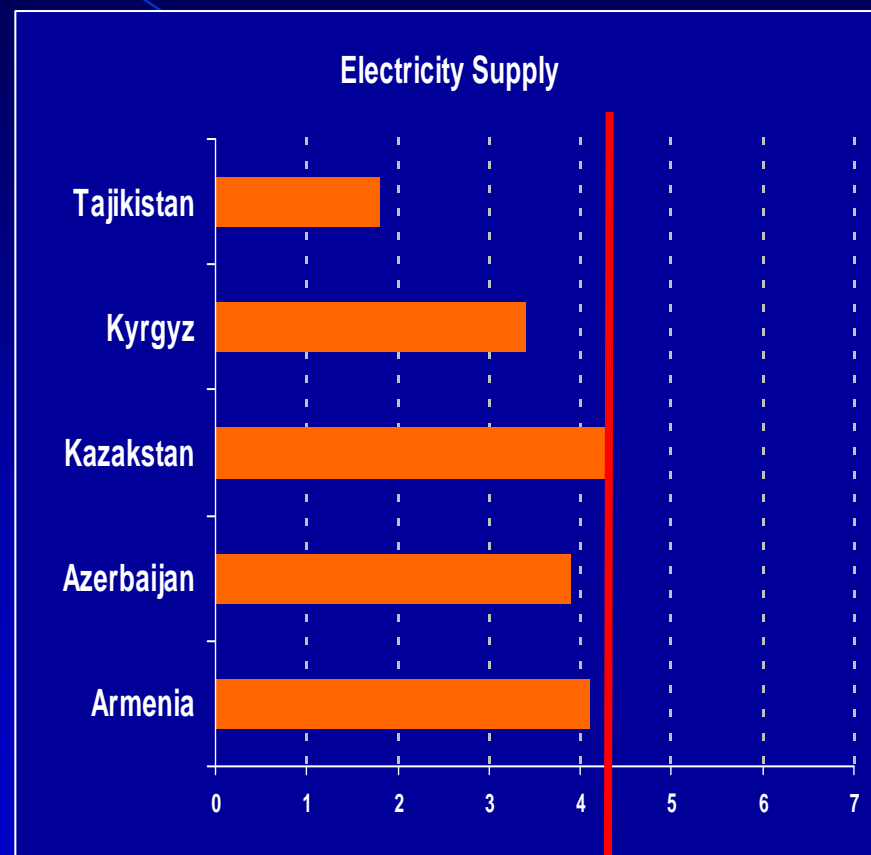
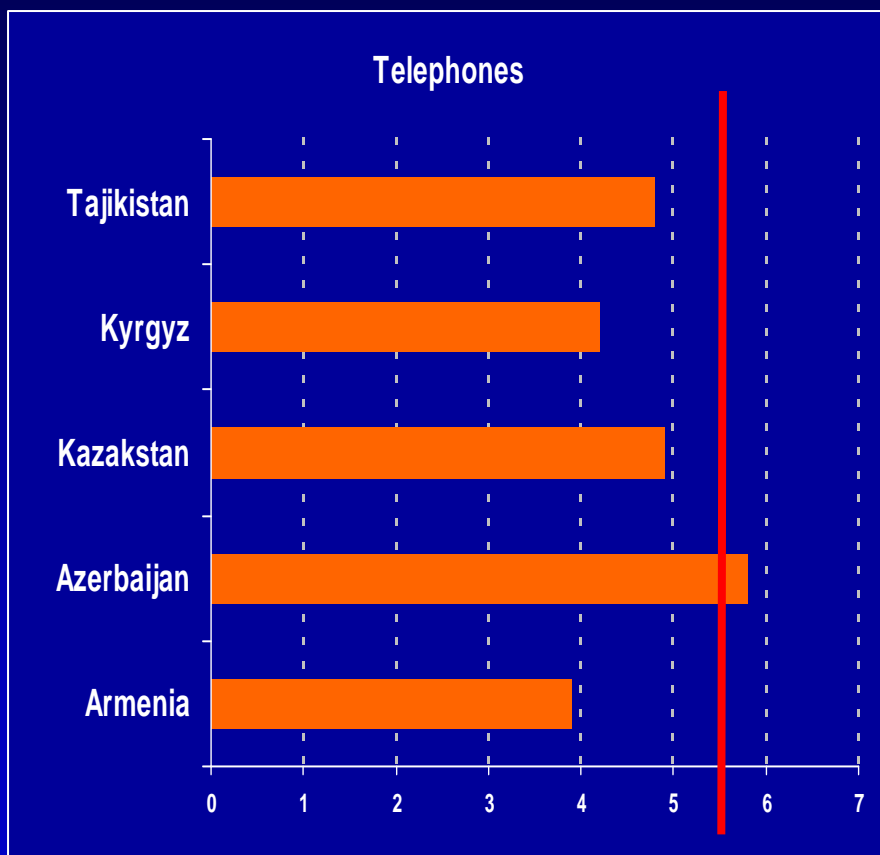


Note: Vertical line is the average for all 125 surveyed countries, both within and outside of East Asia.



