Infrastructure: Current Developments and Financing

Infrastructure Leasing & Financial Services

Mumbai

24 January, 2005

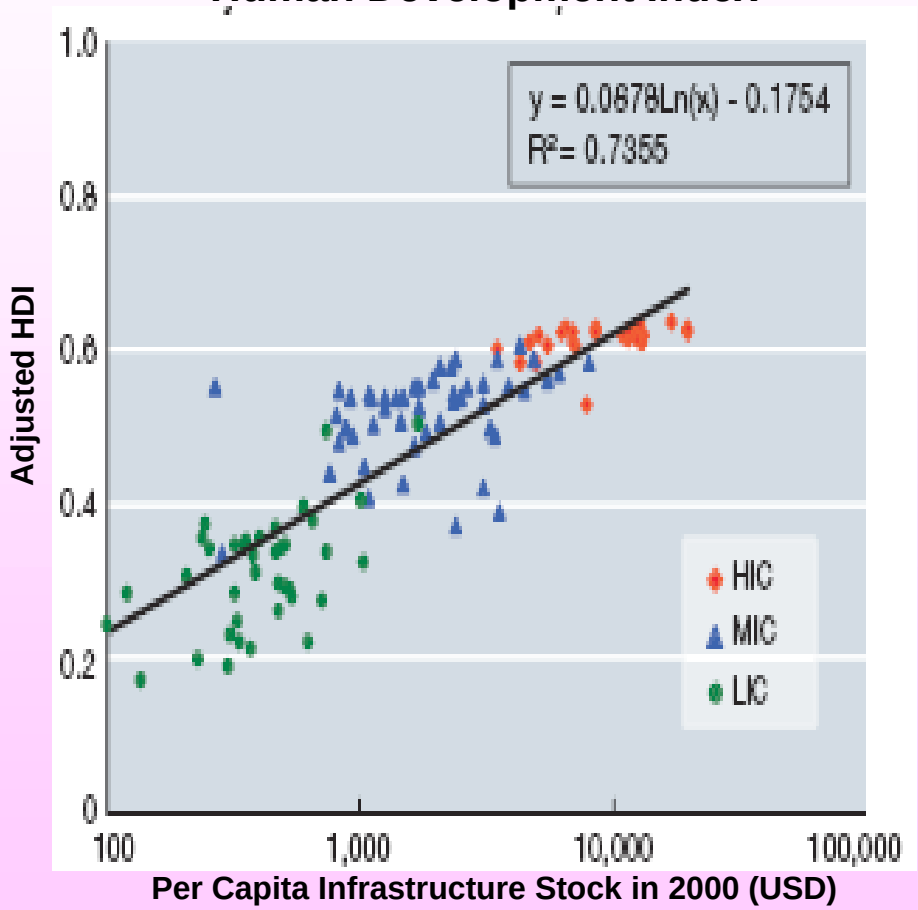
Section I: Infrastructure and Economic Development

Infrastructure and Economic Development

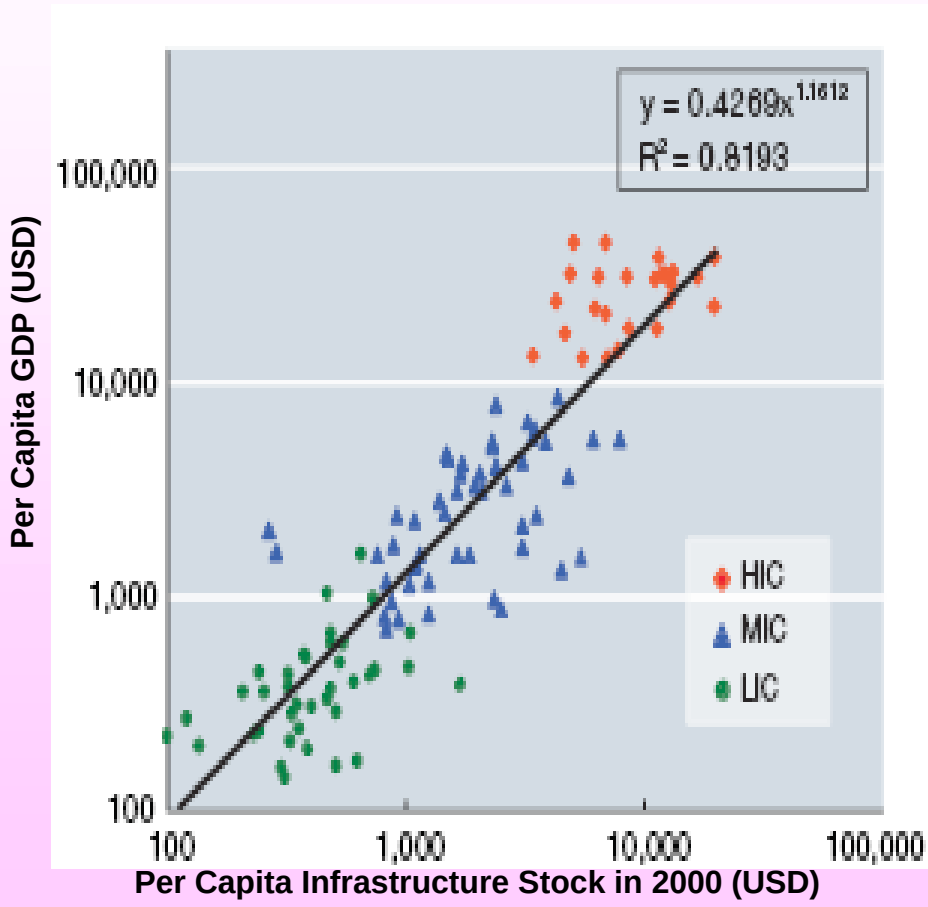
- Infrastructure contributes to economic growth, both through supply and demand channels by:
  - Reducing costs of production
  - Contributing to the diversification of the economy
  - Providing access to the application of modern technology
  - Raising the economic returns to labour
- Infrastructure contributes to raising the quality of life by:
  - Creating amenities
  - Providing consumption goods (transport and communication services)
  - Contributing to macroeconomic stability
- Infrastructure does not create economic potential by itself; it only develops it where appropriate conditions (i.e. other inputs such as labour and private capital) exist

