

# Scaling up investment in Infrastructure: The Indian experience



*- Gajendra Haldea*

*November 30, 2010  
IMF, Washington*

# Infrastructure Deficit

## Power

- 14% peaking deficit and 11% energy shortage; 27% T&D losses; absence of competition; and inadequate private investment

## Highways

- 70,548 Km of NH (2% of network, 40% of traffic): only 18% Four-lane; 52% Two-lane; and 30% Single-lane; State highways also suffer from prolonged neglect

## Ports

- Inadequate berths, rail / road connectivity and draft are constraints

## Airports

- Inadequate capacity: Runways, aircraft handling capacity, parking space & terminal buildings

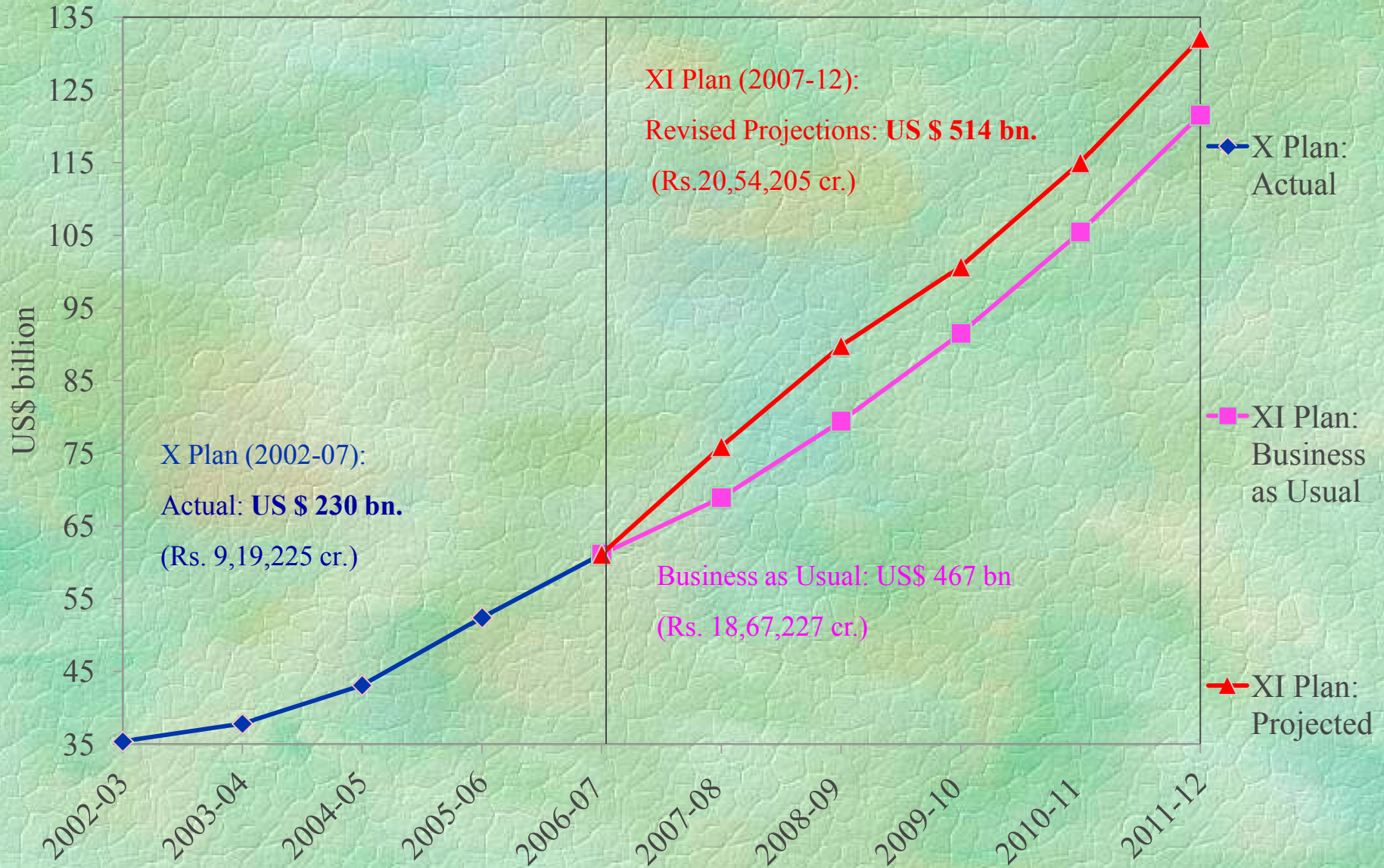
## Railways

- Old technology; saturated routes: slow average speeds (freight: 22 kmph; passengers: 50 kmph); low payload to Tare ratio (2.5)