# Telephones and Electricity Supply: Quality Ranking

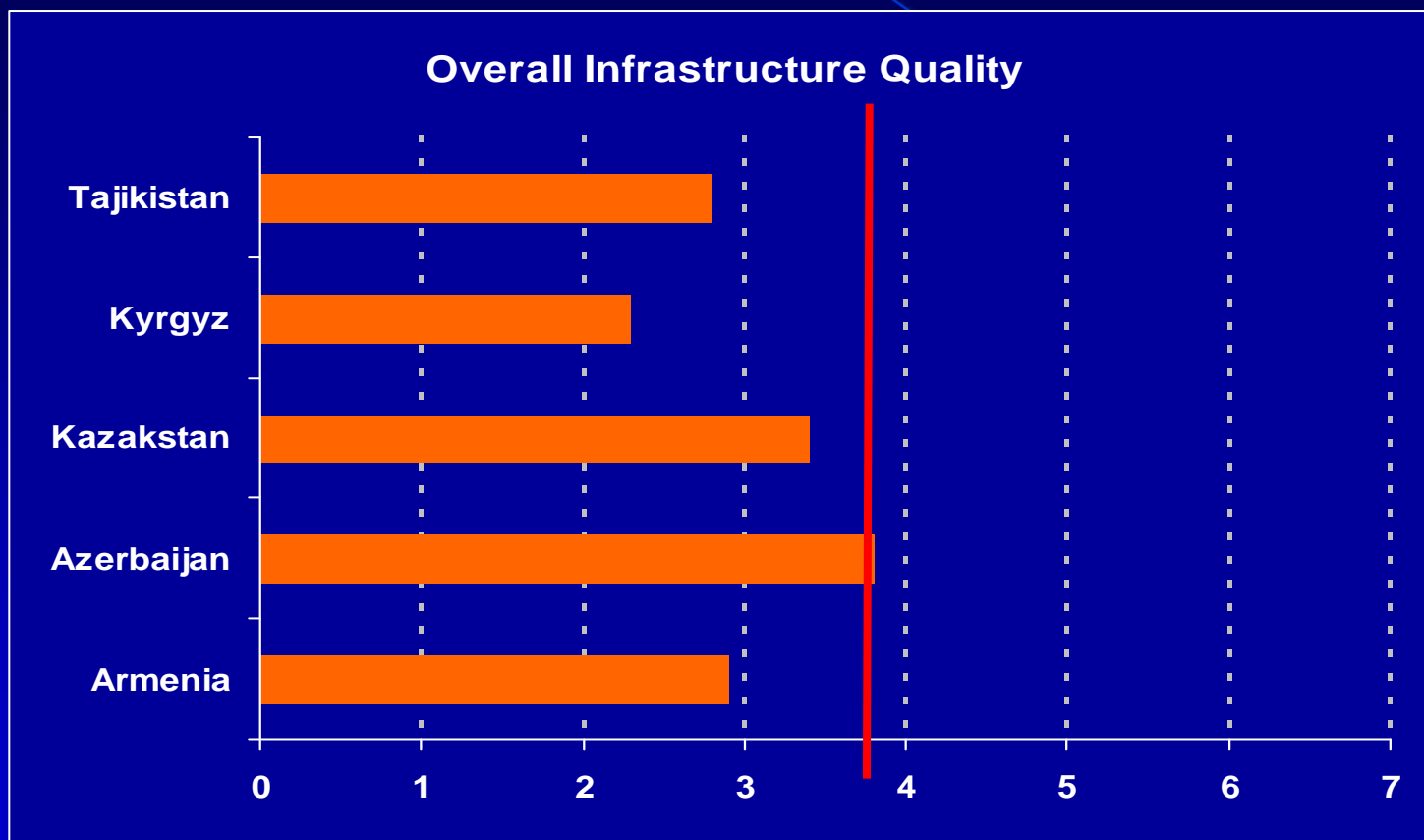
World Competitiveness Report Ranking, 2006-2007



Note: Vertical line is the average for all 125 surveyed countries, both within and outside of East Asia.

# Infrastructure Quality is a Major Impediment to Economic Competitiveness

World Competitiveness Report Ranking, 2006-2007

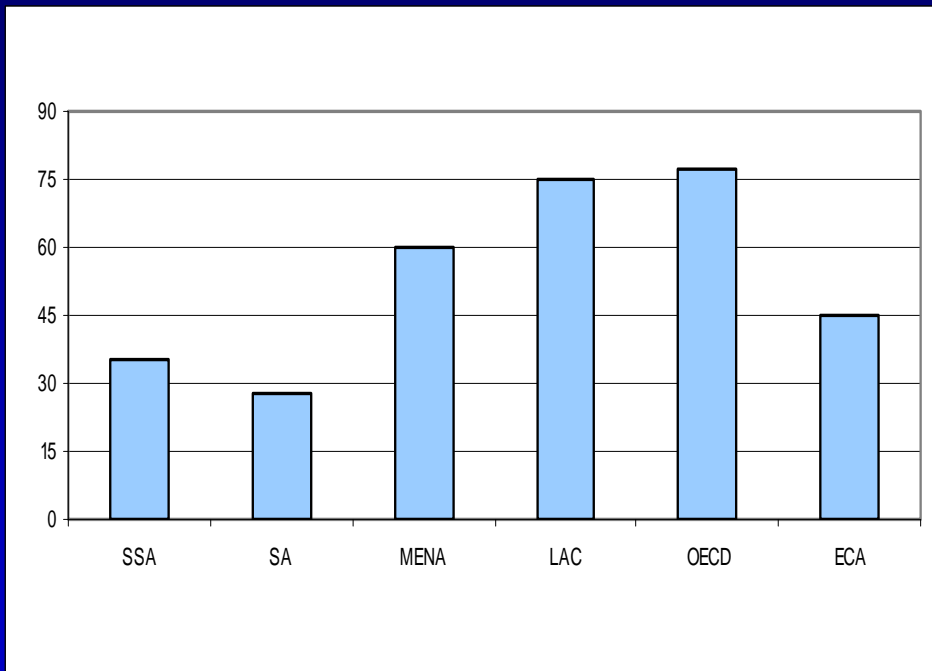


Note: Vertical line is the average for all 125 surveyed countries, both within and outside of East Asia.

# Urbanization Is the New Driver for Infrastructure & Productivity

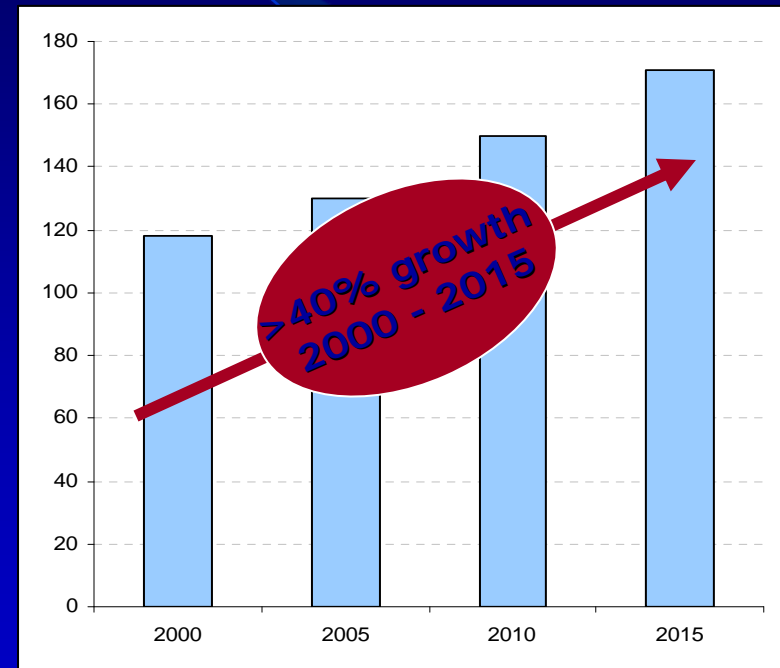
... in 20 years, urbanization and infrastructure financing needs in CAREC can be expected to increase significantly

