

Paradigm shift in financing Railway projects

10 AUGUST 2016

The 1st steps are equally relevant today....



Above : The first railway train on the East Indian Railway. (Reproduced by courtesy of 'The Illustrated London News').

17th August 1849, contract was signed between **East India Company & East Indian Railway Company** for construction " of a line of Railway from Calcutta towards the Upper Provinces," under the famous 'Guarantee System'.

- East Indian Railway Company should pay into Treasury of East India Company, **£1,000,000**.
- the East India Company should select the route and direction of a line of railwayto be completed by the Railway Company, and opened for **the conveyance of passengers and goods** with all practicable speed.
- the East India Company should provide the **land** required for the railway and for stations, offices
- Railway Company should charge **fares** as should be approved by East India Company.

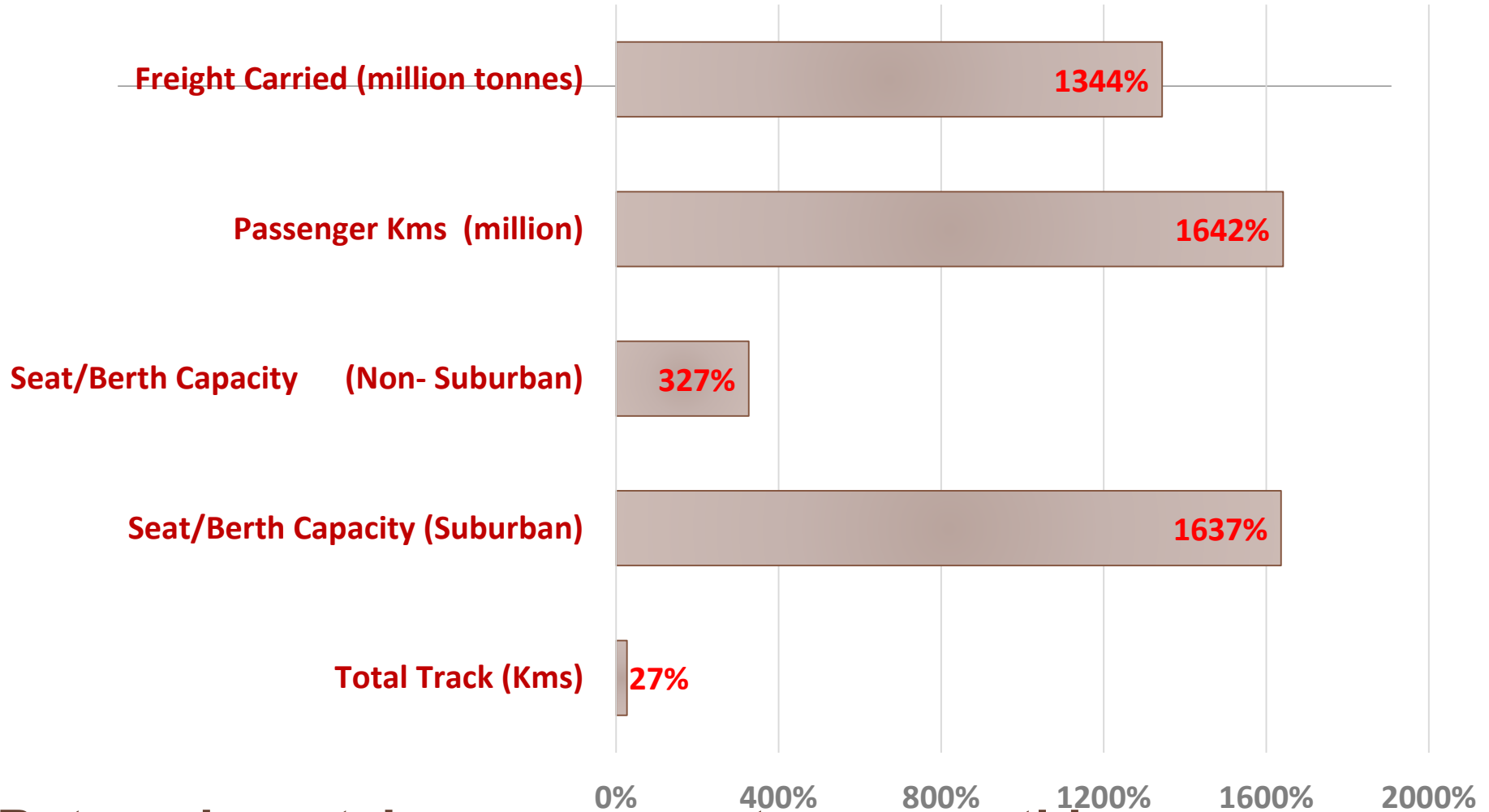
The 1st steps are equally relevant today....