Infrastructure: Correlation to Social Development and Economic Growth

Infrastructure Stock and Adjusted Human Development Index

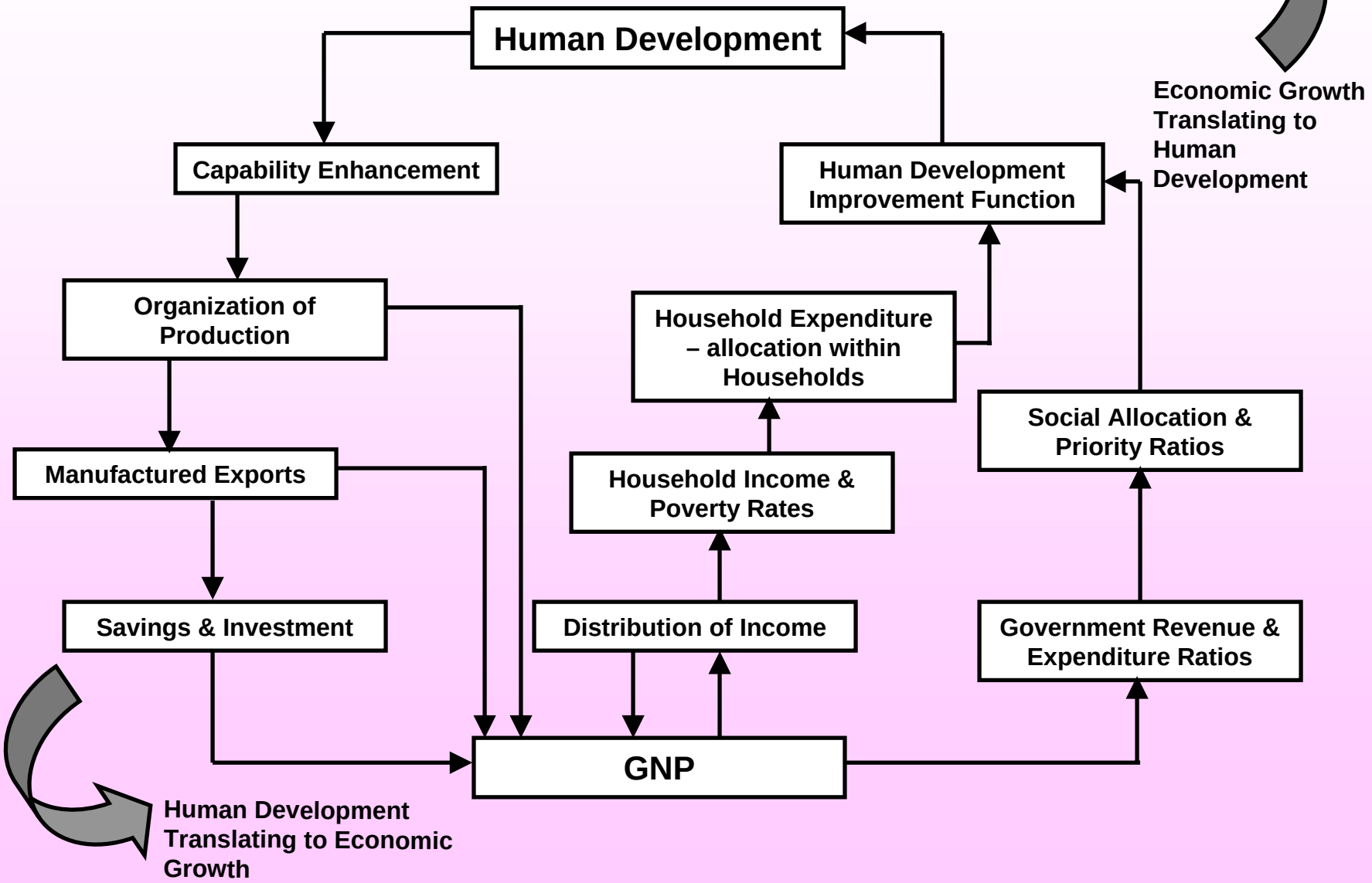


Per Capita GDP and Infrastructure Stock



Source: UNDP 2002 Human Development Report

Virtuous Cycle of Development



Approach to Infrastructure

Emphasizes Infrastructure Service Delivery

not only about…		*…also about…*
Growth	→	Poverty Reduction
An End unto Itself	→	Means to Achieve Goals in other Areas
Access and Efficiency	→	Affordability and Quality
Provider Focus	→	Consumer Focus

Calls for Allocating Resources to and Targeting Interventions

In…		*…also in*
New Physical Assets	→	Operations and Maintenance, Capacity Building, Policy Reform

Section II: Infrastructure Sector Reforms

Reasons for Slow Development of Infrastructure

- The Lack of Political Will
- The Absence of a Regulatory Structure
- Initial Hesitance to Pay User Charges
- High Interest Rate Regime
- Lack of Sector Familiarity by the Domestic Banks and FIs

The Need for Infrastructure Reforms

- While India's economic performance has been impressive, it has lagged behind other competing economies in terms of the infrastructure quality and availability
- Traditionally, most infrastructure sectors were regarded as "natural" monopolies where a single firm could supply a market at the lowest cost
- However, advances in technology and in economic thinking have shown that competition in many cases is not only feasible but also highly desirable
- The Government of India (GoI) realizes the importance of world-class infrastructure for sustained economic growth
- Given the large resource requirements, GoI has increasingly felt the need to attract Private Sector Participation (PSP)

What Has Changed…

- The Political Will to Develop Infrastructure
- Better Articulation of Policy
- An Emerging Regulatory Structure
- Earmarking of Specific Resources for Leveraging Commercial Investment in Infrastructure
- Greater Investor Confidence
- Availability of Funds from Multilateral Agencies
- Growing Acceptance of User Charges
- A Lower Interest Rate Regime
- A Sustained Reform Process
- Significant Sector Financing by the Domestic Banks and FIs