# Inadequate investment in Infrastructure

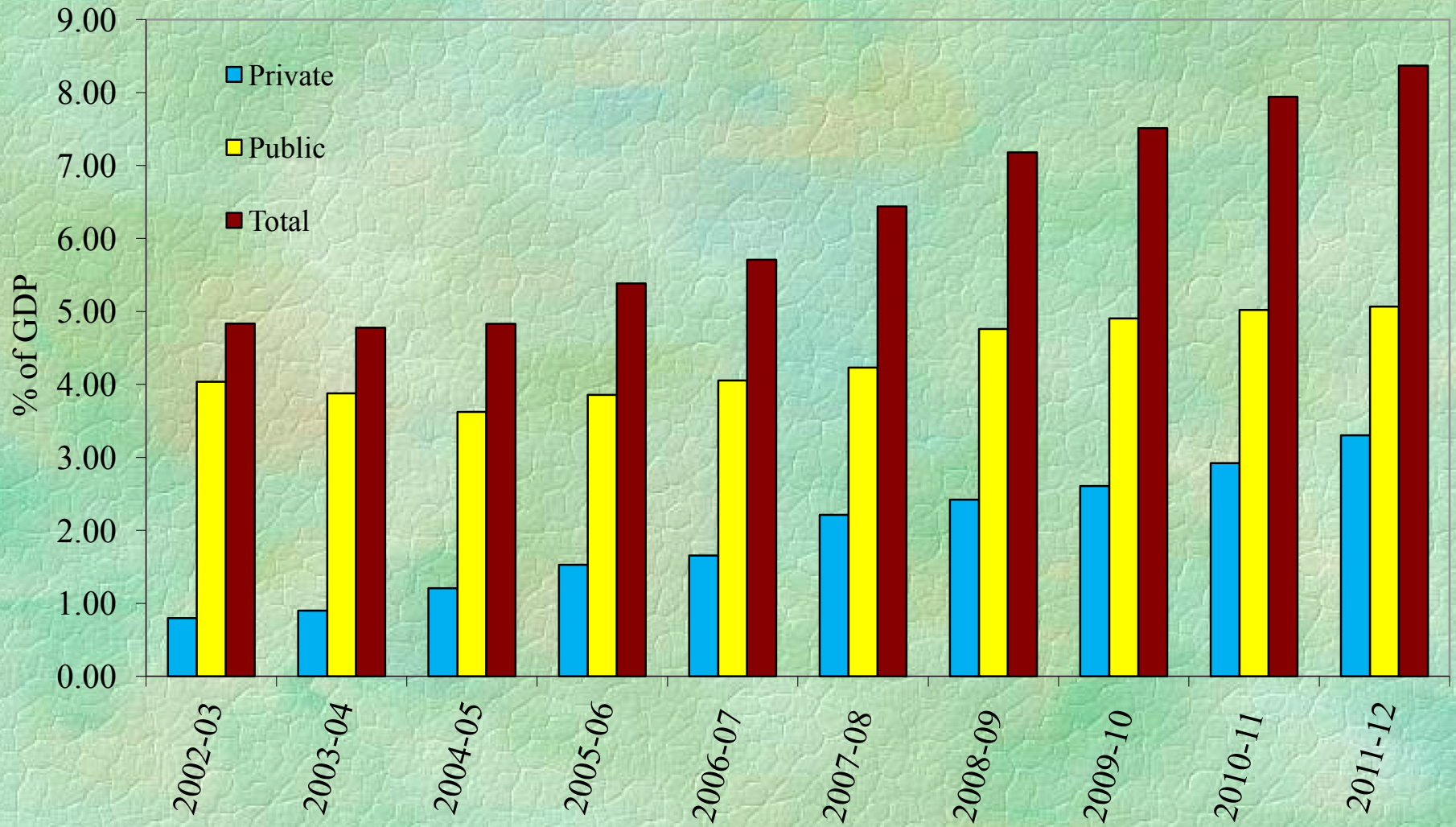
- Investment in infrastructure was only **5% of GDP** upto 2007; mainly in the public sector
- Economic liberalisation of the 1990s led to **GDP growth of 7-9%**; not accompanied by similar rise in infrastructure spending
- Infrastructure **deficit increased** during 10<sup>th</sup> Plan (2002-07) owing to rapid growth of economy
- **East Asian economies and China** typically invested 9-10% of GDP in infrastructure
- Growth is getting constrained owing to infrastructure deficit

# Investment in Infrastructure: 11th Plan



# Investment in Infrastructure as % of GDP

(10th and 11th Five-Year Plans)