- East India Company to pay the Railway Company interest at the rate of 5 % p.a. on the £1,000,000 paid to the East India Company....
- the railway become the property of the East India Company after **99 years**, the engines, carriages, stock, machines, and plant being paid for at a valuation.
- The railway also had the right to surrender the line to the East India Company and the East India Company had a right of purchase on certain conditions, at any time within six months after the expiration of the **first twenty-five years**.
- Another agreement was signed with the Great Indian peninsular Railway on 17th August, 1849 with the same terms and conditions

Since this spurt of development in pre-independence era, we have not expanded.....

Under-investment has been our bane

% Variation 1950-51 & 2013-14



But, we have taken measures to reverse this.....

IR 2020

- Reserved accommodation on trains available on demand
 - Time tabled freight trains
 - High end technology for safety
 - Elimination of unmanned level crossings
 - Punctuality @ 95%
 - Speed of freight trains @50kmph & Mail/Express trains @ 80 kmph
 - Semi-high speed trains along the golden quadrilateral
 - Zero direct discharge of human waste
- ***Focus on Railway development as growth of the country dependent on growth in Railways – economy cannot grow if the carrying capacity is not available in the system***

We have built a strong fleet of sanctioned projects to meet our 5 year investment target

5 year investment target – unveiled in 2015-16

Rs Crore

8,56,000

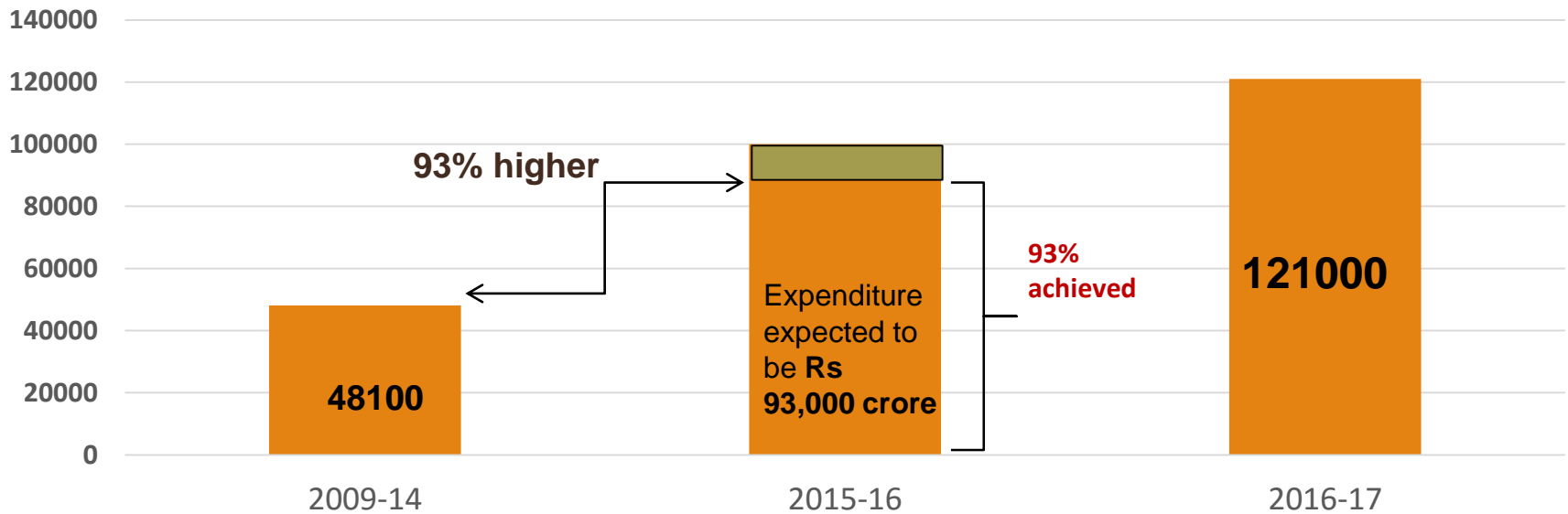
Approved investment plan as of today

Rs Crore

▪ Capital expenditure in 2015-16	▪ 1,00,000
▪ Balance cost of ongoing 'Network Decongestion and Capacity Augmentation'	▪ 2,35,000
▪ New capacity augmentation and electrification works sanctioned in 2016-17	▪ 35,000
▪ Rolling Stock Procurement 2016-17	▪ 20,000
▪ PPP and Partnership projects	▪ 90,000
▪ Dedicated Freight Corridor – Eastern and Western	▪ 50,000
▪ High speed railways	▪ 10,000
▪ Total	▪ 5,40,000