% Urban Population of Total Population



Source: World Development Indicators, 2006; United Nations World Urbanization Prospects, 2003

Growth in Cities over 1 Million



Source: United Nations World Urbanization Prospects, 2003



# CAREC Infrastructure - Financing Needs

CAREC Region requires infrastructure financing of about \$12 billion per annum

Actual expenditure is likely to be less than half this amount, mobilized from

- **Public sector**
- **International donors**
- **Private sector**

# CAREC Infrastructure Financing - Domestic Resources

Macroeconomic Indicators 2008 (US\$ billion)

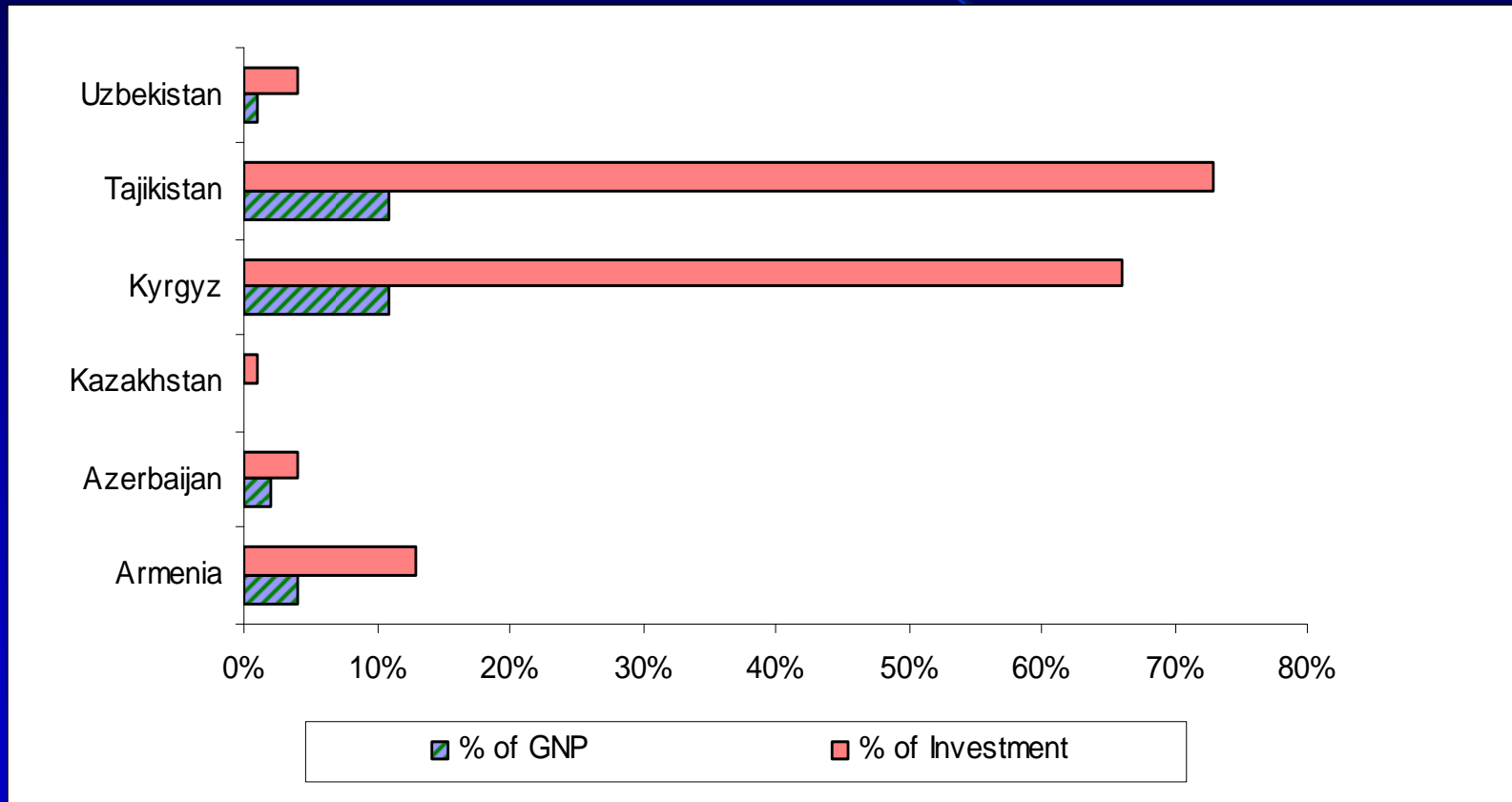
Country	Gross Reserves	Current a/c Balance	Gross Domestic Savings
Armenia	1.4	-1.4	1.9
Azerbaijan	6.5	16.5	29.9
Kazakhstan	19.9	6.6	72.8
Kyrgyz	1.2	-0.6	-0.6
Tajikistan	0.2*	0.0	-1.1
Uzbekistan	...	...	9.3

Source: World Development Indicators.