Key Initiatives

- Fiscal benefits
  - 10-12 years tax exemption for infrastructure projects
  - Tax benefits for institutional and retail investors
- Encouragement to Foreign Direct Investment (FDI)
- Development of regulation and model concession agreements
- Increase in the budgetary outlays to the infrastructure sector
- Relaxation of IPO guidelines for infrastructure companies

The Story So Far

- Within Sectors, the pace of reforms has varied significantly, due to select commercial and regulatory issues
- Consequently, progress and opportunities across Sectors differ both in quantitative terms as well as in terms of attractiveness
- While there are still some gray areas, the emergence of a market-linked, yet suitably regulated competitive framework presents a huge opportunity

Telecom

- Rapid expansion in the sector accompanied by technological change
- Total number of connections grew by 40% in 2003-04 to cross 76 mn by March, 04
- Fixed lines grown by 3%, mobile telephones grown by 160% in the same period
- Tele-density touched 7.02 telephones/1000 people as on 31 March,04

International Comparison of Tele-density (2003)	
Countries	**Tele-density**
Australia	126.18
Bangladesh	1.56
Brazil	42.38
China	42.32
India	7.02*
Indonesia	9.17
Nepal	1.70
Pakistan	4.42
Sri Lanka	9.57
USA	116.43
UK	143.13
Source:ITU, Dec 03 , *India's teledensity as on 31 Mar,04	

- The Stepping Stones
  - The National Telecom Policy, 1994: aimed at achieving accelerated telecommunications growth and network expansion
  - The National Telecom Policy, 1999: a new telecom policy that led to private participation in a significant way
  - Calling Party Pays (CPP) Regime, 2003
  - The Interconnect Usage Charge (IUC) Regulation 2003: A level playing field in interconnection charges
  - Universal Service License
  - FDI limit increased from 49% to 74%
  - Universal Service Obligation fund set up as separate non-lapsable fund

Power

- The installed capacity has increased from 1,300 MW in 1947 to 114,000 MW in 2004
- Peak Demand: 84500 MW, Current Supply: 71,700 MW – a 15% Shortfall
- The increase in power supply is not keeping pace with the increase in demand
- Over the last decade, electricity consumption has increased at an average rate of 9-10% p.a. while, supply has increased by only 7%

The Singular Constraint	: The Health of SEBs
The Singular Detractor	: Enron/Dabhol Episode
The Ray of Hope	: The Electricity Act, 2003

- The Reforms
  - Accelerated Power Development Reform Programme (APDRP
  - The Electricity Act 2003:
    - Allows Private Sector Participation in Transmission and Distribution (T&D)
    - All State Electricity Boards have to be unbundled into functional entities before September 2004
    - Stipulates that subsidy has to be provided for in the state budget
    - Delicenses the generation of power
  - Improvement in public sector efficiency :
    - Existing generating plants
    - Transmission gains
    - Distribution efficiencies
    - Pricing
    - Recoveries : non-technical losses

Roads

- The Indian road network at 3.3 million km, is the third largest in the world:
  - National Highways constitute nearly 2 percent at 58,112 km
  - Rural Roads are 78 percent with 2.65 million km
  - State Highways form the rest
- The roads carry 85 percent of all passenger traffic and 70 percent of freight with nearly 40 percent of the total traffic moving on the national highways
- Nearly 25% of the National and State Highways are Congested
- At less than 1,000 km of paved roads per million people it is:
  - Below the average 10,000 km in industrialised countries, and
  - Below the 3,000-5,000 km in comparable developing economies
- In order to meet the additional requirement, the Government has initiated significant programs through PSP

The Road Development Programs

- The Government of India has taken several initiatives to expand the road network
  - The National Highway Development Project (NHDP)
    - Comprises the Golden Quadrilateral (GQ), the North South East West Corridors, Port Connectivity and Other Works
  - The Pradhan Mantri Bharat Jodo Pariyojana (PMBJP)
    - 10,000 Km of Roads Linking Major Cities to Highways
  - The Pradhan Mantri Gram Sadak Yojana (PMGSY)
    - Rural Roads
- Several States have initiated programs to expand the road network in their respective states

- The initiatives combine:
  - New Institutional Arrangements
  - International highway engineering standards
  - A sustainable revenue model comprising tolls and cess on fuel

Railways

- The Indian Railways (IR) is the second largest rail undertaking in the world with a total Length: 63122 Route km
  - Broad Gauge: 45622 Route km
  - Metre Gauge: 14316 Route km
  - Narrow Gauge: 3136 Route km
- The Rail Golden Quadrilateral (GQ) covers 16% of the network, but accounts for 65% of freight traffic and 55% of passenger traffic
- Freight (2003 – 04): 557.4 Million Tonnes
- Passengers (2003 – 04): 5112 Million
- Issues
  - Ageing Infrastructure
  - Declining Budgetary Support
  - A large Permanent Work Force
  - Loss of Share in the Freight Market

- The Reforms
  - Tariff Rebalancing and Rationalization of Fare and Freight Structures
  - The Ministry of Railways has launched National Rail Vikas Yojana (NRVY) to strengthen the GQ and to improve Port Connectivity
  - Rail Vikas Nigam Ltd (RVNL), an SPV has been created to facilitate PSP in railway projects
  - Private-Public Partnerships:
    - Pipavav Railway Corporation (for the development of Sundernagar – Pipavav Broad Gauge Line)
    - Hassan – Mangalore Rail Development Company (for gauge conversion)
    - Kutch Railway Company (for gauge conversion between Palanpur and Gandhidham)
  - The Indian Railways have created non-lapsable Special Railway Safety Fund (SRSF), to be invested over the next five years

Ports

- India has 160 operable ports along its 6,000km long coastline
  - 12 Major Ports: Account for 75% of the traffic
  - 139 Operable Minor Ports: Account for 25% of the traffic
- The productivity of Indian ports has improved with reduction in average pre-berth detention and lower turnaround time though its still low by international standards
- Cargo Handled
  - Dry and Liquid Bulk constitute 80% of the traffic
  - Containers constitute 20%, and growing at 15% over the last 5 years

