



RAILWAYS

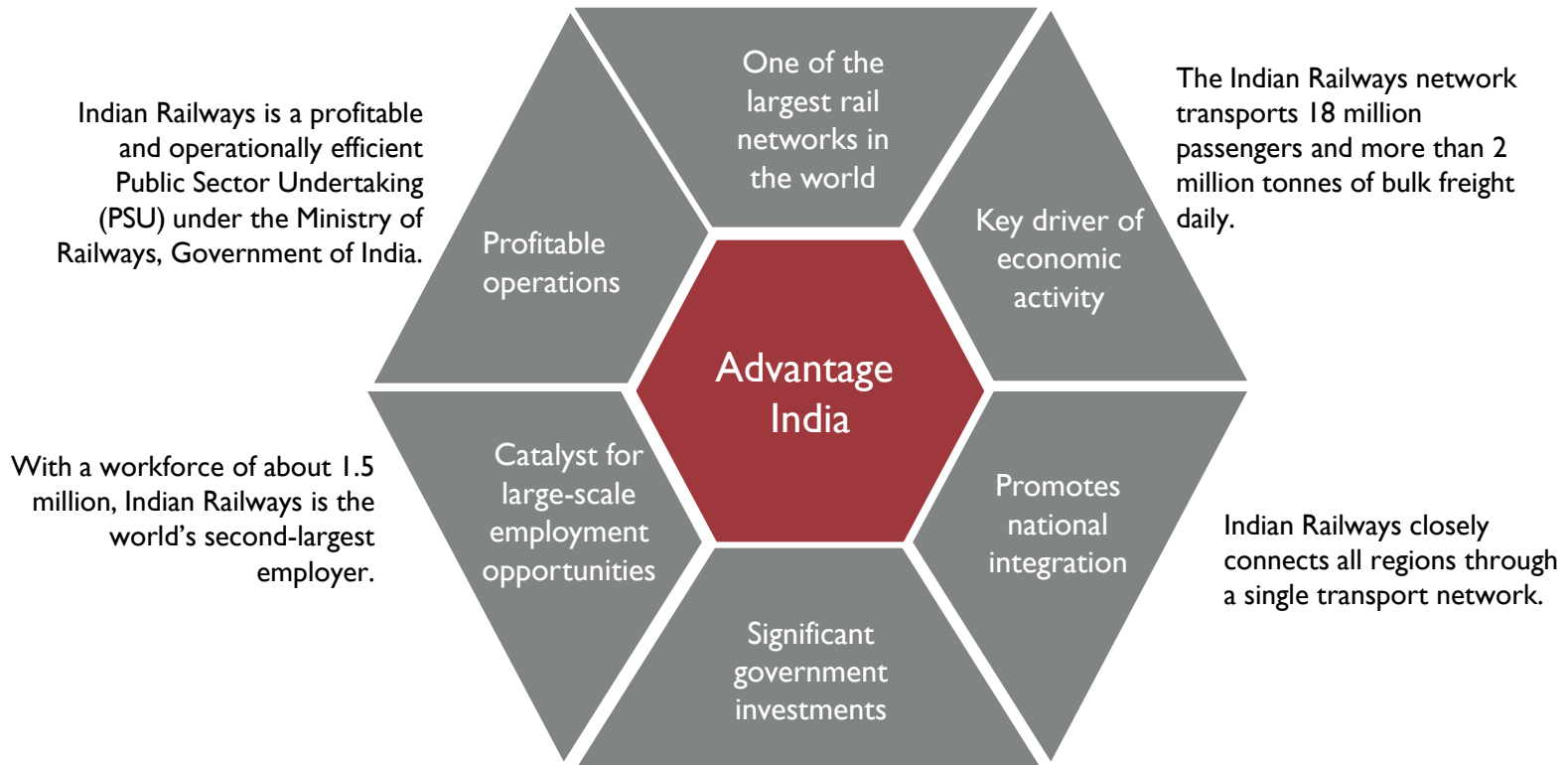
April 2010

Contents

- ❖ **Advantage India**
- ❖ Market overview
- ❖ Industry Infrastructure
- ❖ Investments
- ❖ Regulatory framework
- ❖ Opportunities
- ❖ Industry associations

Advantage India

Indian Railways is the world's fourth-largest rail network, with a total track length of nearly 64,000 km.