\* 2006 figures

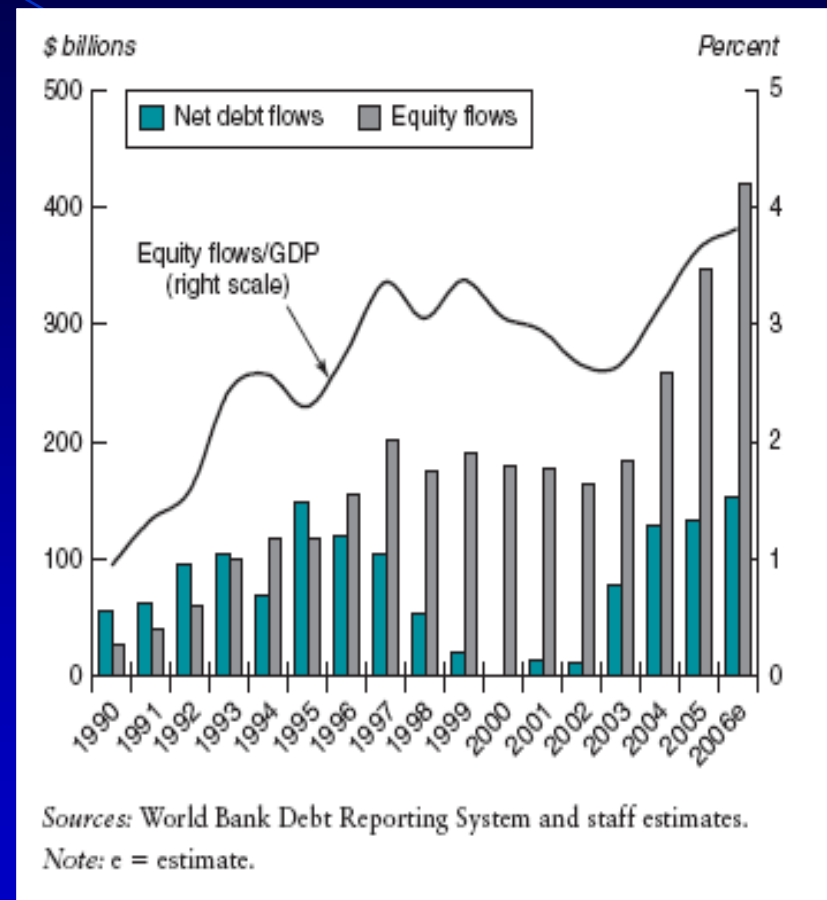
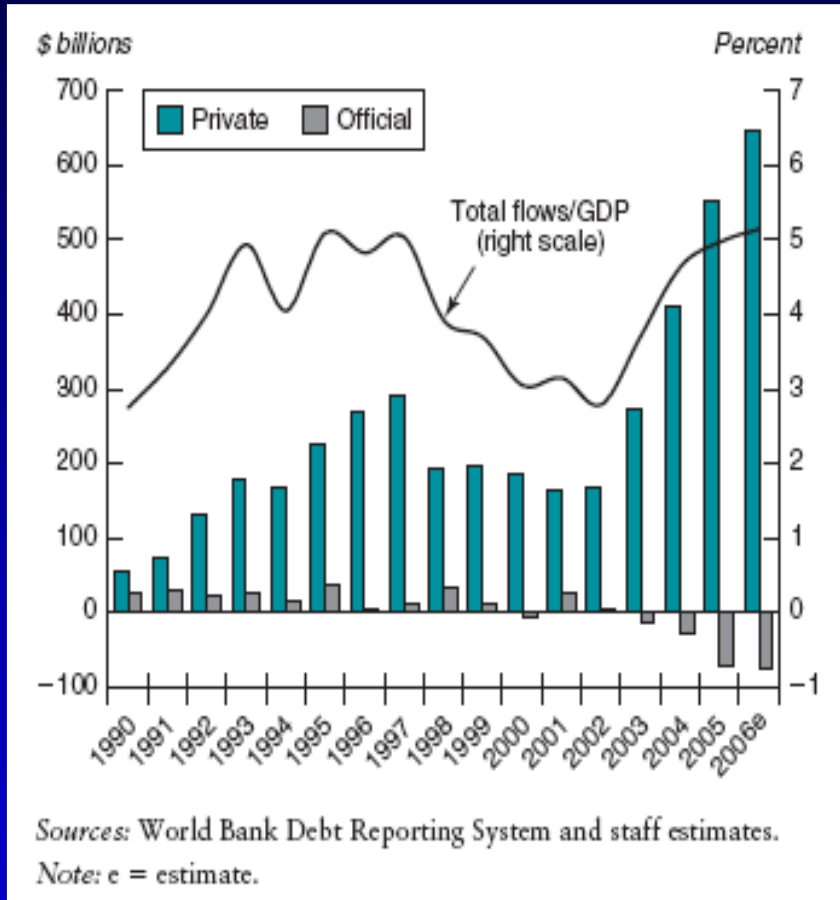
# CAREC Infrastructure Financing - the International Community

CAREC Development Assistance  
(% of GNP and % of investment, 2005)



Source: World Development Indicators, 2005.

# Private Sector is Becoming the Dominant Source of Finance in Developing Economies, 1990-2006



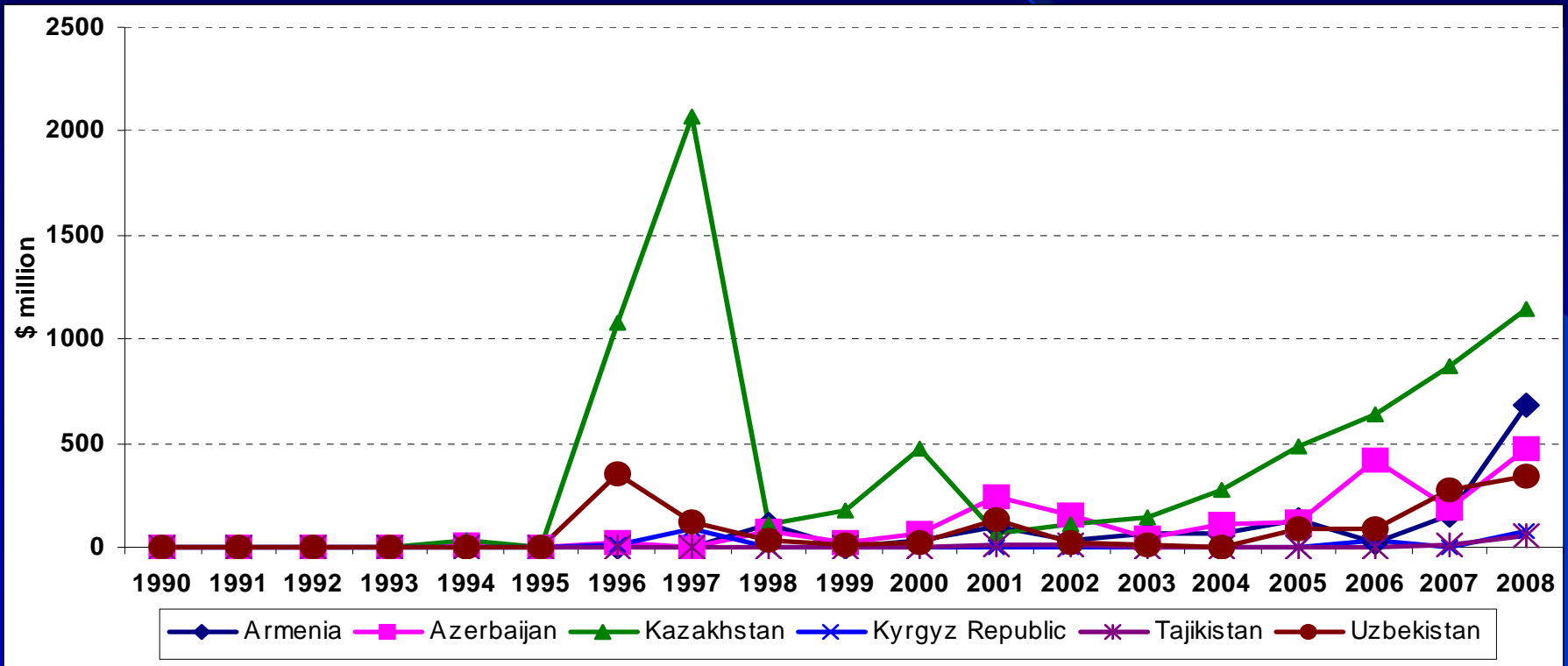
Source: Global Development Finance, 2007

