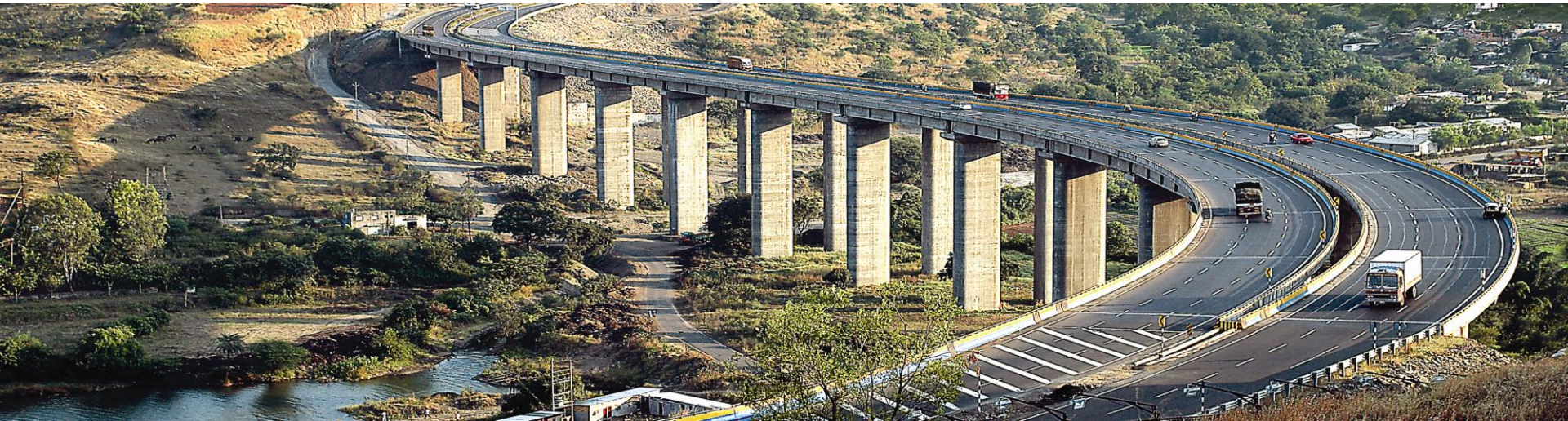


# Roads

NOVEMBER  
2011



**IBEF**   
INDIA BRAND EQUITY FOUNDATION  
[www.ibef.org](http://www.ibef.org)

## Contents

- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories
- ❖ Opportunities
- ❖ Useful information

## Advantage India

### Growing demand

- Greater connectivity between different cities, towns and villages increased road traffic over the years
- Increasing movement of goods within the country due to economic integration

### Opportunities

- National and state highway projects is expected to be worth approximately USD51 billion
- Approximately 12,700 kilometres of projects are expected to be awarded by NHAI over the next two years

FY10

New highway projects awarded by NHAI: 3,361 km

## Advantage India

### Increasing investments

- USD1 trillion worth of expenditure in infrastructure is estimated over the FY13-17
- Growing participation of the private sector through Public-Private Partnership

### Policy support

- Road infrastructure is a key government priority; has budgetary support through funds
- Encouragement to private sector participation; relaxation of FDI and FII norms

FY03

New highway projects awarded by NHAI: 677 km

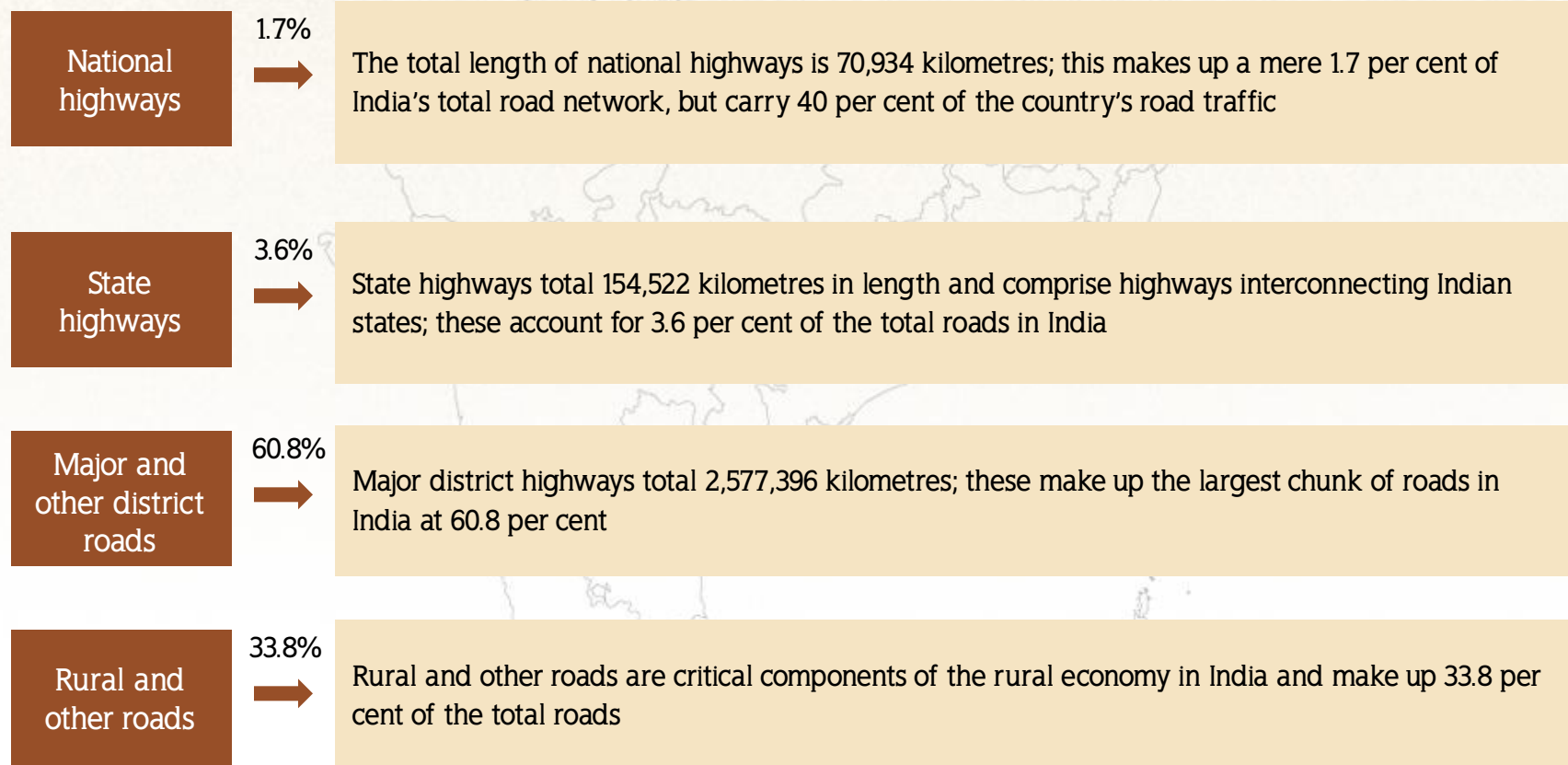
*Source:* NHAI, MoRTH, Planning Commission, Aranca Research