The Indian Government is planning significant investments for the modernisation and development of India's rail infrastructure.

Contents

- ❖ Advantage India
- ❖ **Market overview**
- ❖ Industry Infrastructure
- ❖ Investments
- ❖ Regulatory framework
- ❖ Opportunities
- ❖ Industry associations

Market overview

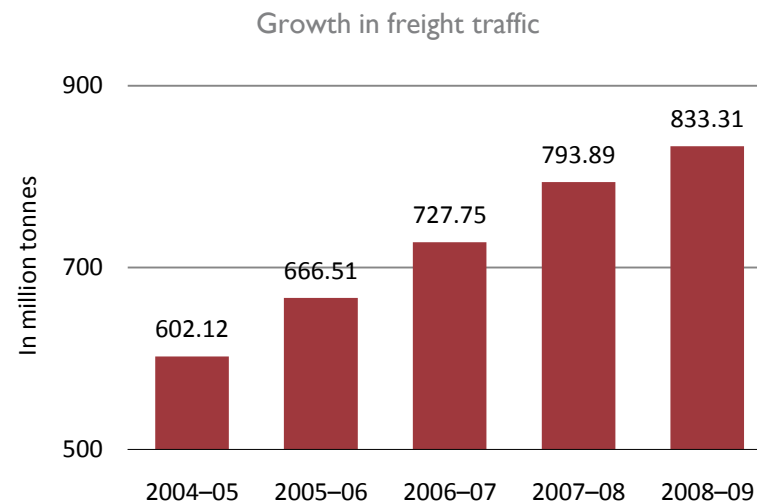
- With a presence spanning more than 150 years, Indian Railways has played an integral role in the development of India’s industrial and economic landscape.
- In terms of route length, India’s rail network is the fourth largest in the world.
- Indian Railways has a total network of about 64,000 km (route km), spread across 8,000 stations.
- Indian Railways possesses 225,000 wagons, 45,000 coaches and 8,300 locomotives and operates more than 18,000 trains daily.
- Indian Railways accounts for 2.3 per cent of the country’s GDP.

Comparison of rail network with other countries		
Countries	Network length (km)	Number of employees
United States	226,706	187,000
Russia	84,158	11,28,000
China	63,637	20,67,000
India	63,327	14,06,000
Canada	57,042	34,000
Germany	33,897	2,31,000
France	29,488	1,66,000
South Africa	24,487	36,000
Japan	20,050	1,32,000
Australia	9,639	13,000

Source: “White paper on Indian Railways, December 2009, Indian Railways website, http://www.indianrailways.gov.in/DEPTTS/planning/Whitepaper/White%20Paper_Eng_SUBMITTED%20To%20Parliament.pdf, accessed 24 January 2010.

Market overview — performance of freight and passenger traffic ... (1/2)

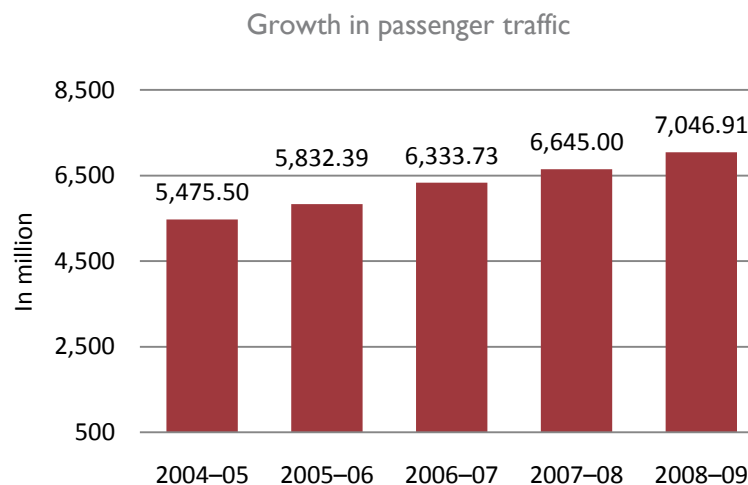
- Indian Railways transports about 40 per cent of India's total freight traffic and 20 per cent of the country's passenger traffic.
 - The freight segment of Indian Railways accounts for about 70 per cent of overall revenues.
- Between 2004 and 2009, suburban and non-suburban traffic increased by 851.95 million and 992.05 million, respectively.
- From 2008 to 2009, freight traffic recorded an increase of 4.97 per cent over the previous year.
 - Between April and November 2009, freight traffic was recorded at 573.5 million tonnes.