Increasingly, these funds are being directed towards private infrastructure investment



# CAREC PPI

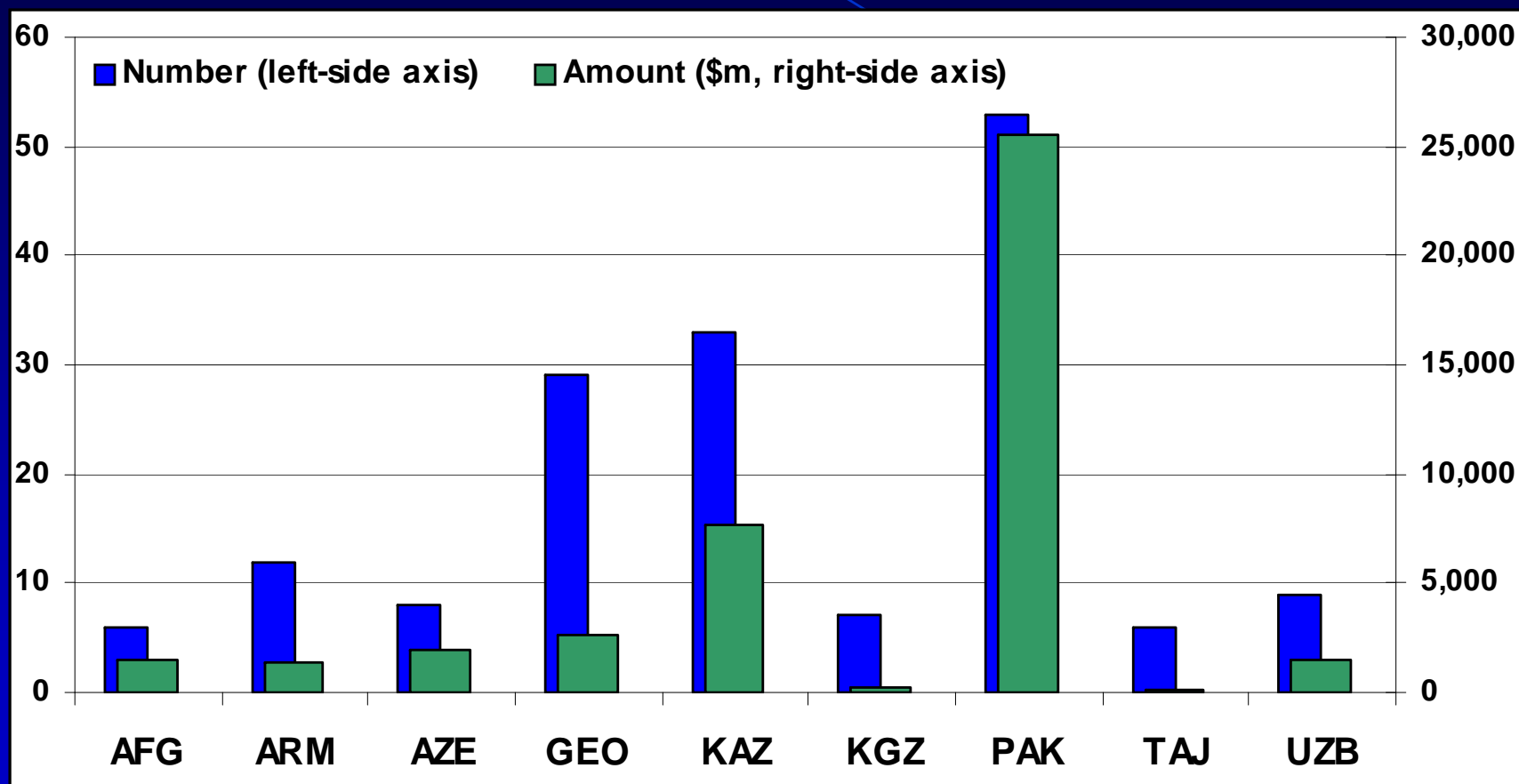
- *Starting to Increase from a Low Base*



Source: PPI Project Database.