Notes: FDI is Foreign Direct Investment, NHAI is National Highways Authority of India, MoRTH is Ministry of Road Transport and Highways

## Contents

- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories
- ❖ Opportunities
- ❖ Useful information

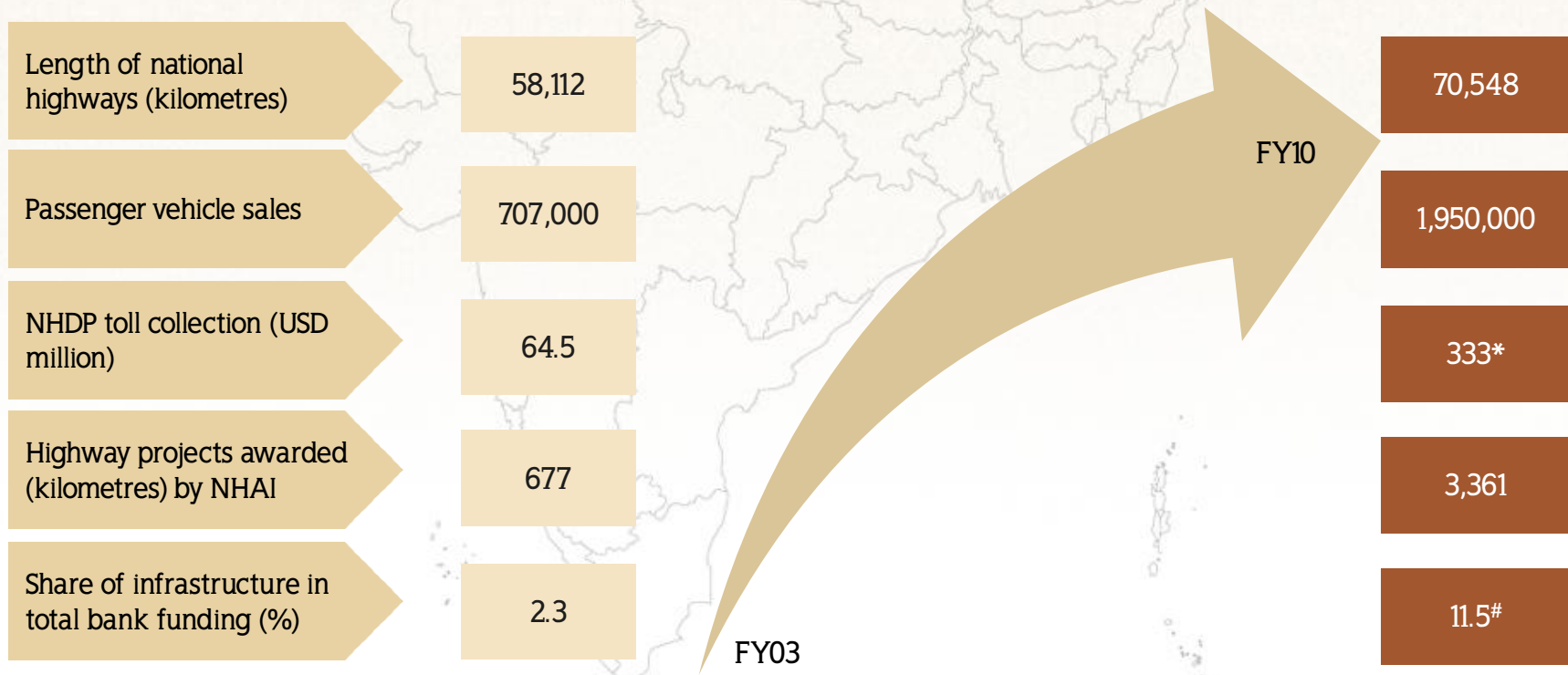
## The road network in India is sub-divided into four categories



*Source:* Annual report for the Ministry of Roads, Transport, and Highways (MoRTH) – FY11

## Evolution of India's road network

- India has the second largest road network in the world (4.2 million kilometres)
- Roads bear 87.4 per cent of the country's passenger traffic and 60 per cent of freight traffic

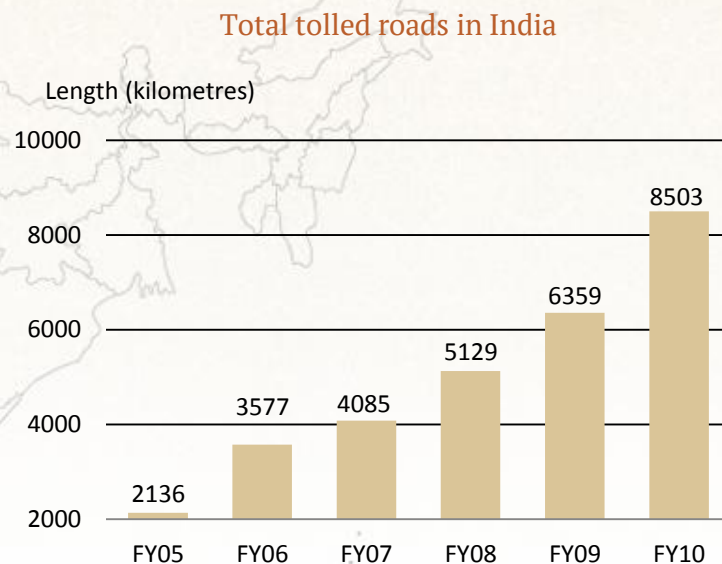


*Source:* National Highway Authority of India (NHAI), National Highway Builders Foundation, ICRA Ltd, Reserve Bank of India (RBI)  
*Notes:* \*data for FY09, # - Figure for 2010, FY – Indian financial year (April – March), NHDP – National Highway Development Project