We have increased capital expenditure significantly

Capex Investment in Rail Sector (Rs. Crore)



For the first time, assured availability of funds for projects to ensure timely completion

Rs. 1.5 lakh crore funds available from LIC; increased funds through partnerships and PPP; in the process of setting up a fund, with World Bank as anchor lender

Project execution



Substantially increased the average kms Broad Gauge lines commissioned per day

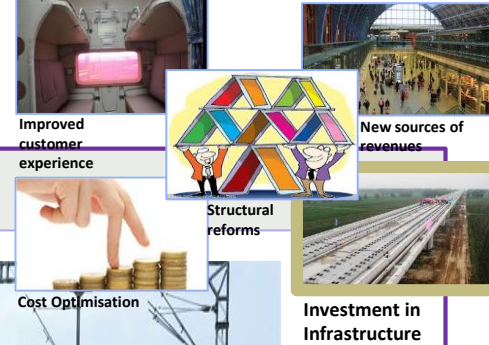
*Increased to about **7 kms/day** from an average of 4.3 kms/day over the last six years; will increase to about **13 kms /day in 2017-18 & 19 kms/day in 2018-19***



Electrification increased substantially

*Increased from 1100 kms per year during 2009-14 to **1600 kms in 2015-16 and 1800 kms in 2016-17***

*More than **10,000 kms** to be electrified during 2015-19*



Improved customer experience

New sources of revenues

Structural reforms

Cost Optimisation

Investment in Infrastructure

Project execution (contd.)



Loco factories at Madhepura & Marhowra bid after 7 yrs

Significant part of equity expected through FDI

Order book of Rs. 40,000 crore

Train sets to be procured through a similar process

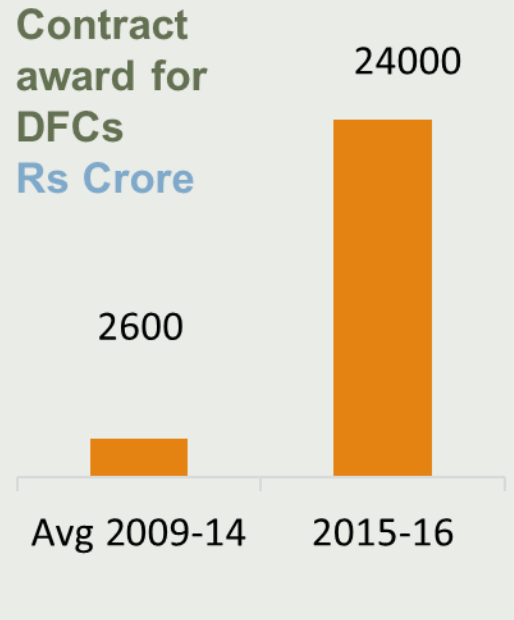
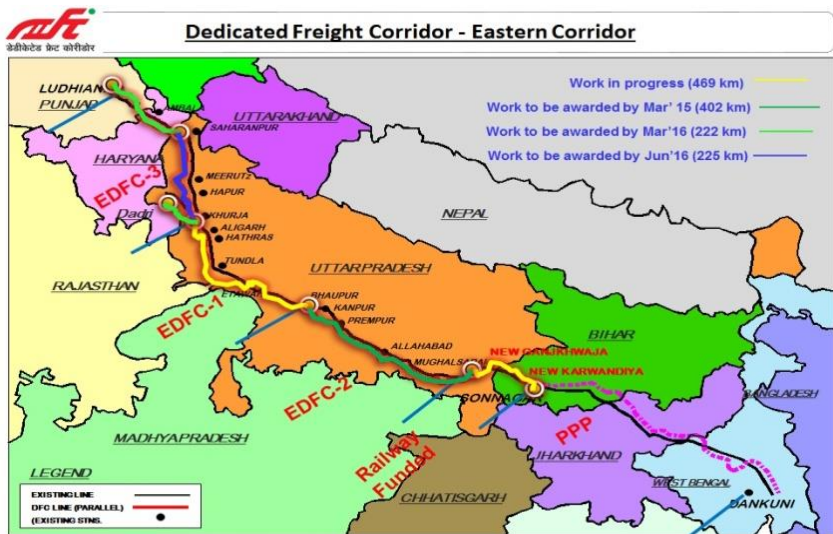
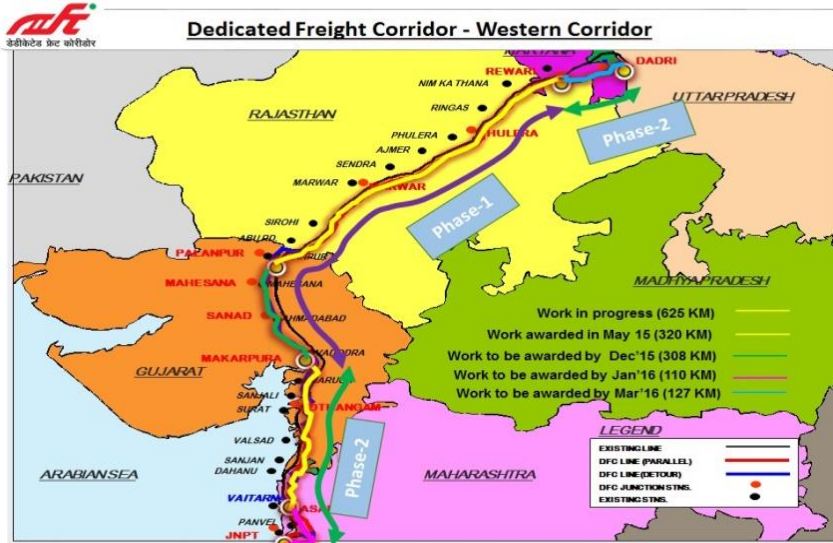