- The Port Sector was opened to private participation in FY91 to increase capacity and to introduce modern management practices
- Major Ports have been permitted to form Joint Ventures with Foreign Ports, Minor Ports and Companies
- A number of State Governments have formed State Maritime Boards to address opportunities in the sector
- Up to 100% FDI under the automatic route permitted
- 10-year Tax Holiday for Investments in Ports
- Corporatisation of major Ports underway
- Ports are permitted to lease out existing assets
  - JNPT
  - Chennai Port
  - Cochin Port
- Greenfield Projects

Special Economic Zones

- SEZ are special duty-free enclaves designed to promote foreign investments in a range of economic activities, including manufacturing, trading, and financial services
- Units in SEZs enjoy several concessions, including duty waivers on imports, reimbursement of sales taxes paid on domestic purchases, and Income Tax breaks
- Salient features of SEZs in India
  - Import of capital goods and raw materials duty-free without the payment of terminal excise duty
  - Reimbursement of central sales tax paid on domestic purchases. No licence required for imports
  - 100% tax break/holiday for ten years up to 2010
  - 100% foreign ownership and investment automatically cleared in the manufacturing sector
  - Profits allowed to be repatriated freely without any dividend balancing requirement

- The GoI recognizes the importance of SEZs as engines to boost manufacturing, exports and employment.
- Bill to regulate SEZs is likely to be introduced shortly
- 100% Foreign Direct Investment in manufacturing, sector allowed through automatic route barring a few sectors
- Exemption from industrial licensing requirement for items reserved for SSI sector
- Job work on behalf of domestic exporters for direct export allowed
- In-principle approval has been granted to 13 SEZs. Currently the Navi Mumbai SEZ (NMSEZ) is under construction

Airports

- India has 450 airports that are managed by several government agencies like the defence services, the state governments, the Airports Authority of India (AAI) and the private sector
- The plan outlay for the sector has remained almost constant over the past four years
- The passenger traffic for the fiscal 2003-04:
  - Indira Gandhi International Airport:10.4 million (a growth of 13%)
  - Mumbai International Airport: 13.2 million (a growth of 8.3%)
- The absence of a Hub Airport

- The AAI was formed in 1995 by merging the International Airports Authority of India and National Airports Authority to accelerate the integrated development of airport facilities
- The Airports Authority of India Amendment Bill 2003 (AAIAB) provides the legal framework for private investment in new and existing airports. The Main Provisions of AAIB:
  - Private players in a joint venture with AAI can hold upto 90% equity in metro and 50% in non-metro airports
  - Maximum 49% foreign holding
  - Concession Agreement: 30 years. Provision for automatic renewal for another 30 years
  - Provision for the levy of an airport development fee on passengers to be used to upgrade or construct new airports

Urban Infrastructure

- India has the second largest urban system in the world after China
- Approximately 285 million people reside in urban areas contributing 60 percent to the national income
- There exist critical deficiencies in transportation system, water supply and sanitation
- Government's efforts to upgrade infrastructure will remain insufficient
- Amendments to the Constitution provide a framework for local bodies to induct PSPs to provide a range of services
- A number of projects are now being implemented on a PPP basis in the following areas:
  - Transport
  - Water
  - Sanitation
  - Environmental Infrastructure
  - Solid Waste Management

- Reform Process so far
  - First Generation Interventions
    - Legislative measures and guidelines
      - 74th CAA (1992) – Empowering local bodies
      - Establishment of State Finance Commissions
      - Urban Development Plans Formulation and Implementation
  - Second Generation Interventions Still Underway
    - Municipal Tax and Accounting Reforms
      - Some efforts through FIRE program underway in some States
    - Guidelines for Public Private Partnerships
    - Model Municipal Act
    - Proposed Guidelines for Regulatory Framework

- Economic and Financial Framework
  - Tax incentives
    - Ten year tax holiday during first 20 years
    - Income tax incentives for long term financing
    - Tax free municipal bonds
  - Fund Support
    - Infrastructure Equity Fund (Rs. 1000 cr.)
    - Urban Reform Incentive Fund - Rs. 500 cr. linked to reforms – partial disbursements made
    - City Challenge Fund – Grant facility (Rs. 500 cr. in 10th Plan)
    - Pooled Finance Development Scheme

Section III: Commercialization of Infrastructure Projects

Principles of Commercialisation

Cost Recovery

I Beneficiaries identifiable, benefits quantifiable

Direct Service Charge with/ without cross subsidy– water, electricity, public transport

II Beneficiaries identifiable, benefits not directly quantifiable

Indirect Service Charge (petrol cess)

III Beneficiaries not identifiable, benefits not quantifiable

Community Taxation - urban roads, street lighting

Examples of User Charges

Water Supply	*Registration charges, Connection charges, water tariff, water kiosks*
Sewerage	*Connection charges, sewerage cess, sale of sludge*
Roads, Flyovers, Bridges	*Toll tax, Lease of surplus land, advertising*
Airports, railway stations, bus terminals	*Surcharge on tickets, Lease of surplus land, user charges, advertising*

Principles of Commercialisation

Unbundling/ Packaging of Services

- Identify “service gap” areas
- Carve out commercially viable projects
  - To enable cost through direct service charge where possible
    - Free up state resources for alternative investments
    - Better maintenance of existing facilities
  - Attract private capital
  - Enable maintenance/ service contracts
    - Decrease overheads, increase operating efficiency

Examples of Unbundling

Urban Transport

- Development of urban mass transport systems
- O&M of urban mass transport systems
- Development and maintenance of terminals
- O&M of public transport systems
- Construction and maintenance of toll bridges
- Construction and maintenance of parking facilities

Water Supply

- Water resource management and development of source
- Treatment of water
- Distribution
- Billing and collection