## Strong momentum in roadways expansion ... (1/2)

- The length of total tolled roads in India expanded at a CAGR of 26 per cent over FY05-10
- In FY10, road constructions went up by 34 per cent compared to the previous fiscal year

Note: CAGR – Compounded annual growth rate, FY – Indian Financial Year (April – March)

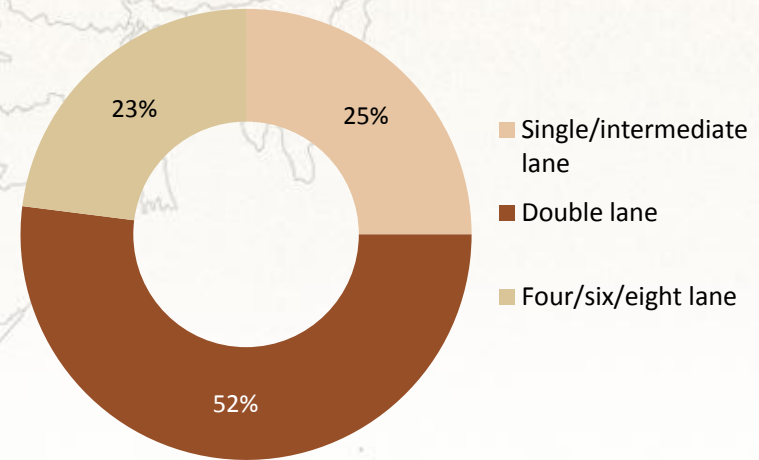


Source: NHAI, MoRTH

## Strong momentum in roadways expansion ... (2/2)

- Double lane highways constitute the largest share of highways in India (36,995 kilometres)
- These are followed by single lane highways (17,752 kilometres) and multi-lane highways (16,187 kilometres)

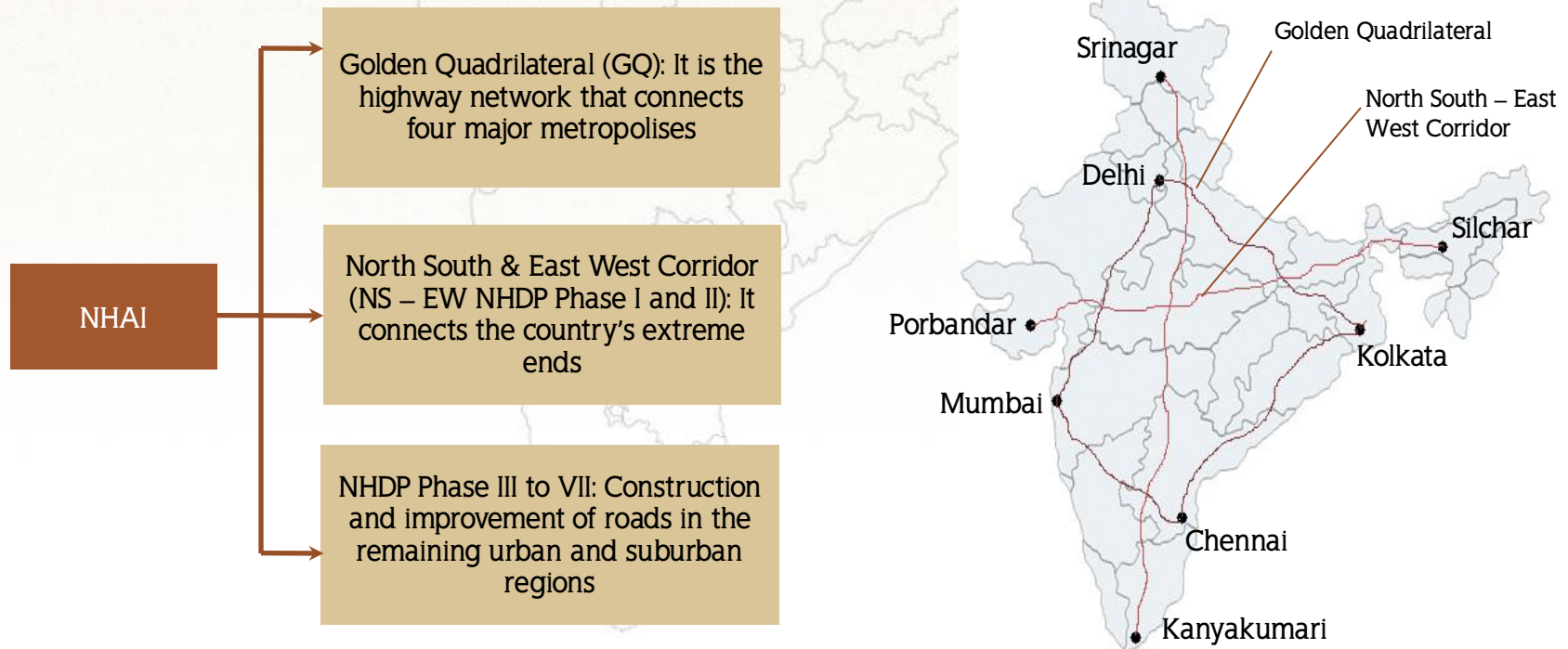
Lane composition of national highways (FY11)



Source: MoRTH

## Adoption of NHDP for development of highways

- The National Highway Authority of India (NHAI) is a government agency responsible for construction, maintenance and development of highways
- The agency runs the National Highway Development Project (NHDP) to construct, upgrade and develop major highways



Source: NHAI, Aranca Research

## NHAI's successful implementation of projects

Status of NHAI projects as on 30 April 2011

Projects	→	NS-EW Phase I and II	NHDP Phase III	NHDP Phase IV	NHDP Phase V	NHDP Phase VI	NHDP Phase VII	NHDP Total	Port Connectivity	Others	Total by NHAI
Length in kilometres	GQ										
Already four-lane	5,824	5,683	2,294	-	596	-	-	14,397	316	936	15,649
Under implementation	22	1,038	5,805	765	1,918	-	41	9,701	64	427	10,192
Balance to be awarded	-	421	4,010	14,034	3,986	1,000	659	24,386	0	20	24,406
<b>Total</b>	<b>5,846</b>	<b>7,300</b>	<b>12,109</b>	<b>14,799</b>	<b>6,500</b>	<b>1,000</b>	<b>700</b>	<b>48,642</b>	<b>380</b>	<b>1,383</b>	<b>50,405</b>