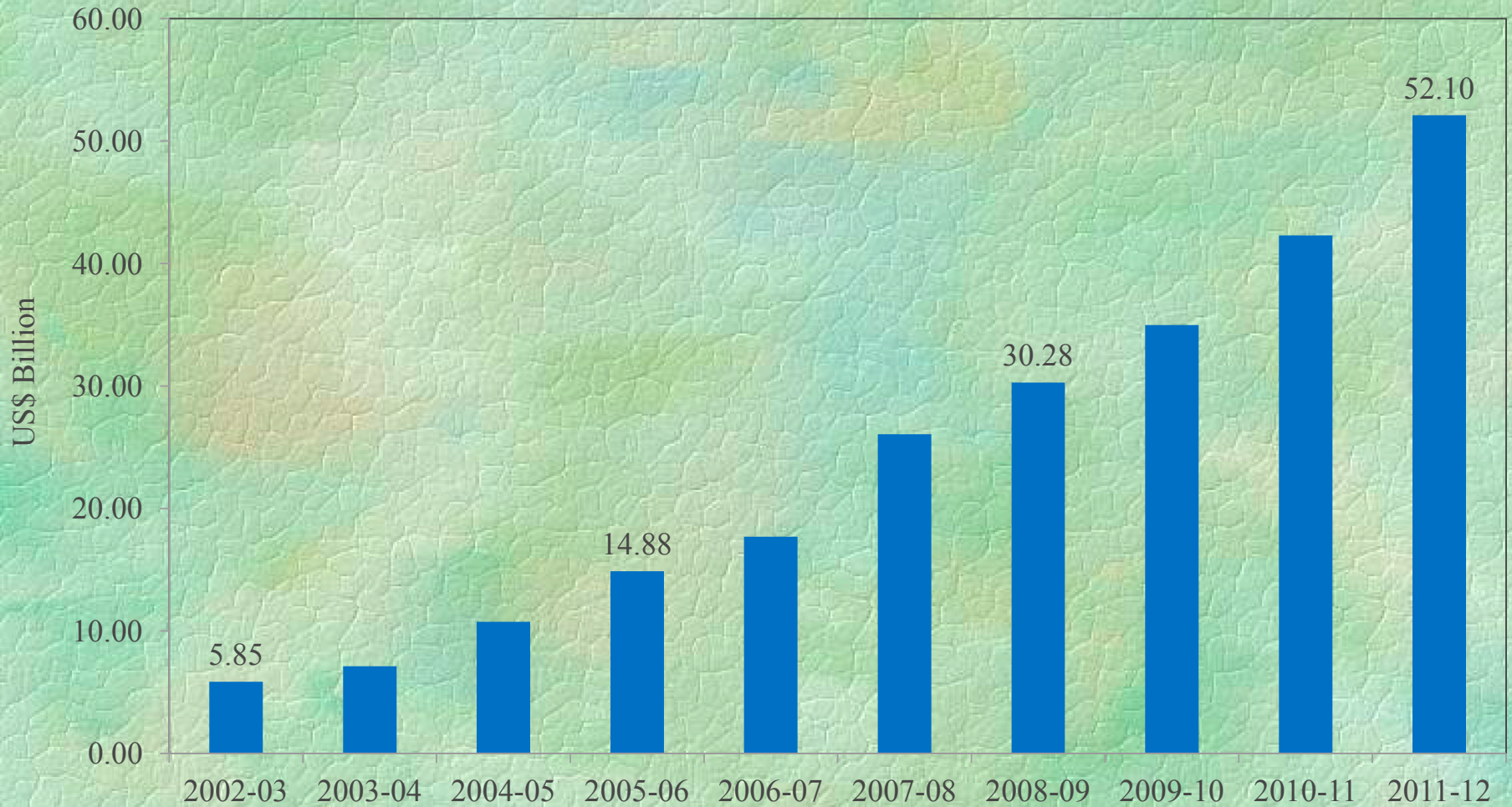


Projected figures for 2009-12

# Growth of Private Investment

(10<sup>th</sup> and 11<sup>th</sup> Five-Year Plans)