Source: "White paper on Indian Railways", December 2009, Indian Railways website, http://www.indianrailways.gov.in/DEPTTS/planning/Whitepaper/White%20Paper_Eng_SUBMITTED%20To%20Parliament.pdf, accessed 24 January 2010.

Market overview — performance of freight and passenger traffic ... (2/2)

- Passenger traffic during the same period increased at 6.05 per cent on a year-on-year basis.
 - Between April and November 2009, passenger traffic was recorded at 4,849.8 million.



Source: “White paper on Indian Railways”, December 2009, Indian Railways website, http://www.indianrailways.gov.in/DEPTTS/planning/Whitepaper/White%20Paper_Eng_SUBMITTED%20to%20Parliament.pdf, accessed 24 January 2010.

Growth drivers

Government expenditure on rail infrastructure has increased

- The government has increased the allocation of funds to Indian Railways to US\$ 3.49 billion (INR 167.52 billion) in the budgetary estimates (BE) for 2010–11, indicating a rise of about US\$ 0.19 billion (INR 9.5 billion) from the 2009–2010 BE.

Private sector's participation in the development of railway infrastructure has increased

- The private sector's contribution to railway projects has increased from 0.26 per cent in the Tenth Five Year Plan (2002–07) to 19.2 per cent in the Eleventh Five Year Plan (2007–2012).
- Indian Railways has allowed private sector entities to operate container trains. Till date, concession agreements have been signed with 16 firms for the provision of container services.

Freight and passenger traffic have witnessed growth

- Freight traffic has increased at a CAGR of 8.38 per cent and passenger traffic has increased at a CAGR of 6.26 per cent between 2003–04 and 2008–09.

Key trends

The scope of public-private partnerships (PPPs) has increased

- For the improvement and enhancement of rail infrastructure, the Ministry of Railways has proposed the development of 50 world-class stations on PPP mode.
- Some of the recent PPP projects undertaken/under implementation include the construction of DFCs, modernisation of metro stations and manufacture of rolling stock including coaches, wagons and locomotives through SPVs.

International investment has increased

- Indian Railways has attracted investments from overseas through strategic alliances with various countries across the globe.
- Bombardier Transportation, a subsidiary of Swiss-based Bombardier Inc, has set up a new facility in Savli, South Gujarat, to cater to orders worth US\$137 million secured from the Delhi Metro Rail Corporation (DMRC).
- Further, the company plans to double its production from January 2010 and aims to introduce eight metro trains (32 metro cars) required for the Delhi Metro project.

Demand for urban mass transportation has risen

- With demand for urban mass transportation systems in India rapidly increasing, the Gol has introduced a number of Metro rail projects in the country to improve connectivity within cities.
- Metro projects have already been initiated in Delhi, Kolkata, Bengaluru, Chennai, Hyderabad and Mumbai.
- Development of Metro projects is now being proposed for cities such as Jaipur, Lucknow, Ludhiana and Kanpur.

Key trends — status of Metro projects in India

Name of the project	Cost of the project (US\$ billion)	Length of the project (km)	Due date of completion
Delhi Mass Rapid Transit System	Phase I: 2.18 Phase II: 0.11	Phase I: 65.1 Phase II: 121.76	Phase I: Commissioned in November 2006 Phase II: Expected to be completed before the Commonwealth Games, scheduled to kick off in October 2010
Delhi Metro Phase-II to Gurgaon	0.32	14.47	July 2010
Kolkata Metro Rail Project	1.01	14.67	2014–15
Bengaluru Metro Rail Project	1.33	33.00	Due for completion by December 2011, with 7 km expected to be completed in March 2010
Hyderabad Metro Project	1.58	71.6	Early 2013
Mumbai Metro Project Phase-II	1.59	31.87	2015
Chennai Metro Rail Project	3.04	45.04	Between 2014 and 2015

Source: Ministry of Urban Development FY09 annual report.