While the Golden Quadrilateral is nearing completion, other phases are in progress, and will be awarded as projects stage-wise

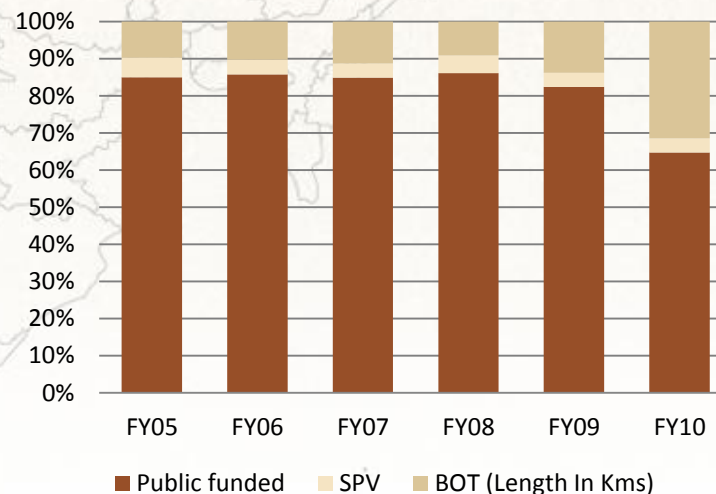
Notes: GQ – Golden Quadrilateral, NS-EW – North South – East West Corridor, NHDP – National Highway Development Project  
Source: NHAI, MoRTH

## Private participation in the sector has increased ... (1/2)

- The BOT model's share among the total highway projects has increased sharply over the years; it rose from 10 per cent in FY05 to 31 per cent in FY10

Notes: CAGR – Compound annual growth rate,  
FY – Indian financial year (April – March), SPV – Special Purpose  
Vehicle, BOT – Build Operate Transfer

Composition of the total highway projects awarded

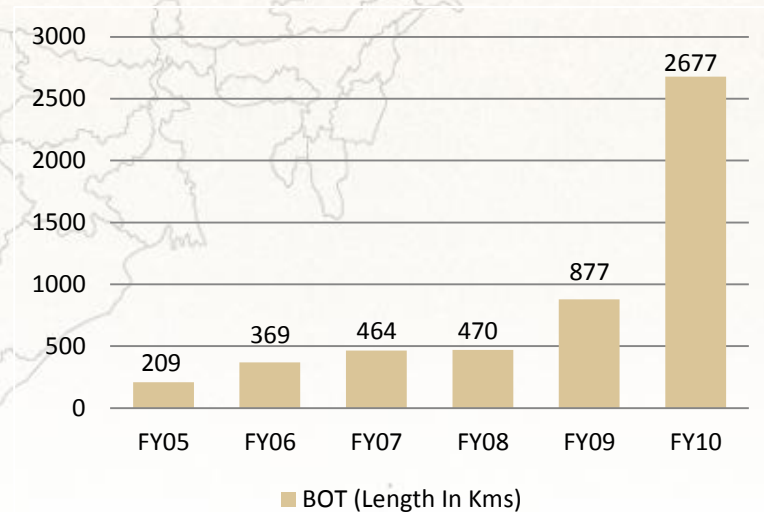


Source: NHAI, MoRTH

## Private participation in the sector has increased ... (2/2)

- Road construction projects awarded to BOT companies went up at a CAGR of 53 per cent over FY05-10 to about 2,677 kilometres
- In FY10, highway projects awarded to private companies rose more than thrice from FY09

Awards won by BOT private players



Source: NHAI

## Fragmented market with healthy competition

- Until 2005, the road construction market was dominated by public sector companies
- However, the emergence of private players over the last decade has made the road construction market fragmented and competitive; the players bidding for projects also vary by size



Source: Aranca Research  
Notes: NH – National Highway

## Notable trends in the roads sector

### Increasing private sector participation

- Government policy to increase private sector participation has proved to be a boon to the infrastructure industry with a large number of private players entering the business through the PPP model
- The type of PPP models used in road projects are BOT toll and BOT annuity

### Partnerships between Indian and foreign firms

- With the Government of India permitting 100 per cent FDI in the roads sector, most foreign companies have formed partnerships with Indian players to participate in the sector's growth story

### India's renewed focus on infrastructure

- Infrastructure is the key to supporting double-digit GDP growth in India during the medium- to long-term
- The government has hence made infrastructure development a key policy issue and plans to spend USD44.6 billion during FY12 on it

### Success of India's Five-Year Plans

- Through Five-Year Plans, India has increased the length of national highways from 21,378 kilometres during the late 1940s to 70,548 kilometres in the current 11th Five Year Plan (FY08-12). The 9th Five Year Plan (FY1997-FY02) reported a total of 23,814 km, the highest addition to highways