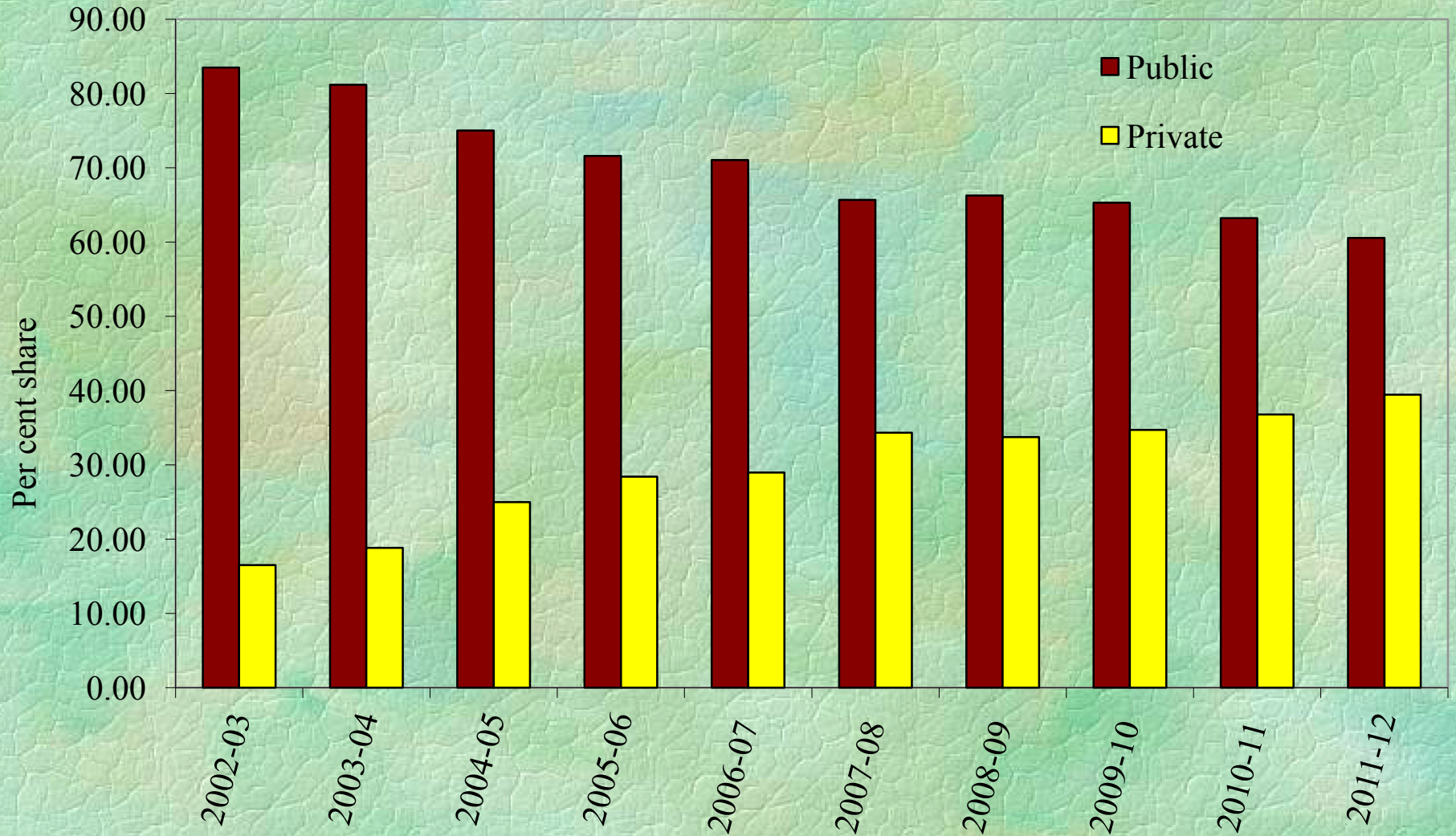
(US\$ 1= Rs. 40 at 2006-07 prices)