# CAREC PPI

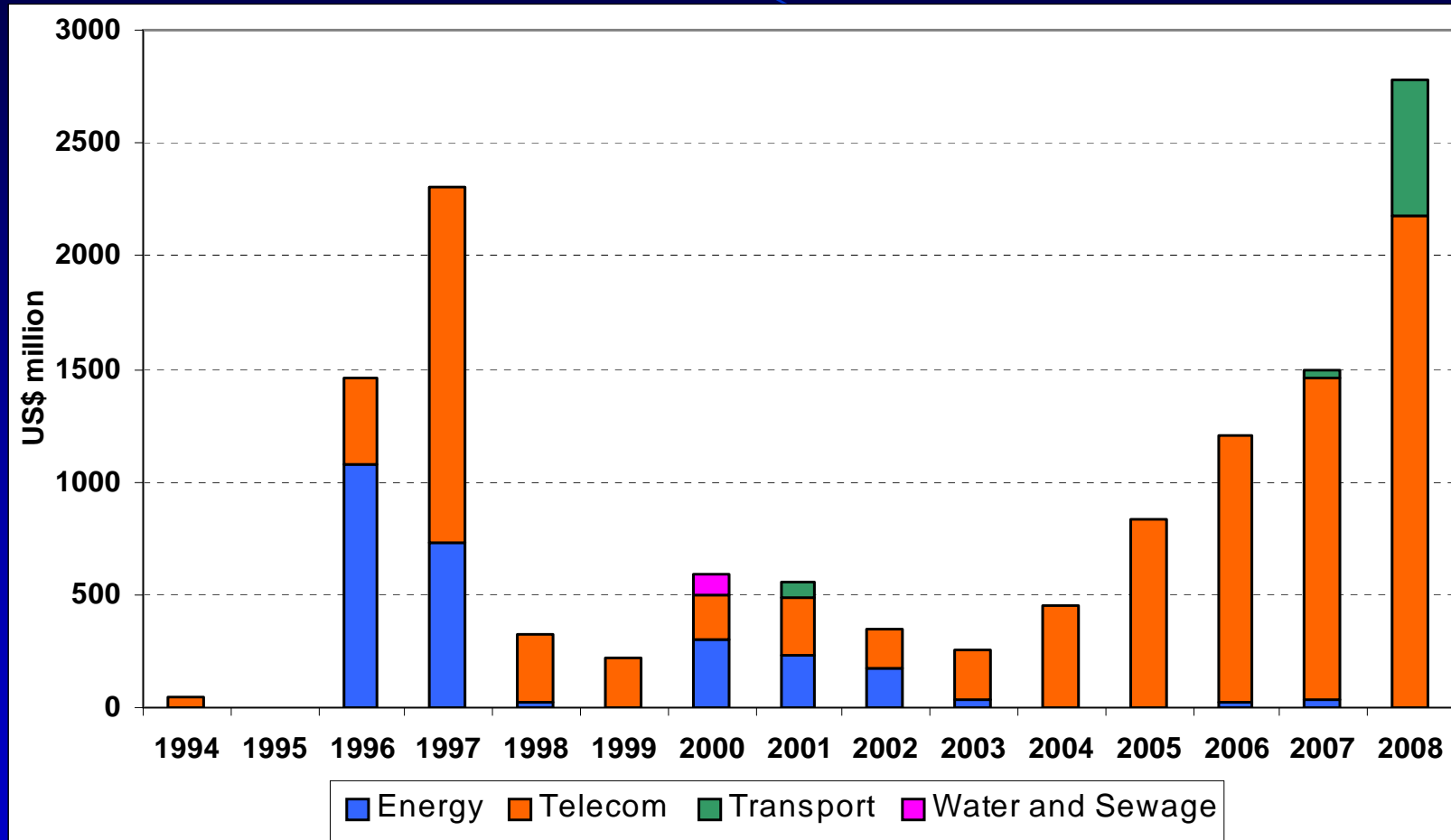
## - Across the Region



Note: Includes investment in projects reaching financial closure in 1990–2008.  
Source: PPI Project Database.

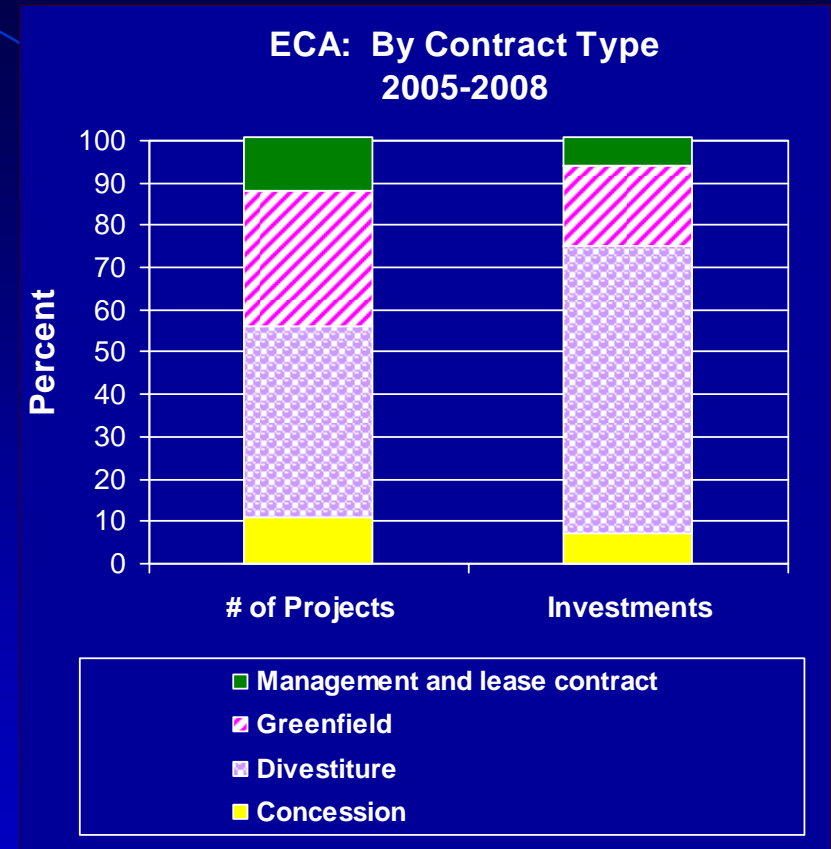
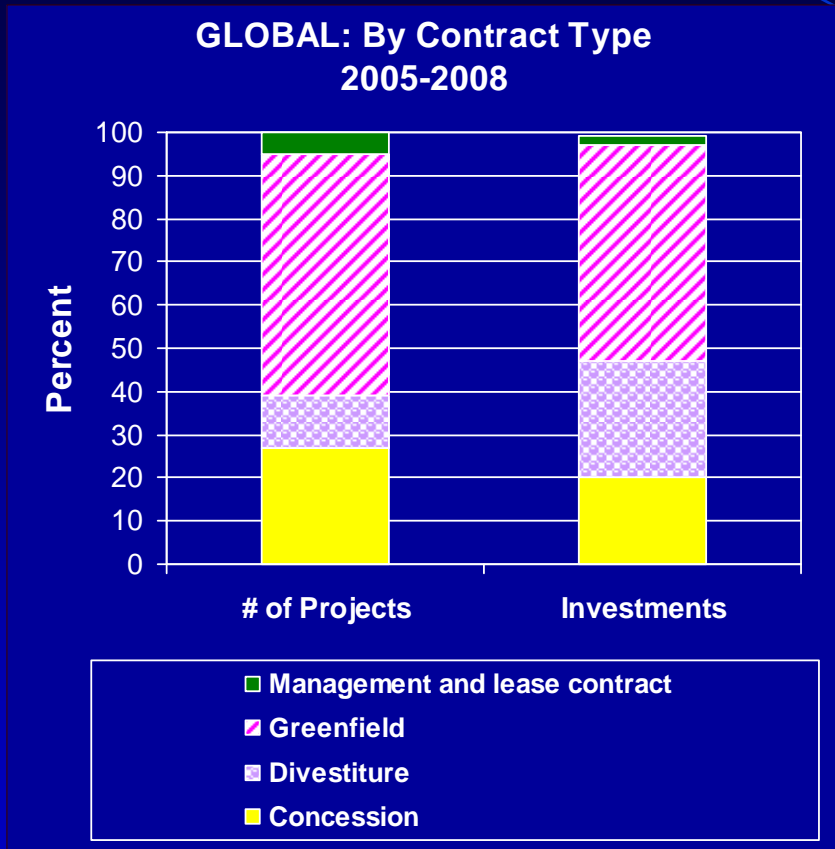
# CAREC PPI