Solid Waste Management

- Collection
- Separation and Treatment
- Distribution of by-products

Principles of Commercialisation

Forms of Private Sector Participation

- Service Contracts
- Management Contracts
- Lease
- Concession
- Divestiture

Allocation of Responsibilities

Option	Asset Ownership	O&M	Capital Investment	Commercial risk	Duration
Service Contract	Public	Public & Private.	Public	Public	1-2 yrs
Mgmt Contract	Public	Private	Public	Public	3-5 yrs
Lease	Public	Private	Public	Shared	8-15 yrs
Concession	Public	Private	Private	Private	Upto 30 yrs
Divestiture	Private Or Private & Public	Private	Private	Private	Indefinite

Section IV: Financing Infrastructure Projects

Characteristics of Infrastructure Projects

- High Capital Cost, relatively low operating cost
- Long gestation periods-require long term players ; whether lenders or investors
- Steady cash flows; generally low upsides
- Need for government support as most projects involve public – private partnerships

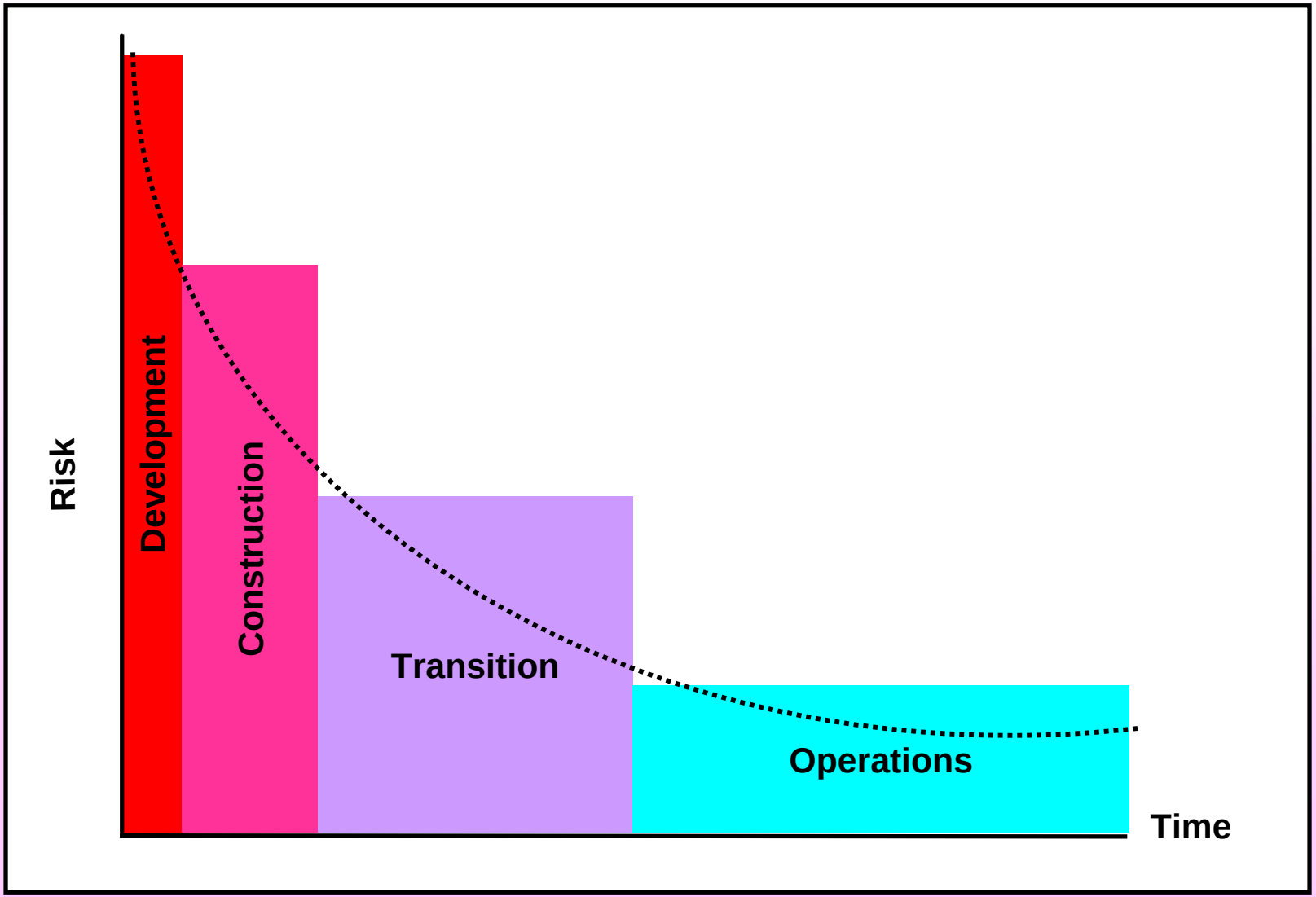
Financing Considerations

- Traditionally all infrastructure investments, and therefore risks have been undertaken/absorbed by the government
- In the recent past, financing and implementation of infrastructure projects has shifted to the Private domain
- However, long return horizons need long term players – both lenders and investors
- The Resource Mobilization has to meet the project expenditure profile
- Debt servicing has to match the cash flow profile
- Infrastructure Projects require special assessment skills and framework for risk management