Projected figures for 2009-12

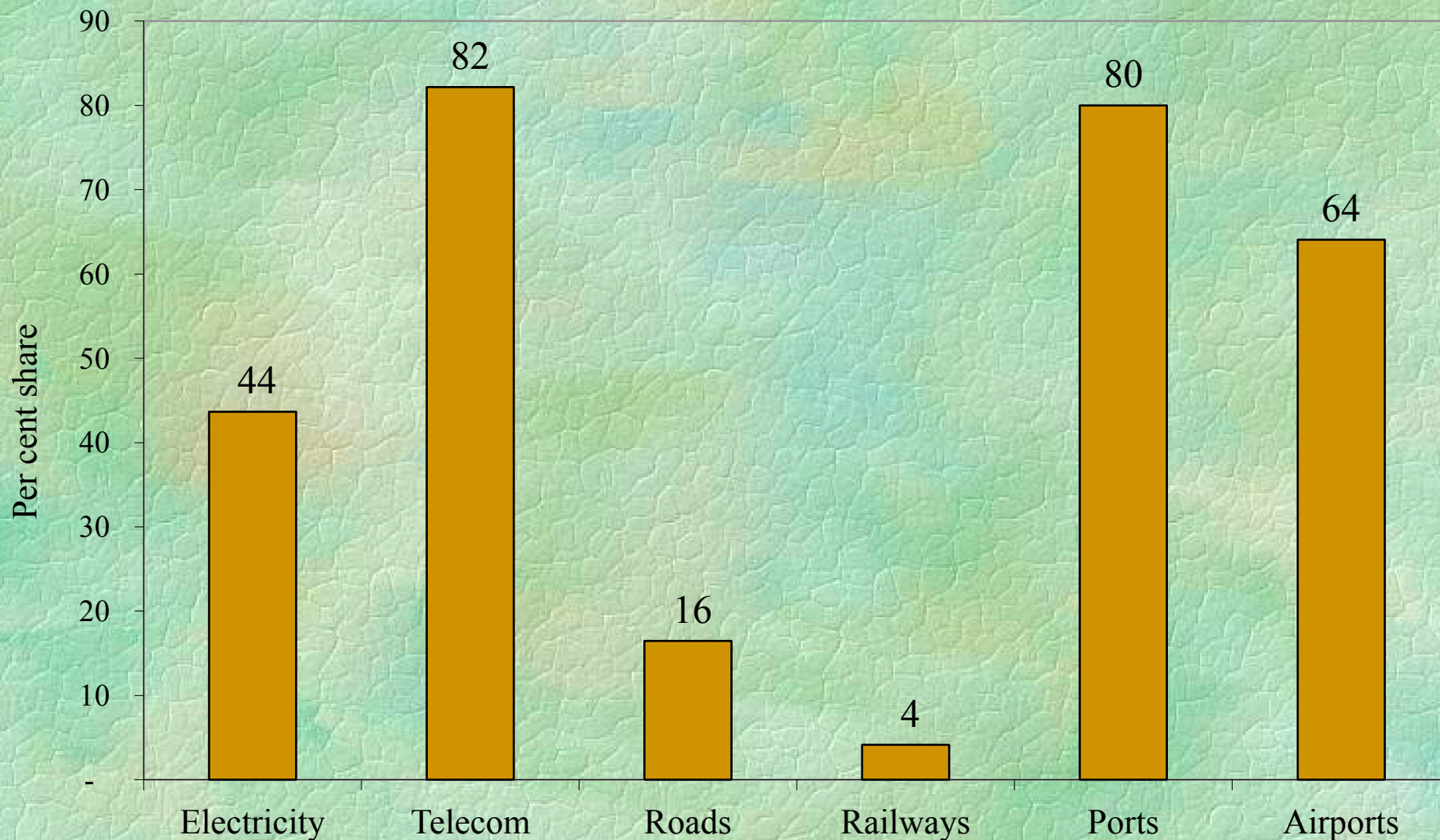
# Relative Share of Private Investment

(10th and 11th Five Years Plans)