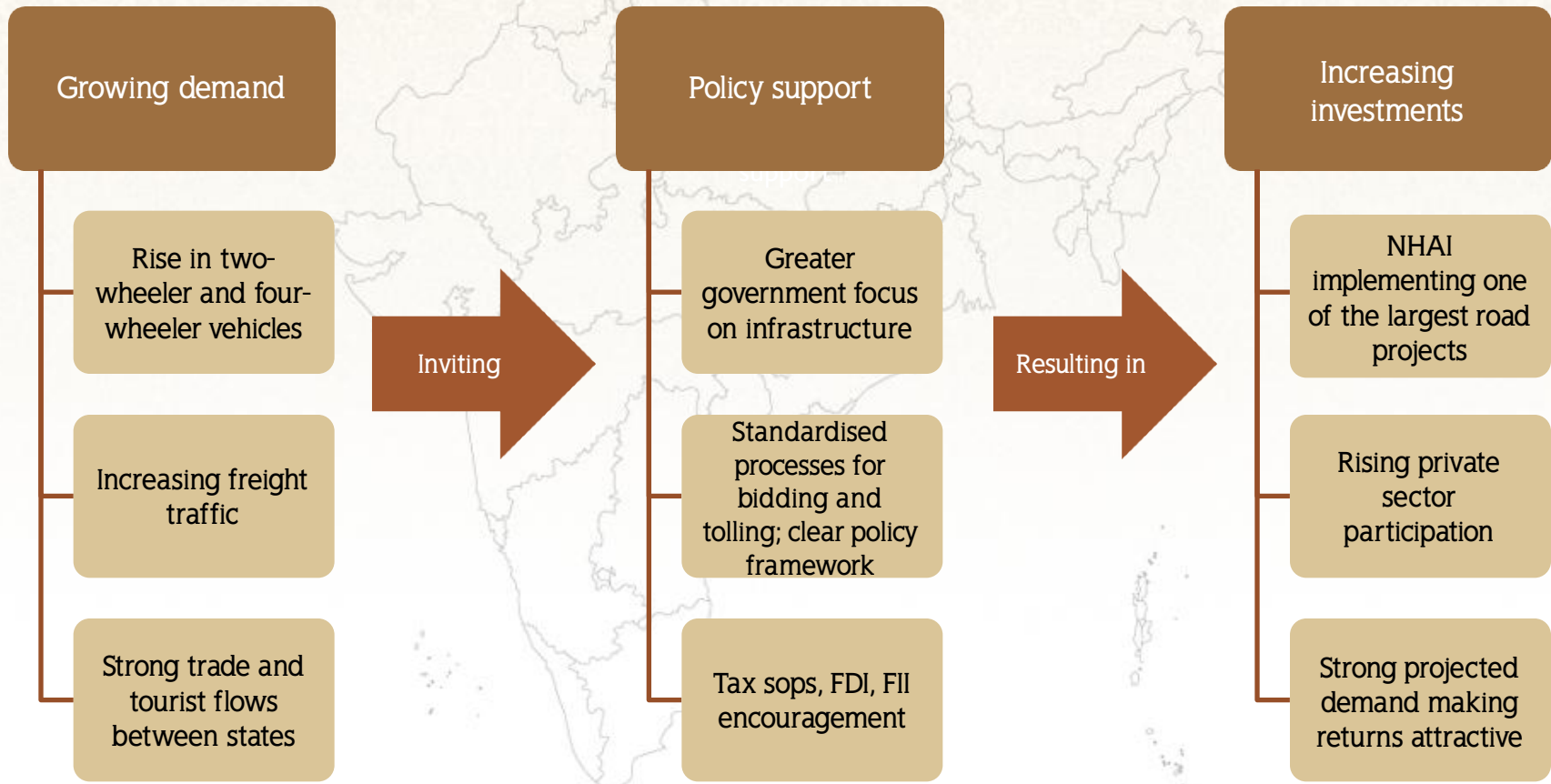
Notes: BOT – Build Operate Transfer, PPP – Public Private Partnership, GoI – Government of India, FDI – Foreign Direct Investment

Source: NHAI, MoRTH, Aranca Research

## Contents

- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories
- ❖ Opportunities
- ❖ Useful information

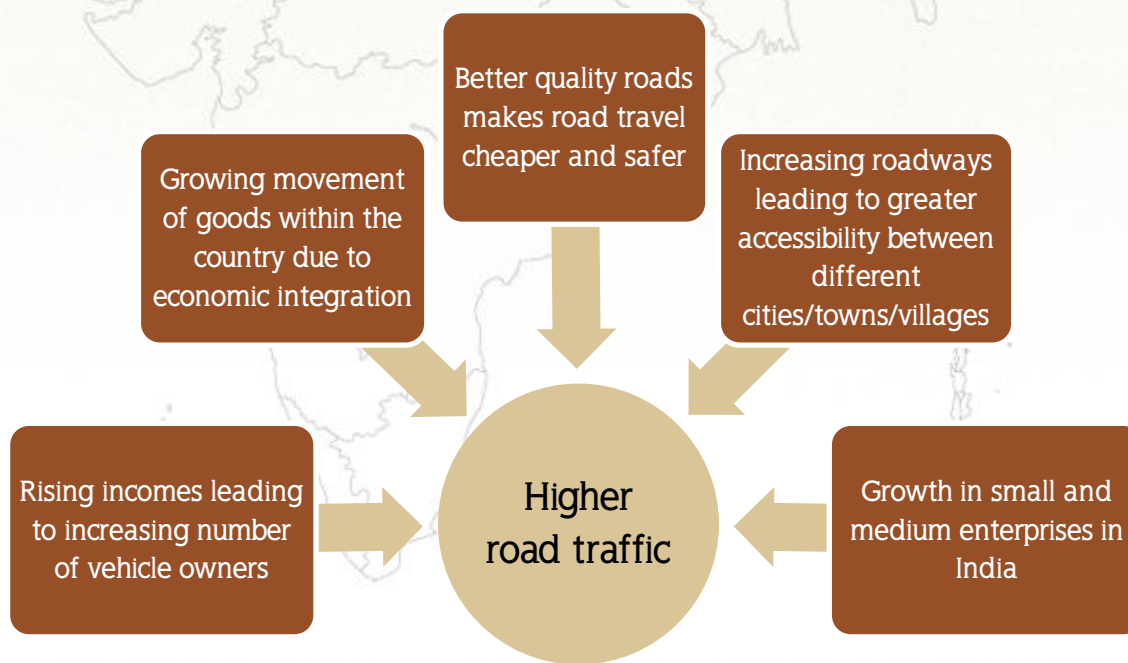
## Strong demand and policy support driving investments



## Key catalysts behind increasing demand for roadways

- Higher individual discretionary spending has led to increasing spending on cars, motorbikes and scooters
- Growing domestic trade flows have led to rising commercial vehicles and freight movement
- Road's traffic share of the total traffic in India has grown from 13.8 per cent to 60 per cent in freight traffic and from 15.4 per cent to 87 per cent in passenger traffic from 1951 to 2006