Connectivity to North East, J&K and Naxal-affected areas

All

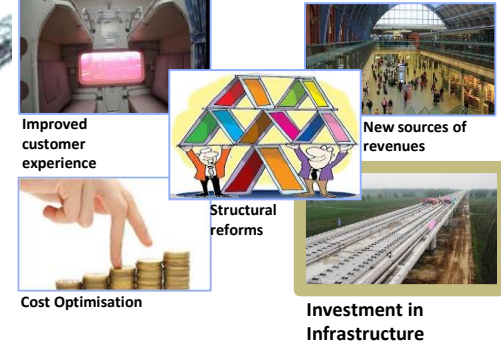
Capital cities in North East to be connected by Broad Gauge by 2020

Dedicated Freight Corridor project has picked momentum



- Majority of contracts will be awarded in next few months
- Target for commissioning – 2019
- Feasibility studies for 3 new DFCs completed – **To be implemented through alternate modes of financing**

Travel into the future: High Speed Era

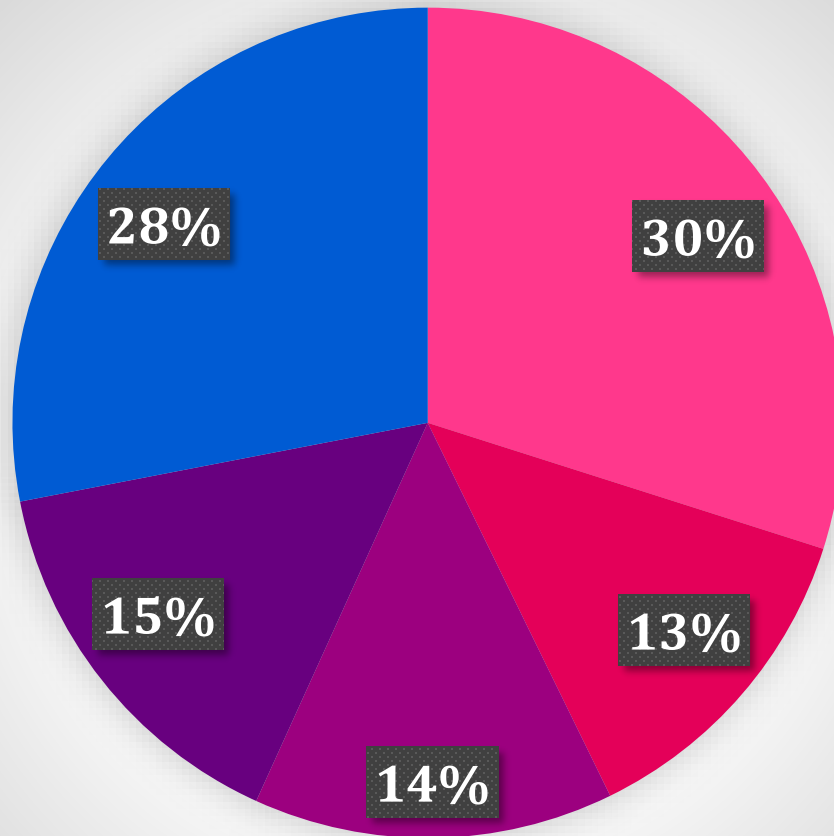


- Bullet train -Mumbai to Ahmedabad; speed @ 350kmph
- Cost: USD 15.4 bn
- Financial & technical partner – Government of Japan
- Construction period 2017-2023
- New SPV registered
- Future studies: Delhi- Nagpur proposed by Govt of China; Mumbai-Kolkata by Govt of Spain, Delhi – Mumbai, Mumbai-Chennai, Delhi-Kolkata
- **Semi – high speed corridors:** Delhi- Agra (implemented), studies: Delhi-Chandigarh (France), Chennai-Bangalore–Mysore (China), Delhi-Mumbai (Korea), Delhi-Kanpur, Nagpur-Bilaspur, Mumbai-Goa, Mumbai-Ahmedabad, Chennai-Hyderabad, Nagpur-Secunderabad

Financing projects

INSTITUTIONAL FINANCING

Five year Fund requirement (tentative)



■ GBS ■ INTERNAL GENERATION ■ STATE JVs ■ PPP ■ DEBT

(Rs. in lakh crore)	
Gross Budgetary Support	2.56
Internal generation	1.00
JVs/ cost sharing	1.20
PPP	1.30
Debt	2.50
<i>Rolling stock lease</i>	<i>1.00</i>
<i>Institutional financing</i>	<i>1.50</i>
Total	8.56

Sourcing Funds – a snapshot

- Gross Budgetary Support
-
- Institutional financing: LIC – loan agreement effectuated
 - JVs: Projects worth Rs. 1 lakh crore expected to be executed through JVs with State Governments; 17 states committed & 8 signed MOU with IR and 3 JV agreements signed
 - Market debt: Taxable/Tax free bonds (Rs. 9500 crore in 2015-16)
 - Multilateral/bilateral agencies – WB, ADB, AIIB
 - Implementation of projects through Railway PSUs
 - Station Development
 - CSR & MPLAD funds for passenger amenities and cleanliness & waste management