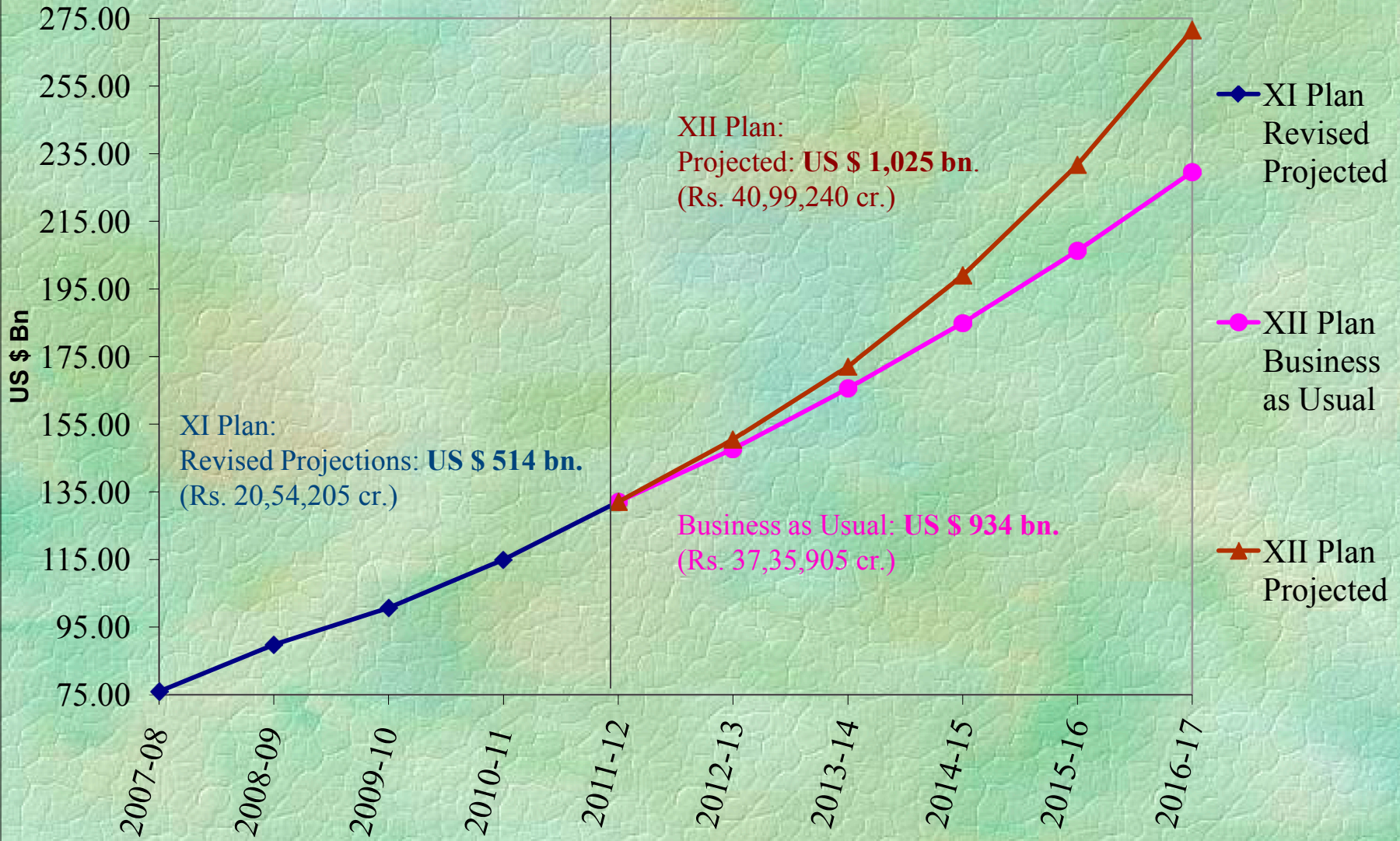
Projected figures for 2009-12

# Share of private investment in different sectors (11<sup>th</sup> Five-Year Plan)

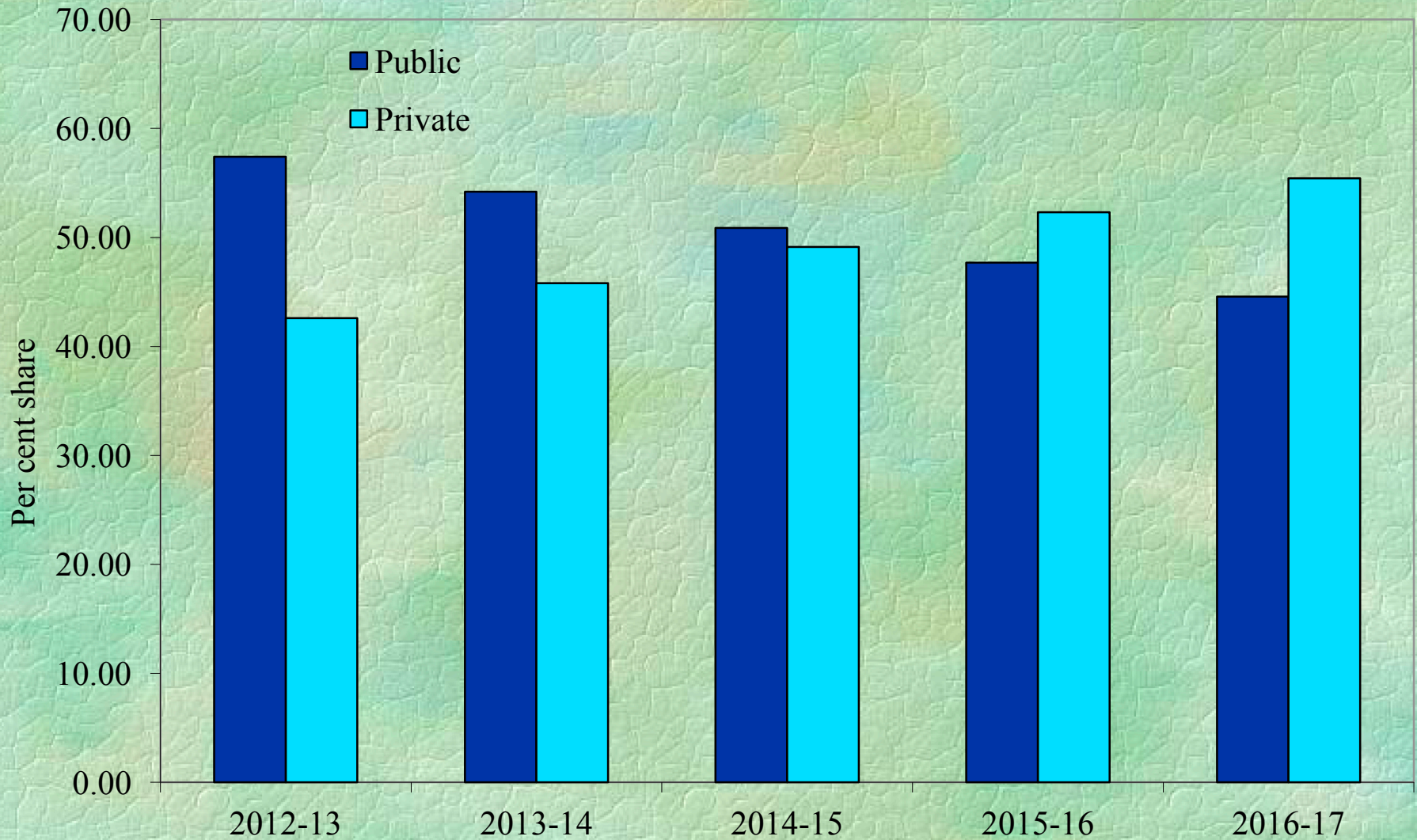




# Projected Investment in Infrastructure: 12<sup>th</sup> Plan



# Relative Share of Private Investment: 12<sup>th</sup> Plan



# Investment by Centre, States & Private Sector

*(Billion US\$ at 2006-07 prices, 1US\$ = Rs.40 )  
(per cent share in brackets)*