*Source: MoRTH, Aranca Research*

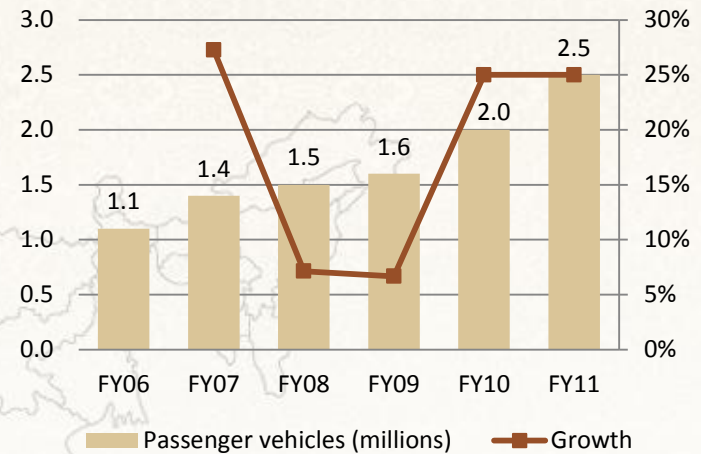


## Rising vehicular traffic a key factor behind roadways expansion

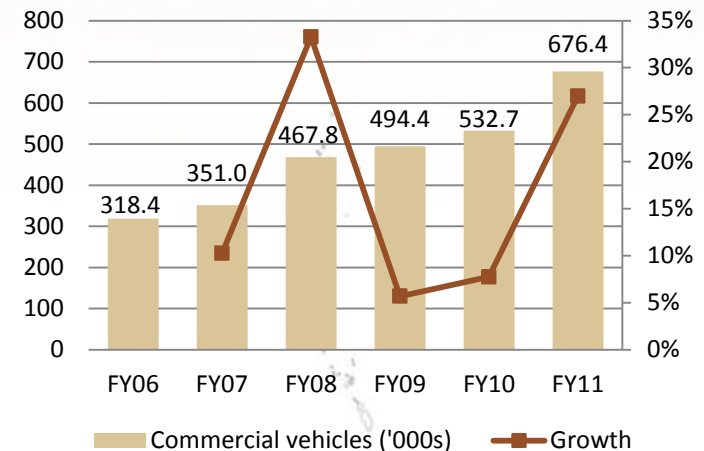
- From FY06 to FY11, the CAGR in –
- Passengers cars is 17.8 per cent
- LCVs is 16.3 per cent
- Rising per-capita incomes and a growing middle class has led to higher number of car owners
- Easier access to credit and a wider range of vehicles have also led to higher passenger car and commercial vehicles

Notes: LCV – Light Commercial Vehicles, CAGR – Compounded Annual Growth Rate, FY – Financial Year India (April – March)  
Source: SIAM, Aranca Research

Passenger vehicles sales growth



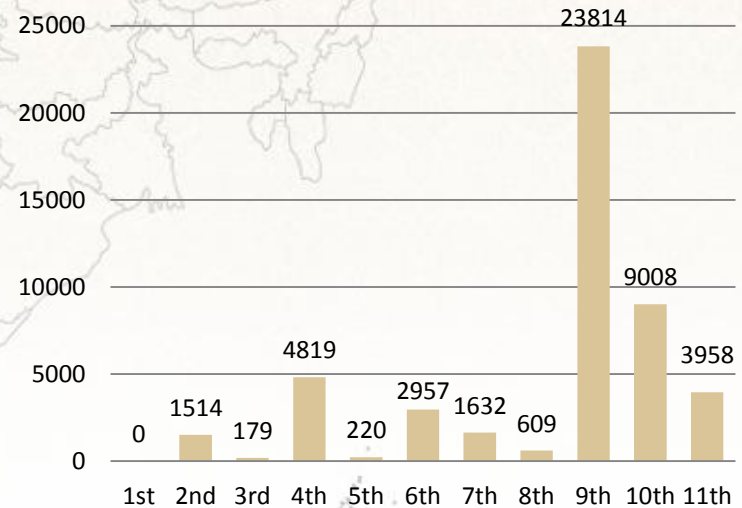
Commercial vehicles sales growth



## Strong growth momentum in road construction ... (1/2)

- Road addition in the 3rd Five Year Plan was only 179 kilometres; this increased to 9,008 kilometres in the 10th Plan
- The 12th Plan (FY13-17) is estimated to carry the momentum forward with projects to the tune of 21,678 kilometres

Length of roads added in the Five Year Plans (kilometres)

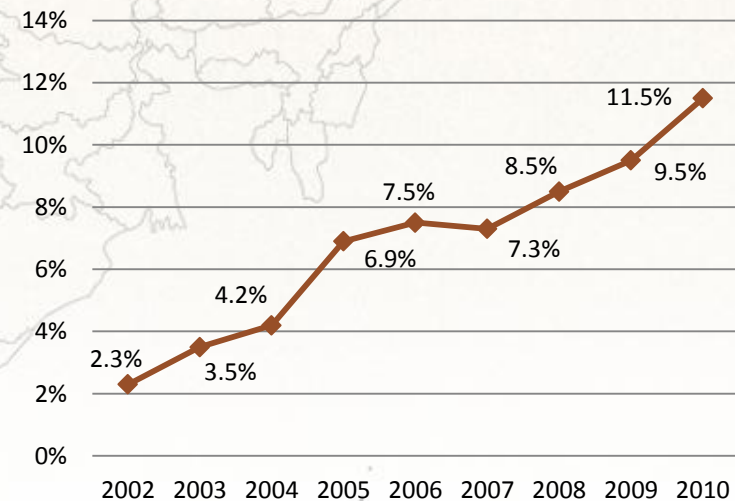


Source: NHAI, MoRTH, Aranca Research

## Strong growth momentum in road construction ... (2/2)

- Infrastructure is a priority of the government's economic policy; funding from the private and public sectors is set to increase sharply in the near-term
- Infrastructure's total share in bank funding rose from 2.3 per cent in 2002 to 11.5 per cent in 2010