Financing the Plan 2016-17

	Rs. in crore
Gross Budgetary Support from Finance Ministry	34220
Safety Fund	10780
Capital fund to meet lease charges	7000
Depreciation Reserve Fund	7160
Development Fund	2515
Bonds by IRFC for Rolling Stock	20000
Extra Budgetary Resources/Institutional Financing (LIC)	20985
Partnerships	18340
Total	121000

37% budgetary resources, 14% internal generation, 49% extra-budgetary resources

Institutional financing

Why Institutional financing

- Convert vicious cycle of under-investment to a virtual cycle of revenue generation and higher investment
- Leverage conventional sources of fund to finance projects through institutional debt
- Low cost, long term financing
- Serviced through enhanced revenue generation
- Will be able to access funds through
 - Multilateral development funds, NBFCs, Insurance companies, Infrastructure funds, Sovereign wealth funds, Investment trusts

Implications

Assured availability of funds for projects taken up for financing through institutional financing

Funds do not lapse at the end of financial year

Loan repayment capability – the assumptions

- Prioritised projects essentially doubling projects with a few other projects of electrification, new lines, etc, hence, revenue generating projects
- Large number of ports being expanded & developed
- For meeting the liability of loan repayment, incremental traffic of about 360 MT over & above the normal flow will have to be carried by 2025-26
- The proposed works would have been completed in five years time, hence, higher traffic than the usual flow should materialise to repay the loan

Prerequisites for financing through EBR/IF

- Robust appraisal of projects
- Selection of projects which are clear for drawal of funds; unutilised funds would be a drain on Railway finances
- Realistic assessment of fund requirement
- Timely completion of projects leading to timely generation of revenues for repayment