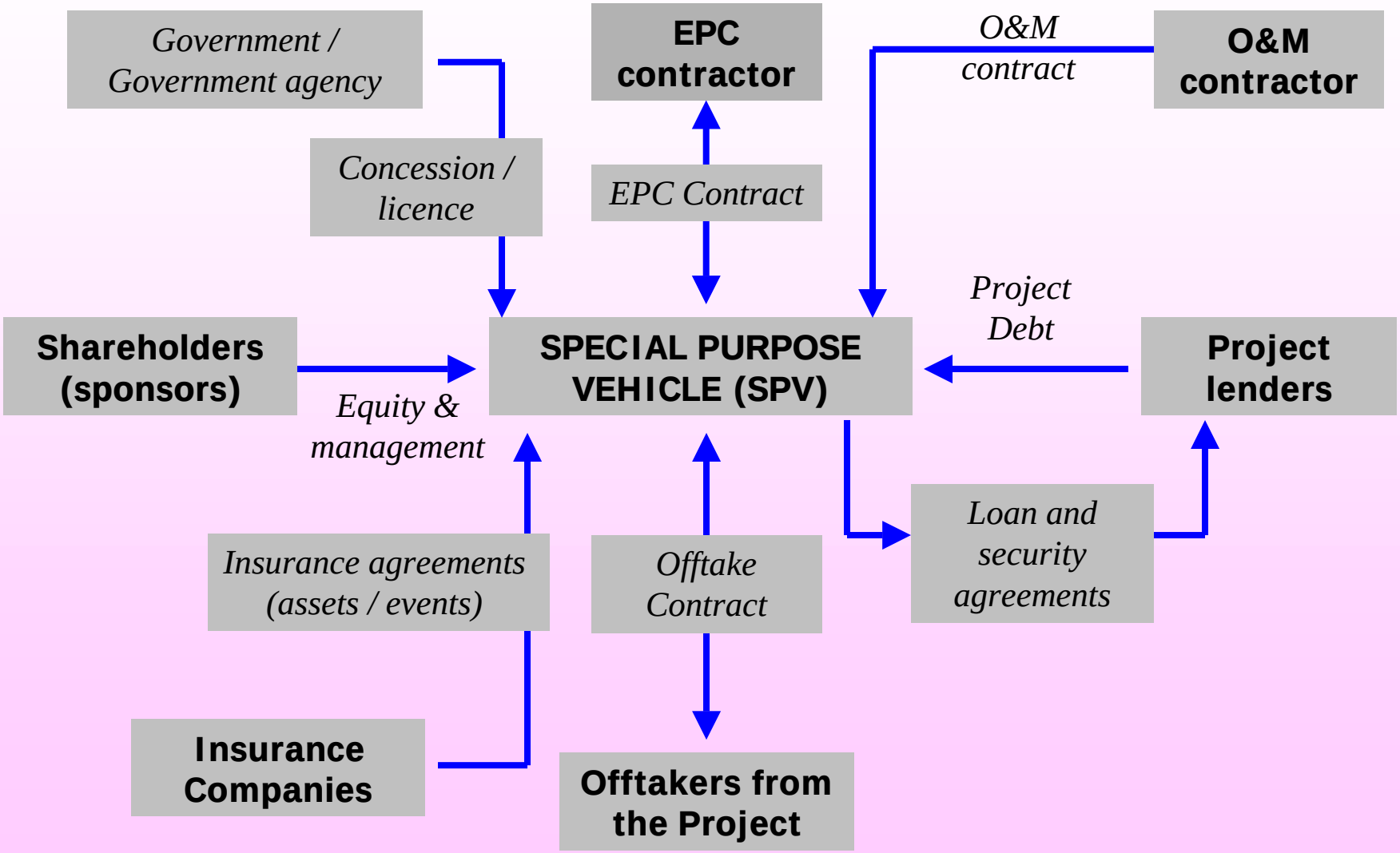
Risk Profile

- The Risk profile of infrastructure projects vary with the stage of the project cycle. These Risks include:
  - Political risk
  - Technological risk
  - Environment and social risk
  - Construction risk
  - Financing risk
  - Commercial risk
  - Other non-commercial risks (force majeure, forex)
- Development of institutional and financing strategies are closely linked to each phase of the project cycle