Share of infrastructure in bank funding



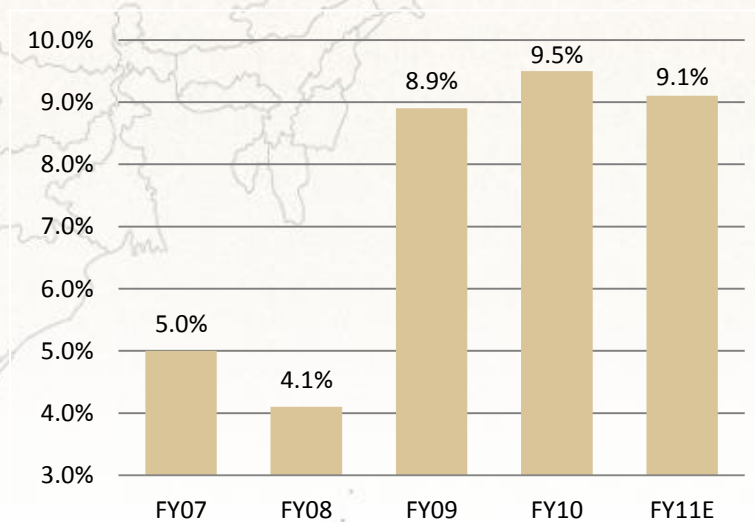
Source: RBI, Aranca Research

## To reduce finance constraints, private funding encouraged ... (1/2)

- The government has been eager to involve private sector funding for infrastructure projects and thereby reduce strains on the budget
- The PPP model has emerged as the favoured one for private sector participation in roads projects

Notes: PPP – Public Private Partnership, NHDP – National Highway Development Project, BOT – Build Operate Transfer

Fiscal deficit (centre and states)

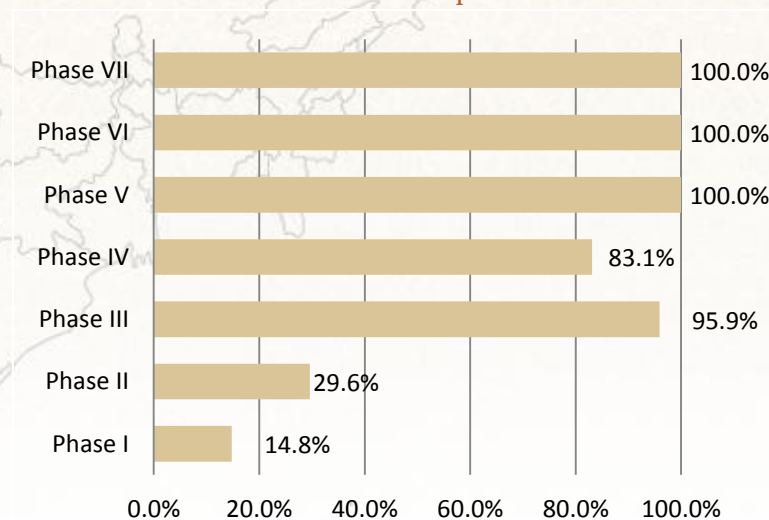


Source: RBI, Aranca Research

## To reduce finance constraints, private funding encouraged ... (2/2)

- Phase I and Phase II of NHDP were mostly developed by public funds with the BOT share at 14.8 per cent and 28.6 per cent respectively
- PPP model will be the favoured way of executing the remaining NHDP phases

% of BOT share in different phases of NHDP



Source: NHAI, MoRTH, Aranca Research

## Policy initiatives in the right direction

Infrastructure is a key government priority

- Infrastructure investment is a major focus area for the government
- The Government would spend USD500 billion on infrastructure in the 11th Five-Year Plan (FY08-12) and the spending is estimated to double to USD 1 trillion in the 12th Five-Year Plan (FY13-17)

Support from the Union Budget

- The FII investment limit in infrastructure corporate bonds was raised from USD5 billion to USD25 billion in the union budget
- An increase in road development fund was also announced

Rural development

- The Prime Minister Gram Sadak Yojana (PMGSY) is a scheme for development of rural roads in India
- The Construction of Rural Roads Project (CRRP) is another initiative focused on rural development

Taxes and other sops

- Companies enjoy 100 per cent tax exemption in road projects for five years and 30 per cent relief for the next five years
- The companies are also granted a capital of up to 40 per cent of the total project cost to enhance viability

Notes: FDI – Foreign direct investment, FII – Foreign Institutional Investors

## Recent BOT projects awarded by NHAI and budgetary outlays ... (1/2)

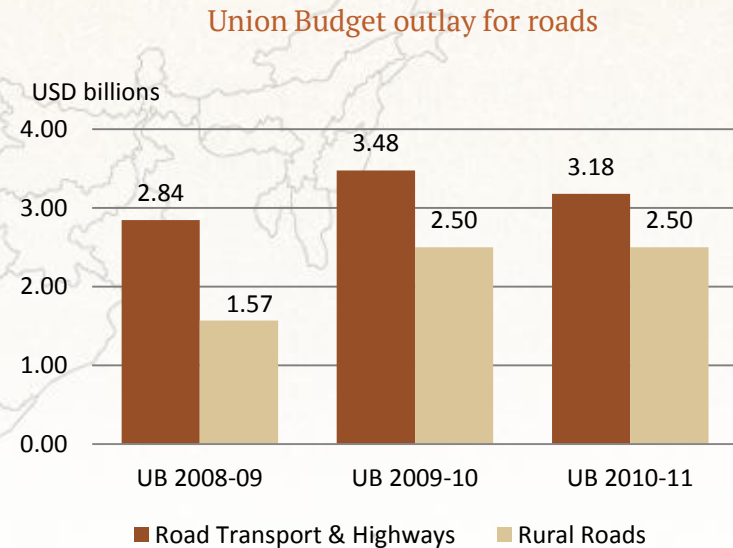
Project	Length (kilometre)	Cost (USD million)	Company
Ahmedabad – Vadodara (Gujarat)	102	442.7	IRB Infrastructure Developers
Kota – Jhalawar (Rajasthan)	90	110.4	Keti Construction
Beawar – Pali – Pindwara (Rajasthan)	244	497.9	L&T Constructions
Nagpur – Wainganga (Maharashtra)	45	100.8	JMC Projects
Ranchi – Rargaon – Jamshedpur (Jharkhand )	164	325.0	Madhucon Projects

Source: NHAI, MoRTH, Aranca Research  
Notes: BOT– Build Operate Transfer, UB – Union Budget

## Recent BOT projects awarded by NHAI and budgetary outlays ... (2/2)

- Roadways has been a key focus area of budget allocations over the years
- During FY11, the spending on highways has been USD3.2 billion, while it was USD2.5 billion for rural roads