Intensive monitoring required to avoid slippages

LIC Financing Facility

March 11, 2015 – MOR signed MOU with LIC of India for extending a financing assistance of Rs. 1.5 lakh crore for the next five years; Rs. 10,000 crore drawn

- rate of interest : 30bps above the 10-year benchmark yield
- funds would be drawn in tranches, as per requirement
- tenor of the facility would be 30 years
- MOR owned entities can draw funds available under this facility
- LIC will invest in bonds issued by IR companies such as IRFC
- Moratorium:
 - on interest and principal payment for first 5 years; interest to be capitalized
 - year 6 to year 10 interest liability to be met; year 11 to year 30 repayment of principal and interest in equated half yearly instalments, i.e. 40 instalments

Which projects to finance through EBR/IF: Decisions taken in Board meeting on 10.09.2016

- 118 projects listed out under Annex II (excluding 15 projects listed for financing through PPP and State JVs and works under Traffic Facility, Track Renewal, Bridges, S&T and Workshops) and 21 projects identified under Annex III of the EDs report on project prioritisation would qualify for EBR/IF funding subject to:
 - Completion period within 5 years
 - Balance amount for completion to be provided through EBR/IF; assured funding to be made available
 - ROR may not be recalculated since ongoing works critical for decongestion
 - Works added on as MM but have no relevance to throughput enhancement should not be funded through EBR/IF
 - Committee of AMs to hold meetings with Zonal Railway to assess project preparedness, working out completion costs and fund requirement
 - Each project to be approved by Board for EBR/IF funding
 - Funds should be marked in each year's budget to meet eventual debt servicing liability of EBR/IF

Funds allotted for 50 works after assessment by AMs committee

Need for review of Board decision

- Due to reduction in GBS by Rs.8,000 crore, entire doubling (barring a few) and RE projects plus a few others, totalling to Rs.9,584 crore shifted to EBR/IF in RE 2015-16 (incl. projects with ROR below 14%).
- To meet the investment target for 2015-16, fund availability needed to be ensured
- Principles adopted for selecting projects needed to continue in subsequent years
- Land and equity funding through EBR/IF needed to be settled
- Apart from Doubling and Electrification, the criteria for funding other works through EBR/I needed to be settled.

MOF circular on RoR

*'13.0 Only those projects with a financial rate of return and an economic internal rate of return both **equal to or exceeding 12%** should be posed to the PIB for its consideration. In those cases where either the financial rate of return or the economic internal rate of return is over 12%, but the other one falls short of the norm, and the administrative ministry still considers it essential that the project should be taken up for implementation, the reasons therefor should be gone into in detail at the pre-PIB meetings and also set out in the memorandum for the PIB. PIB shall consider such cases only in exceptional circumstances and that too only if the projects are in the core sector. Under no circumstances shall projects with both the financial and economic internal rates of return falling below 12% are to be considered by the PIB. In the case of projects, in which institutional financing is contemplated, the appraisal report of the financial institutions should also be submitted along with the PIB proposals so that it is available before the PIB at the time of consideration of the proposal. Project Appraisal and Management Division (PAMD) of Planning Commission shall, in the appraisal, carry out a "Sensitivity Analysis" of the Internal Rate of Return (IRR) for different levels of time and cost overruns. In respect of Undertakings, which have implemented and/or are implementing Projects, one of the points in the Sensitivity Analysis shall be the "average" delay noticed in the implementation of projects by the undertakings.'*

The RoR debate

- Prior to August 1990, cut-off/hurdle rate was fixed at 10%
- Revised to 12%
- In 1992 following was considered:
 - Plan size was cut down
 - Increase in costs due to deregulation of steel & procurement of foreign exchange at market rates
 - Works which are *genuinely remunerative* should be included in the Budget
 - Lease rentals on IRFC borrowings may have to be revised upwards
 - MOF pressing for increase in dividend rate
- Cut-off rate was revised to 14%

Proposal by SBICAPS for assessing bankability of projects

Ratio	To be compared with	Criteria for Investment
Project IRR	Weighted Average Cost of Capital (WACC)	Project IRR > WACC
Equity IRR	Hurdle Rate	Equity IRR > Hurdle Rate
Average Debt Service Coverage Ratio (DSCR)	Basic Level (say 1.50)	Average DSCR > Basic Level

Board Decision – March 8, 2016

- Hurdle rate for project sanction fixed at 12% based on MOF circular
- All works of DL & RE be funded from EBR-IF excluding –
 - Works with land, environment issues to be financed out of capital till these issues are resolved.
 - MM in the form of GC & new line works added on to doubling works unless specifically approved by Board
 - Equity investments including Pass Through Assistance (PTA)
 - Cost of land acquisition
 - Charged expenditure

Board Decision – March 8, 2016 (contd.)