Note: This is an indicative list.

Key players

Rail projects in India have typically been the domain of the public sector. However, several PSUs and private players are involved in allied activities of Indian Railways (track laying and maintenance, maintenance of coaches and wagons, construction of bridges, stations, signalling and telecommunication works).

Company	Key projects/services offered
Container Corporation of India Limited	The company is setting up a multi-model logistics park (MMLP) in Rajasthan.
Dedicated Freight Corridor Corporation of India Limited	DFC project
Rail Vikas Nigam Limited	Surat–Hazira new line (Gujarat); Bharuch–Samni–Dahej gauge conversion (Gujarat); Delhi–Rewari gauge conversion of second line, Rewari–Phulera–Ajmer gauge conversion
RailTel Corporation of India Limited	Creation of Optical Fibre Cable-based communication infrastructure for train operations
Punj Lloyd	Construction of an elevated Metro rail viaduct in Delhi; construction of a 300-km dedicated eastern corridor
Gammon Infrastructure Limited	Partial design and construction of 4.725 km viaduct; East-West corridor for Kolkata Metro Rail Corporation Limited
Kalindee Rail Nirman Engineers	Installation of signalling for doubling of railway line between Gooty–Pullampet section; gauge conversion of VilluPuram–Mayiladuthurai section; installation and commissioning of signalling and telecommunication facilities at NTPC

Sources: Relevant company annual reports and websites

Note: This is an indicative list.

Contents

- ❖ Advantage India
- ❖ Market overview
- ❖ **Industry Infrastructure**
- ❖ Investments
- ❖ Regulatory framework
- ❖ Opportunities
- ❖ Industry associations

Industry infrastructure ... (1/2)

Rolling stock *						
Year	2004-05	2005-06	2006-07	2007-08	2008-09	Total
Wagons (four-wheeler units)	19,992	18,681	21,933	22,753	24,115	107,474
Diesel multiple units	36	27	57	33	38	191
Electric multiple units (EMUs)	145	176	251	193	535	1,300
Main line electric multiple units (MEMUs)	88	88	64	33	64	337
Coaches	2,623	2,684	2,881	3,101	3,193	14,482
Electric locomotives	90	129	150	200	220	789
Diesel locomotives	121	148	186	222	257	934

Industry infrastructure ... (2/2)

- On an average, 220 km of new lines are added on an annual basis.
- Wagons (four-wheeler units) have increased at a compound annual growth rate (CAGR) of 4.80 per cent over the past five years.
- Between 2008 and 2009, 797 km of railway lines have been electrified with an investment of US\$ 0.16 billion (INR 7.80 billion).

Growth in fixed infrastructure (in km)						
Year	2004–05	2005–06	2006–07	2007–08	2008–09	Total
New lines	150	180	250	156	357	1,093
Gauge conversion	779	744	1,082	1,549	563	4,717
Doubling	282	231	386	426	363	1,687
Railway electrification	320	170	361	502	797	2,150

Sources: “White paper on Indian Railways,” December 2009, Indian Railways website, http://www.indianrailways.gov.in/DEPTTS/planning/Whitepaper/White%20Paper_Eng_SUBMITTED%20To%20Parliament.pdf, accessed 24 January 2010; “Railways: Economic Survey 2008-09,” Government of India: Union budget and economic survey website, <http://indiabudget.nic.in/es2008-09/chapt2009/chap97.pdf>, accessed 14 January 2010.

* Includes replacement of rolling stock

Government initiatives — the Dedicated Freight Corridors

In order to augment capacity and enhance the quality of services, Indian Railways has initiated its most ambitious project — the Dedicated Freight Corridors (DFCs).