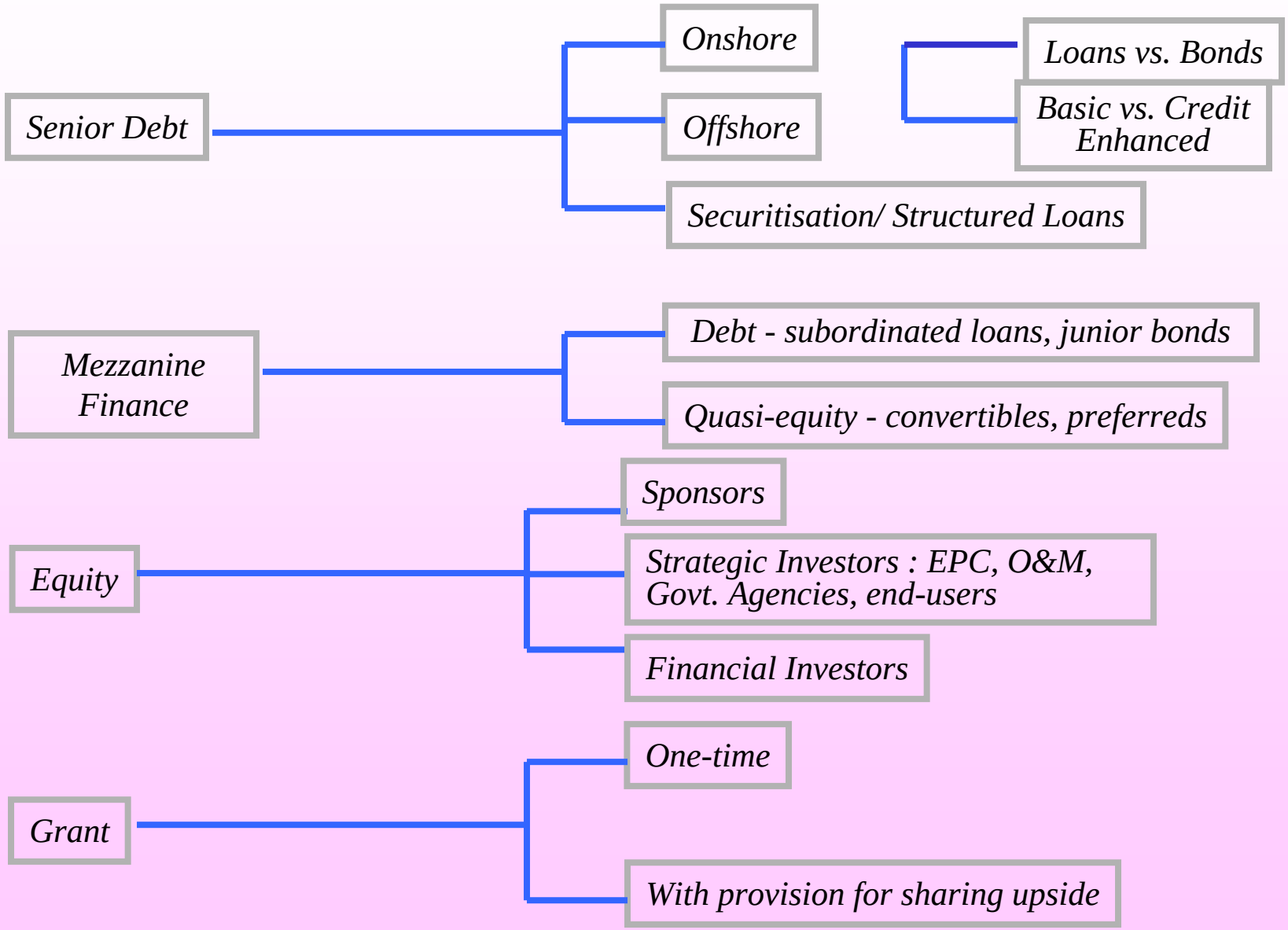
Risk Expectancy



Infrastructure Projects : Typical Structure



Project Financing Options



Section V: Project Financing

Types of Capital Available

- Equity
  - Ordinary
    - Sponsors
    - Contractors
    - Equity Funds
  - Preference
- Debentures / Bonds
- Convertible Debentures / Loan Stocks
- Bank Loans
- Subordinated Debt
- Government Export Credits
- Trade Credit
- Leases

At what Cost?

Equity

Capital Market Opportunities

- The Indian Capital Markets have as yet not been exposed to Companies, which are a pure infrastructure play
- Companies with pedigreed parentage and strong antecedents would pave the way for investors to share in the expected upside
- A Public Issue of securities while diversifying the shareholding would bring a sense of ownership among the users
  - The success of any project clearly hinges on the support from the local community and the major users
  - The IPO should be intensively marketed in the service area of the project
  - This would entail a wide retail shareholding and ensuing liquidity for the stock

Institutional Investor Interest

- The SPV may be structured in a format to leverage its value created
  - As its corporate objective establish additional infrastructure in the area either by itself or through affiliates / subsidiaries
- A business model on these lines would position the SPV as a holding Company with a diverse basket of projects within its fold.
- Valuations would be on the basis of the
  - Individual valuations of the businesses
  - The respective share of the businesses in the holding company
- There has been an acceptance of the holding company concept amongst large institutional equity investors
  - Larger values emanating from significant chunks of a diversified business model rather than individual chunks in those businesses.
- This would attract institutional shareholders at the time of the IPO and post listing

Regulatory Issues

- As per the extant SEBI Guidelines, infrastructure companies are not restricted on the extent of dilution or the mode of Issuance
  - Can dilute upto a minimum of 10 %
  - Can use the Book Built or Fixed Price mode of Issuance
- Infrastructure Company is defined as
  - whose project has been appraised by a Public Financial Institution or Infrastructure Development Finance Corporation (IDFC) or Infrastructure Leasing and Financing Services Ltd. (IL&FS) and
  - not less than 5% of the project cost is financed by any of the institutions referred above, jointly or severally, irrespective of whether they appraise the project or not, by way of loan or subscription to equity or a combination of both.

Debt Funding

Term Lending

- Term Lending would typically be on commercial Terms and a Project Recourse basis
- The following is a security package normally required by lenders
  - Debt Service Reserve Account
    - Equivalent to six months debt servicing
  - Concession rights assigned to lenders
    - Lenders can step-in to cure event of default within a period of 90 days
    - After 90 days lenders can appoint substitute entity as concessionaire
  - Pari-passu first charge on all fixed assets and revenues
  - Comprehensive insurance package to cover all risks during construction period,.third party liability and business interruption. Lenders will be designated as 'Loss payees'
  - Appointment of Security Trustees to safeguard Lenders security interest
  - Appointment of Trust and Retention Agent to monitor cash inflows and outflows of the Project

Debt Market Instruments

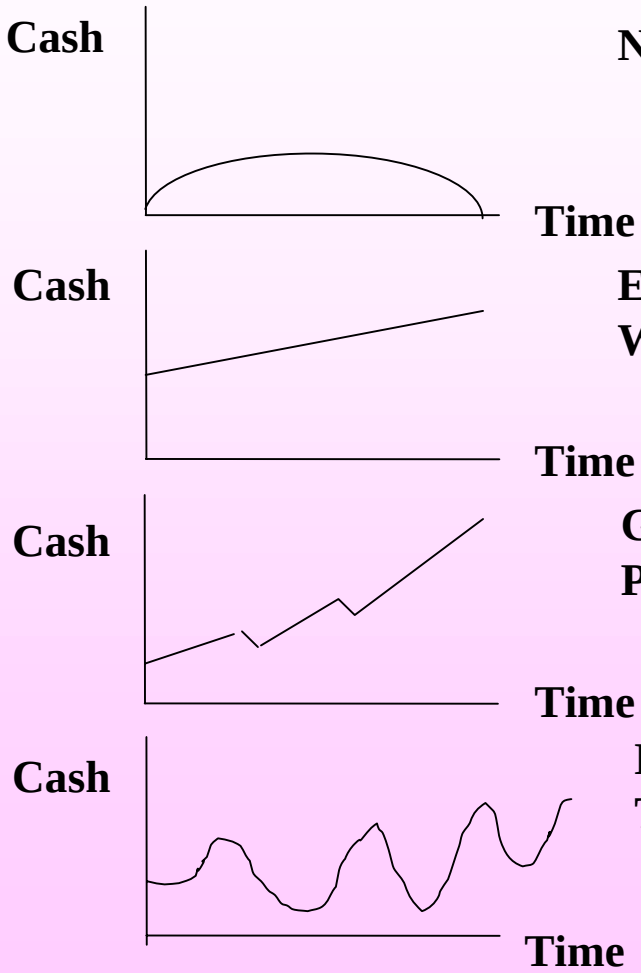
- Long tenor debt instruments Issued either through a Private Placement or Public Issue route
- Debentures / Bonds / Preference shares may be issued which are
  - Partly / Fully / Optionally Convertible or Non Convertible
- Extant SEBI Guidelines for Public Issue of Debt stipulate the following
  - Requirement of credit rating
  - Requirement in respect of Debenture Trustee
  - Creation of Debenture Redemption Reserves(DRR)
  - Distribution of Dividends with approval of the trustees
  - Redemption as per Terms defined in the offer document.
  - (Disclosure and) Creation of Charge
  - Filing of letter of option (for Convertibles)
  - Additional Disclosures as may be specified