	<b>10<sup>th</sup> Plan</b> (2002-07)	<b>11<sup>th</sup> Plan</b> (2007-12)	<b>12<sup>th</sup> Plan</b> (2012-17)
<b>Centre</b>	92 (40.2)	173 (34)	231 (22.5)
<b>States</b>	81 (35.3)	155 (30)	282 (27.5)
<b>Private</b>	56 (24.5)	186 (36)	512 (50)
<b>Total</b>	<b>230</b>	<b>514</b>	<b>1025</b>

# Division of Labour

- **Public Sector to continue, and even expand**
  - Especially in segments that can't be commercialised, such as rural roads
  - Expected CAGR of budgetary allocations: about 10% in real terms
- **Increased reliance on PPPs** for additionality & improved efficiency
  - In segments that can be commercialised, eg. highways, ports, airports & rail concessions
  - Much of additional investment through PPPs
- **Independent private investment** wherever feasible
  - Telecom, power generation/supply, container trains etc.

# Commercialisation of Infrastructure

- Government budgets are increasingly **inadequate** for financing capital-intensive infrastructure projects
- The issue is whether tax-payers or **rate-payers (users)** should pay for infrastructure services
- User charge based infrastructure projects ensure a **better allocation of resources**
- The move towards commercialisation of infrastructure is **inevitable**
- The key issue is the creation of an **enabling environment** that would attract capital flows

# Need for enabling environment

- Sound enabling environment is a **pre-requisite** for private participation
- Investors **shy away** or seek **high risk premium** in the absence of a credible policy & regulatory framework
- Private participation has greater potential for **rent-seeking**; risk of **popular backlash, re-negotiation and expropriation**
- The challenge is to create an enabling environment that would **enhance investment, reduce costs and improve efficiencies**

# Stages of PPPs

- I. Public sector provision of Infrastructure: **Command & Control**
    - PPP by exception
  
  - II. Introduction of PPPs: **The Transition** - still on in some sectors/states
    - Largely negotiated; characterised by rent-seeking
    - Driven by private beneficiaries (eg. Dabhol, NOIDA bridge)
  
  - III. PPPs gain acceptability: **Enhancing welfare & efficiency**
    - Transparent, competitive and fair
    - Driven by the government; good governance becomes the key
    - Objective is to attract private capital in public projects
- **Indian PPP projects are mostly in Stage III**

# Paradigm Shift

- Successful reform initiatives have universally relied on:
  - **leadership** from head of government
  - creation of independent & **inter-ministerial processes** for overcoming incumbent pressures and perceptions
- Infrastructure reforms in India have been **led by PM** and CoI/CCI
- PPP has gained **wide ownership** and support across the government. A **paradigm shift** has occurred.



# Financial Support to PPPs

- Viability Gap Funding (**VGF**) upto 20% of capital costs based on competitive bidding
- **270** central and state projects with an investment of Rs. 2,14,228 cr. (**US\$ 54 bn**) cleared with a VGF commitment of Rs. 59,493 cr. (**US\$ 15 bn**)
- India Infrastructure Finance Company (**IIFCL**) provides upto 20% of capital costs as long-term debt for viable projects
- IIFCL has sanctioned Rs. 27,779 cr. (**US\$ 7 bn**) for **156** projects

# Financing Constraints

- **Competing demands** on budgetary resources: health, education, rural development, livelihood support programmes etc.
- **Budgetary allocation cannot be increased beyond 10% p.a.** in real terms; reliance on private investment is inevitable
- **Private equity** not viewed as a constraint; markets have responded well
- **Debt required** by PSEs and private sector estimated at **US\$ 247 billion** in 11<sup>th</sup> Plan (2007-12)
- **Possible debt gap of \$ 40 bn**; policy responses under way

# Issues in Financing by Banks

- **Excessive reliance** on commercial banks (51%); lending rose from **US\$ 2 bn** in FY 2000 to **US\$ 67 bn** in FY 2009
- Increase in bank exposure from **1.8% of their lending in FY 2001 to 10.2% in FY 2009; CAGR of over 40% in last 9 years**
- **Tenure** of bank loans is inadequate as their deposits are short/medium term
- **Asset-liability mismatch (ALM)** is emerging as a serious regulatory issue constraining long-term financing by banks
- Shorter tenures **raises costs/user charges**
- Banks are **exhausting their prudential limits** in terms of sector, borrower and project exposure