Dedicated Freight Corridor:

- The Dedicated Freight Corridor Corporation of India Limited, is a special purpose vehicle (SPV) set up under the administrative control of the Ministry of Railways, responsible for implementing the DFC project.
- The SPV aims at constructing dedicated freight lines along the eastern (Ludhiana to Dankuni) and western sides (Mumbai to Dadri/Tughlakabad) of India, encompassing a length of 3,287 km
- Total cost of the project is US\$ 10.33 billion (INR 496.2 billion).
- Funds for the project will be arranged through internal generation, domestic/external borrowings and multilateral agencies.
- Construction work on the DFC has commenced, and the project is scheduled for completion in 2016–17.

Source: “Railways: Economic Survey 2008-09,” Government of India: Union Budget and Economic Survey website, <http://indiabudget.nic.in/es2008-09/chapt2009/chap97.pdf>, accessed 24 January 2010.

Government initiatives — other measures ... (1/2)

Freight incentive schemes

- Indian Railways offers upgrades and frequent traveller schemes to commuters, in order to encourage them to travel via rail.

Wagon Investment Scheme

- Indian Railways launched the Wagon Investment Scheme in 2005 to offer freight rebates and supply a guaranteed number of rakes for a period of seven to 15 years for different types of wagons.

Izzat scheme

- For people working in the unorganised sector and having a monthly income of less than or equal to INR 1,500, Indian Railways has launched the Izzat scheme of uniformly priced monthly seasons tickets (MSTs) at INR 25. The issue of MSTs under the Izzat scheme commenced from August 1, 2009.

Government initiatives — other measures ... (2/2)

Key modernisation initiatives

- The very small aperture terminal (VSAT) hub system (a two-way satellite ground station) has been installed to ensure rail connectivity in remote areas.
- Integrated security systems have been implemented in trains and at railway premises.
 - Modern signalling system, a train protection warning system and a special railway safety fund have been introduced for passenger security.
- E-ticketing and unreserved ticketing services (UTS) have been introduced to facilitate faster and flexible issue of online and unreserved tickets.
 - As of November 2009, UTS were available at 2,911 locations with about 6,239 counters across the country. Automatic ticket vending machines have been installed at 375 locations.
- Passenger facilities and catering services have also seen improvement.
 - Of the 594 stations identified for upgrade in passenger amenities through the Model Station Scheme, 426 stations have already been modernised.
 - The Indian Railway Catering and Tourism Corporation has been set up to provide catering services, economy hotels and food plazas at major stations.

Source: "Railways Economic Survey 2008-09 and 2009-10," Government of India: Union Budget and Economic Survey website, <http://indiabudget.nic.in/es2008-09/chapt2009/chap97.pdf>, accessed 11 March 2010.

Contents

- ❖ Advantage India
- ❖ Market overview
- ❖ Industry Infrastructure
- ❖ **Investments**
- ❖ Regulatory framework
- ❖ Opportunities
- ❖ Industry associations

Investments

According to the Planning Commission's estimates, investment in Indian Railways in the Eleventh Plan is likely to be about US\$ 54.54 billion, as compared to US\$ 24.93 billion in the Tenth Plan.

Projected investment in the Indian Railways during the Eleventh Plan						
	2007-08	2008-09	2009-2010	2010-11	2011-12	Total Eleventh Plan
Rolling stock	67,550	77,860	89,710	103,160	119,010	457,290
Capacity augmentation	65,820	85,060	110,090	142,660	185,060	588,700
Safety and other works	138,740	160,530	185,970	21,5700	250,350	951,290
Investment in PSUs	16,010	17,290	18,670	20,160	21,780	93,900
DFCs	11,310	20,460	37,040	62,940	123,250	255,000
Metro rail projects	42,820	48,430	53,780	59,310	67,570	271,910
Total INR million	342,250	409,640	495,250	603,930	767,010	2,618,080
Total US\$ million	7,130.20	8,534.16	10,317.70	12,581.87	15,979.37	54,543.33

Source: "Projections of investment in Infrastructure during the Eleventh Plan," Secretariat for Infrastructure, Planning Commission website, www.infrastructure.gov.in/pdf/Inv_Projection.pdf, accessed 26 January 2010.