- AMs' Committee (AM/Works, Electrical, Planning & Finance) to monitor physical & financial progress of works funded by EBR-IF:
 - Sign MOUs with GMs, fix physical & financial targets based on BE 2016-17.
 - Draw up action plan for completion of projects by 2019.
 - Slippages to be brought up to Board along with remedial action monthly
 - Report to be put up to Board with suggestions to improve pace of work
- EPC mode of contracting to be adopted for EBR-IF works
- Works under other Plan Heads like TF above hurdle ROR and with leasable assets be considered by AMs Committee.

Board Decision – March 8, 2016 (contd.)

- AMs' Committee (AMs/Finance, Mech, Traffic, Elec & Stores) to consider issues related to financing of rolling stock so that similar principles adopted for financing projects and rolling stock through market borrowings.
- Action Plan for reaching loading target of 1.65 billion tonnes by 2020 and increasing non-fare revenue by a CAGR of 30%
- Action plan for crowding in investment from private sector.

Financing projects

MULTILATERAL/BILATERAL ASSISTANCE

Financing DFC

WB & JICA loans for DFC

World Bank

- committed USD 2.725 bn (INR 17,712 cr @ 1 USD = INR 65) loan for Eastern DFC
- 1st loan through MOR Budget to DFC, rest direct to DFCCIL
- loans on back to back terms
- interest @ 40bps above LIBOR, spread varies depending on WB cost of funds; Involves currency fluctuation risk

JICA

- JICA loan JPY 646 billion (incl for procurement of locos)(Rs. 34,880 cr @ 1JPY = INR 0.54)
- Flows through GBS, Interest liability @7% p.a. & moratorium of 10 years; No currency fluctuation risk

Station redevelopment through PPP

- ***Scheme approved by the Union Cabinet***
 - Developing *over 400 stations* to international standards with modern facilities & passenger amenities on lines of PPP airports
 - Land and space-rights of station buildings to be leveraged
 - To seek participation of private entities
 - Over Rs. 1 lakh crore of investment expected in next four years
- Technology collaboration with foreign railways for development of world class terminals

Rolling stock

IRFC Funding

- IRFC borrowing arm of Indian Railways
- Leases assets to MOR
- Borrowing targets provided in the Budget
- Charges a margin of 0.5% over the average borrowing rate in a year
- IRFC owns rolling stock valuing Rs. 1,23,000 crore

Rail India Development Fund (RIDF)

- Fund proposed to set up with World Bank assistance
- Independent of Railway Budget
- Initial Railway & World Bank contributions
- Sovereign wealth funds and pension funds to be tapped
- Independent management
- Projects capable of repaying debt to be financed including PPPs
- Currently feasibility study being undertaken by World Bank

Financing infrastructure

PRIVATE PARTICIPATION – PPP, FDI, ETC

FDI in Rail Sector

FDI is recently permitted in construction, operation and maintenance of the following:

- Suburban corridor projects through PPP.
- High speed train projects
- Dedicated freight lines.
- Rolling stock including train sets and locomotives/coaches manufacturing and maintenance facilities.
- Railway Electrification.
- Signaling systems.
- Freight terminals.
- Passenger terminals.
- Infrastructure in industrial park pertaining to railway line/sidings including electrified railway lines and connectivity to main railway line.
- MRTS.

Rail Connectivity/Capacity Augmentation

Participative Policy 2012 with five different models

- Non Governmental Private line model
- JV model
- BOT through competitive bidding
- Capacity Augmentation through Customer funding
- Capacity Augmentation through – Annuity model

Cost sharing

JOINT VENTURES

State JVs

- Proposed with 17 States
- IR to have upto 50% share
- Viable projects to be taken up
- Unviable projects to be provided grant/free land by State Government to make it viable
- projects to be executed through SPVs
- Land to be owned by SPVs
- To be governed through a concession agreement

We are working on.....

- Setting up RIDF
- Setting up a holding company for all Railway PSUs
- Signing JVs with State Governments
- Station redevelopment through PPP
- High Speed Rail financing through JBIC

Thank you