# Lack of Long-term debt

- **Insurance and pension funds** have stayed away owing to their risk perceptions
- **Bond markets** in India continue to be shallow
- **IIFCL** was set up for providing long-term debt; a partial success
- **NBFC's** provide 27% of debt but not for long tenures
- **ECB** is also limited in tenure
- **Tenure of debt is a significant issue in financing of infrastructure**

# Long-term debt: Policy Responses

- Setting up **Infrastructure Debt Funds** to channelise long-term insurance & pension funds through credit enhancement
- Introduction of **tax-free Infrastructure Bonds**
- **Take-out financing** scheme introduced by IIFCL
- **High-level Committee** set up to recommend policy initiatives necessary for financing US\$ 1 trillion investment

# Policy Challenges

- **Challenges for large capacity addition**
  - Time-bound delivery under **budgetary constraints**
  - World class yet **cost effective**
  - Commercially sustainable yet **affordable**
- **Policy responses for attracting private investment**
  - Policy and regulatory **framework** for PPPs is in place
  - **Institutional restructuring** and reorientation underway
  - **Financial support** being provided to bridge viability gap of PPP projects

# Role of MDBs

- MDBs typically finance public investment; **negligible support** for enhancing private flows – domestic or foreign
- MDB assistance tends to **pre-empt private flows**
- MDBs do not generally finance/re-finance private investment
- MDBs need an **outcome-based policy for enhancing private capital flows for infrastructure projects**
- Need for **capacity building in MDBs** for supporting private investment flows

# Governance: Typical Issues

- Unwillingness of **incumbents** to cede control over construction & operation of projects
- Denial of **level playing field** is an issue
- **Rent-seeking** is also an issue
- Inadequate and inefficient **roll out** of projects
  - The demand for PPP projects is far greater than their supply
- Incumbent **mindset** constitutes a major challenge



# Governance Structure for PPPs

- **Constitution of a Cabinet Committee on Infrastructure (CCI)**
  - Prime Minister is the Chairperson
  - Ministers of Infrastructure Ministries, Finance Minister and Deputy Chairman, Planning Commission are members
- **PPP Appraisal Committee / Empowered Committee**
  - Appraises & recommends PPP projects
  - Cleared **270 projects** with an investment of **US\$ 54 bn**
- **PPPs have been integrated in the planning process**
- **Consultations** with stakeholders; adoption of best practices
- **Simplification & standardisation of documents & processes**

# Typical documents for PPP projects

- **Substantive Documents**

- Concession Agreements
- Manual of Specifications & Standards
- Rules for user charges

- **Process Documents**

- RFP for selection of consultants
- RFQ for pre-qualification of bidders
- RFP for financial bids

# Framework Documents

## **Model Concession Agreements published for PPP in:**

- National Highways
- State Highways
- Ports
- Operation & Maintenance of Highways
- Urban Rail Systems (Metro rail)
- Container Train Operation
- Redevelopment of Railway Stations
- Non-metro Airports
- Greenfield Airports
- Procurement-cum-Maintenance of Locomotives
- Transmission of electricity

# Framework Documents (contd.)

## Model Bidding Documents for PPP projects

- Request for Qualification Document (**RFQ**) for pre-qualification of **bidders**
- Request for Proposal (**RFP**) for selection of bidder
- RFP for Selection of **Technical Consultants**
- RFP for Selection of **Legal Advisors**
- RFP for Selection of **Financial Consultants**

## Guidelines for Appraisal, Approval and Assistance for PPP projects

- Guidelines for **Financial Support to PPPs** in Infrastructure (**VGF Scheme**)
- Guidelines for Appraisal and Approval of PPP Projects (**PPPAC**)
- Scheme for Financing through India Infrastructure Finance Co. (**IIFCL**)
- Guidelines for establishing Joint Ventures (**JVs**) in Infrastructure

# Some illustrative PPP projects

- Delhi, Mumbai, Hyderabad & Bangalore Airports
- Jaipur-Kishengarh and Delhi-Gurgaon Highways
- Two metro-rail projects in Mumbai and one in Hyderabad
- Four Ultra mega Power Projects: Sasan(MP), Mundra (Gujarat), Krishnapatnam (AP) and Tilaiya (Jharkhand)
- Container terminals at JNPT, Chennai & Tuticorin
- 15 concessions for operation of container trains
- Jhajjar Power Transmission Project, Haryana
- 161 National Highway projects (12,005 km) for Rs.1,07,596 cr
- 137 State Highway projects (8,862 km) for Rs. 64,787 cr
- 22 central sector port terminals for Rs. 18,489 cr and 57 state sector port terminals for Rs. 71,253 cr

# Way forward

- Reinforce the enabling environment for private investment
- Adopt **standardised** documents for accelerating investment flows & for ensuring **safe and competitive** delivery
- **Leverage** budgetary resources & multi-lateral loans for PPPs
- Accelerate the **roll-out** of PPP projects
- Objective is to create **world class infrastructure**

*Thank you*

*For further details please visit  
<http://infrastructure.gov.in>*