Contents

- ❖ Advantage India
- ❖ Market overview
- ❖ Industry Infrastructure
- ❖ Investments
- ❖ **Regulatory framework**
- ❖ Opportunities
- ❖ Industry associations

Regulatory framework

- Indian Railways is a department, which is owned and controlled by the Ministry of Railways, Government of India.
- Indian Railways is divided into 16 zonal offices, each of which is divided into 68 divisions.
- The Railways Board administers the Indian Railways' operations and project management.

Contents

- ❖ Advantage India
- ❖ Market overview
- ❖ Industry Infrastructure
- ❖ Investments
- ❖ Regulatory framework
- ❖ **Opportunities**
- ❖ Industry associations

Opportunities ... (1/3)

The provision of rail connectivity to special economic zones (SEZs) can create significant potential

- The government is planning to provide rail and port connectivity to enhance the competitiveness of SEZs.
- The government also foresees tremendous potential in joint venture partnerships and strategic alliances for linking SEZs to railheads and ports.

Government investments are creating significant construction opportunities for companies

- The government is planning substantial investments in the Indian Railways to modernise India's rail infrastructure, thereby creating avenues for growth for companies involved in the manufacture of wagons and coaches and construction of bridges and stations.
- The government has proposed the development of 50 world-class stations in the recent Budget 2009–2010.
- The government also plans to set up a new factory at the Kanchrapara-Halisahar railway complex to manufacture EMU/MEMU/Metro coaches.

Opportunities ... (2/3)

Private sector participation has increased

- According to Planning Commission's estimates, investments in Indian Railways during the Eleventh Plan is likely to be US\$ 54.5 billion, of which 19.2 per cent is expected to be contributed by the private sector.
- The DFC project offers significant potential for PPPs in the form of a build, operate and transfer (BOT)-annuity contract package.
- Further, the development of MMLP and rail-side warehouses and the construction of rails over bridges also present investment opportunities to private players.

New projects are in the pipeline

- The government also plans to set up new passenger terminals in the metros to meet the increasing requirements of passenger traffic and the ever-increasing demand for trains.

Opportunities ... (3/3)

Freight traffic has tremendous growth potential

- The freight component of the Indian Railways includes nine commodities — coal, iron and steel, iron ore (both for export and domestic steel plants), other raw material for steel plants, cement, food grain, fertiliser, petroleum products and container traffic.
- The rise in the freight business of the Indian Railways is directly proportional to an increase in demand for such commodities.

Contents

- ❖ Advantage India
- ❖ Market overview
- ❖ Industry Infrastructure
- ❖ Investments
- ❖ Regulatory framework
- ❖ Opportunities
- ❖ **Industry associations**

Industry associations

Ministry of Railways

Rail Bhavan, New Delhi

Website: www.indianrailways.gov.in

Indian Railway Catering and Tourism Corporation Ltd

9th Floor, Bank of Baroda Building,
16, Parliament Street, New Delhi-110001.

Phone: 011-23311263/64

Fax: 011-23311259

Note

Wherever applicable, numbers in the report have been rounded off to the nearest whole number.

Conversion rate used: US\$ 1 = INR 48

DISCLAIMER

India Brand Equity Foundation (“IBEF”) engaged Ernst & Young Pvt Ltd to prepare this presentation and the same has been prepared by Ernst & Young in consultation with IBEF.

All rights reserved. All copyright in this presentation and related works is solely and exclusively owned by IBEF. The same may not be reproduced, wholly or in part in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this presentation), modified or in any manner communicated to any third party except with the written approval of IBEF.

This presentation is for information purposes only. While due care has been taken during the compilation of this

presentation to ensure that the information is accurate to the best of Ernst & Young and IBEF’s knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Ernst & Young and IBEF neither recommend nor endorse any specific products or services that may have been mentioned in this presentation and nor do they assume any liability or responsibility for the outcome of decisions taken as a result of any reliance placed on this presentation.

Neither Ernst & Young nor IBEF shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this presentation.