– *Driven by Energy pre-crisis period and Telecom in post-crisis*



Source: World Bank and PPIAF, PPI Project Database <http://ppi.worldbank.org>

# Private Infrastructure Investment Commitments: 2005-2008



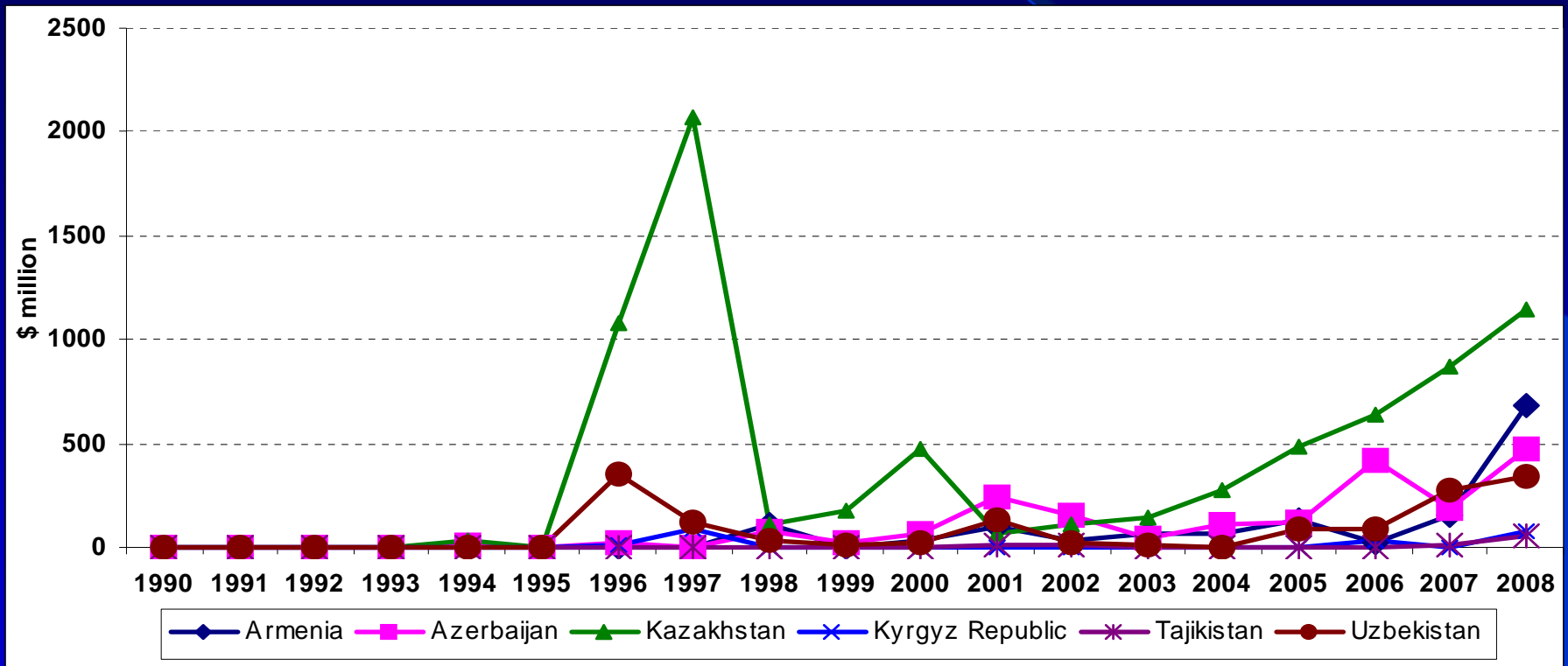
Greenfield (concessions) continues to be dominant form of contract (Brownfield) concessions second most popular (in terms of number of projects) but relatively small deal size