Multilateral Funding

- World Bank provides Financing for both Public and Private Sector projects with a guarantee of the host government
  - Direct Loans or Guarantees to Lenders
  - Through International Bank for Reconstruction and Development (IBRD) to middle income countries at market lending rates
  - Through International Development Association (IDA) at concessional rates and long maturities to poorer countries
- International Finance Corporation (IFC) provides and syndicates loans and makes equity / Quasi equity investments
  - No Government Guarantee required
- The Multilateral Investment Guarantee Agency (**MIGA**) provides political risk insurance
  - under contracts of guarantee for foreign equity and related debt investments

Credit Rating / Enhancement

Project Cash Flow Profiles



New Oil Exploration

Existing Regulated Utility (Eg. Water)

Greenfield Manufacturing Project

Existing Cyclical Commodity Type Product Producer

Project Related Loans Key Risks for the Lenders

COMPLETION
- Will it Work
- Within Budget
- On Time

CASH FLOW
- Product Price
- Market Conditions (Demand)
- Operating Case
- Disruption

POLITICAL
- Expropriation
- Fiscal
- Government Interference in Operations

Risk Assessment Chronology / Issues

- Assessment of key risks: what are key risks; are they acceptable
- Who are the participants; what are their objectives and are they compatible?
- What are the key operating assumptions
- Sensitising the key operating assumptions: is the project viable under any likely set of operating conditions
- How is the project to be financed
  - Debt: Cash flow coverage; which banks; priority amongst lenders
  - Equity: IRR - comparison with cost of capital
- Legal structuring
  - Detailed provisions of financing
  - Project contracts
  - Financing and operating agreements
  - Financial / operating covenants
  - Monitoring arrangements
  - Inter creditor agreements
  - Shareholder documentation
  - Security structure

Credit Rating Methodology

- Common Parameters considered in a rating exercise of Infrastructure Projects
  - Economic base of the service area
  - Regulatory Framework
    - Evaluation of Project Documents
  - Management Evaluation
  - Demand Analysis
  - Credit Assessment of Purchaser of services
  - Project Implementation Risk
  - Operating Risk
  - Financial Structure
  - Credit Enhancements

The Rating Agency analyses each of the above factors and their linkages to arrive at the overall assessment of credit quality

Credit Enhancement Techniques

- Credit enhancement measures can have a beneficial impact on the project's stand alone credit quality
- It adds strength to the debt servicing ability
- Such provisions may take various forms
  - guarantees
  - standby facilities
  - limited recourse to the Promoter / Issuer's assets
  - escrowing of receivables (either from the project or other businesses) to be used for the specific purpose debt servicing
- These measures have the ability to reduce credit risk of the Promoter / Issuer and improve its stand alone rating

Risk Minimising Techniques

- New Technology
  - Increased Equity and / or Guarantees from Sponsors
- Political Risk
  - Insurance (limited)
  - Composition of Project Consortium (Deterrent)
  - Composition of Financing Group (Deterrent)
- Before Completion
  - Insurance (Limited)
  - Performance Bonds
  - Completion Guarantees (Small Companies?)
  - Fixed Price Construction Contracts

- After Completion
  - Sales Contracts (if available)
  - Loss of Income Insurance (Limited)
  - Non-payment Insurance
- Project Complexity
  - Increased Equity and/or Guarantees from Sponsors
- Management
  - Increased Equity
- Financial Management
  - Currency + Interest Rate Hedging
  - Derivatives

Third Party Credit Support

- Comfort Letter
- Guarantees
- Indemnities
- Insurance Policies
- Contract Bonds
- Offtake Agreements
- Put Options
- Repurchase Arrangements
- Subordination Agreements
- Cost Overrun Agreements
- Partly Paid Share Capital
- Margin Arrangements

Securitisation

Conventional Lending

Borrower

CREDIT EVALUATION

- Rating of the Borrower
- Unencumbered assets
- Debt/Equity Ratio, DSCR,
- Asset Cover, Interest cover
- Balance Sheet/ P&L strength

Loan

TERMS FOR LENDING

- Interest Rate commensurate with Rating of Borrower
- Loan secured by land, building, plant/ equipment,current assets
- Standardised repayment terms

Lender

Agglomeration of project and operating risk - participation of a multiple lenders

Raising Resources through Securitisation

Borrower/Originator of Cash Flows

CREDIT EVALUATION

- Assured cash flows arising out of unencumbered or superior assets

Tradeable Security

TERMS FOR LENDING

- Lower costs - enhanced rating through assured cash flows
- Repayment mechanism

Lender/Investors -Right to Cash flows

Securitisation works on the principle of unbundling cash flows - Customising risk and Evolving Superior credit structure

What can Securitisation achieve for Infrastructure Financing?

- Conventional financing pattern
  - Driven by credit extended in the form of non-tradeable loans
  - Project risk compensated by high cost of debt
  - Sponsor comfort and “right” to project cash flows - Key driver
- Securitisation - Benefits/Advantages
  - Disseminate risk by identifying risk parameters
    - *Allocate cash flows to lenders/investors*
    - *Leverage on structure of infrastructure projects - Quasi Government risk*
  - Lending driven by Credit Rating of Structure rather than overall project risk
  - Participation of a large number of investors
    - *Tradeability of loans - Participation /Pass thru Certificates*
  - Resultant reduction in cost of capital for infrastructure projects

Facilitate resource raising through tradeable instruments - Municipal bonds/PTCs widely used in International markets

Thank you