In ECA – divestiture still important source of private capital



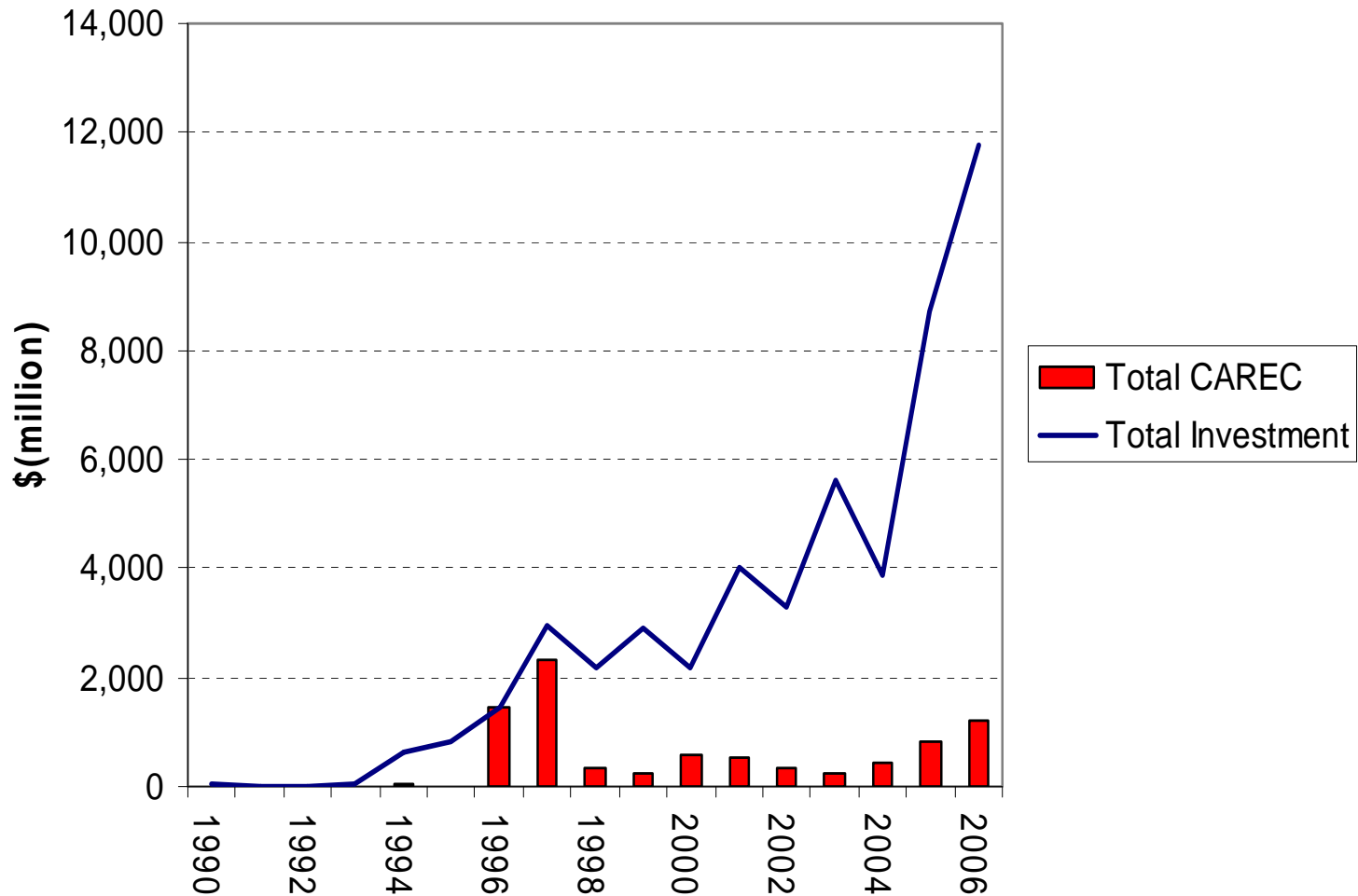
# CAREC PPI

*... with Enormous Potential given PPP Investment in Infrastructure Projects Globally*



Source: PPI Project Database.

# CAREC PPI ... Global Opportunities



Source: World Bank, PPI database.

# Key Lessons for Success & Sustainability

*Political economy* dimensions are critical

*Need to ensure*

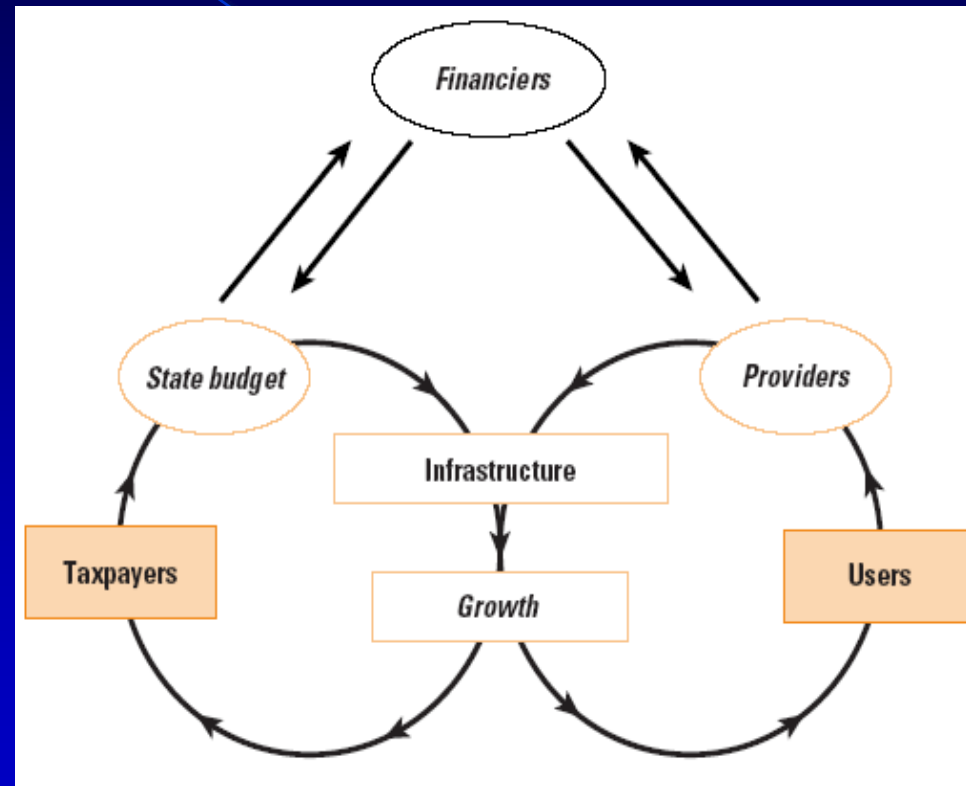
- Regulatory independence and stable & credible contractual and regulatory frameworks
- Capital market development and local currency funding for large-scale infrastructure
- Improved risk solutions and mitigation products to address financing and exchange rate risks
- Government commitment to cost-recovery tariffs or targeted subsidies

# Key Lessons for Success & Sustainability

*Getting the Infrastructure Basics and Service Priorities Right*

Financial engineering cannot substitute for sound project design

In the end, it is the *taxpayers* and *users* who pay



Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank

**Thank you.**