Source: Respective Union Budgets, Aranca Research



Source: Union Budget, Aranca Research

# Roads

NOVEMBER  
2011

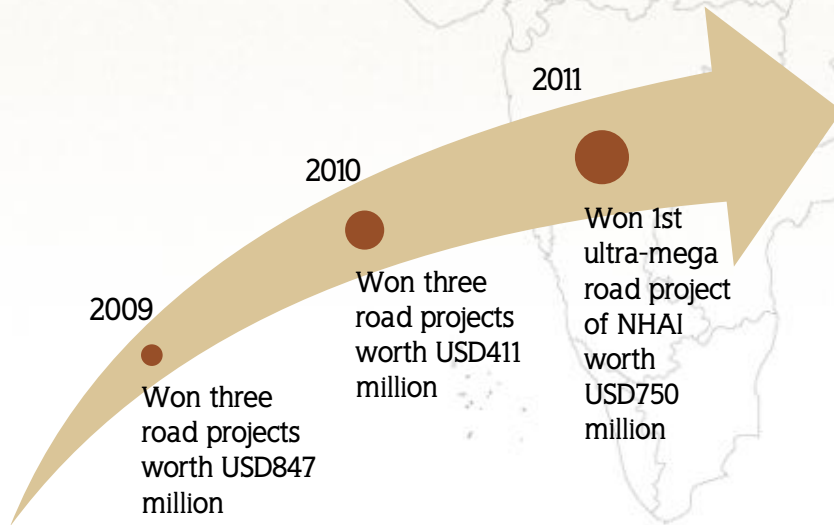
## Contents

- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories
- ❖ Opportunities
- ❖ Useful information

For updated information, please visit [www.ibef.org](http://www.ibef.org)

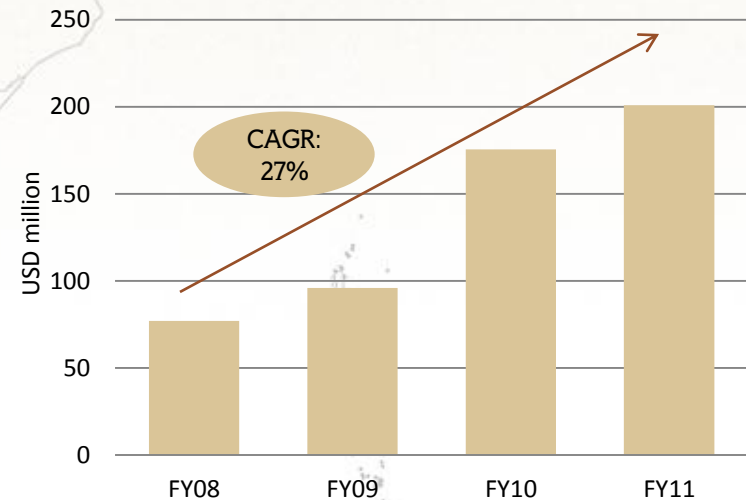
## IRB Infrastructure Limited

- IRB Infrastructure is one of India's leading BOT operators with a built-length of around 6,722 lane kilometres
- The company executed the country's first-ever BOT project, the Thane-Bhiwandi bypass
- It currently has 17 BOT projects out of which 11 are operational
- IRB Infrastructure's order backlog as on 31 March, 2011 was USD2.3 billion



Source: IRB Infra, Aranca Research

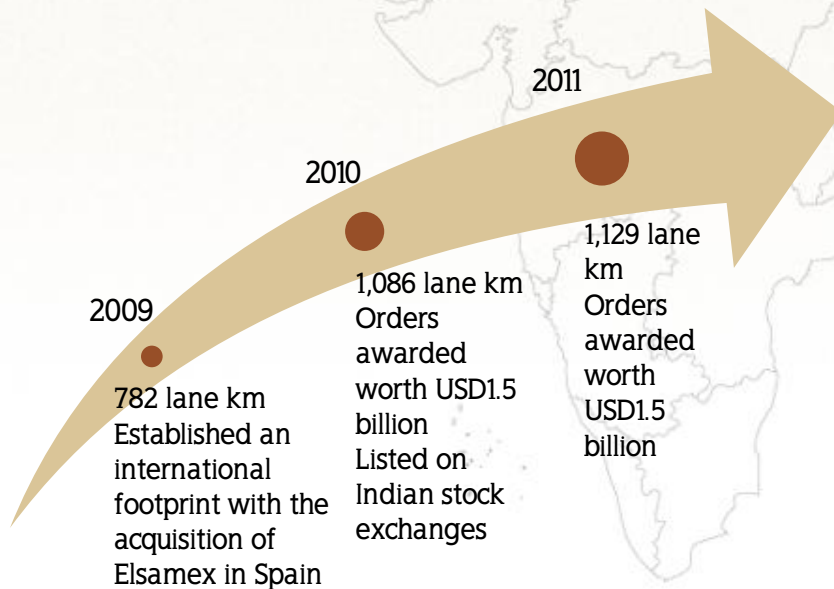
Toll revenue: IRB Infrastructure Limited



Notes CAGR: Compounded Annual Growth Rate

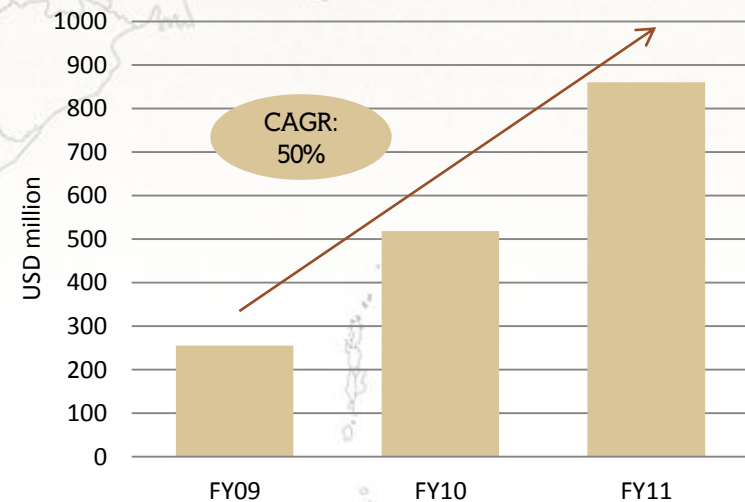
## IL&FS Transportation Networks Limited (ITNL)

- ITNL has the largest BOT road asset portfolio (in terms of lane kilometres) in India with a presence in 14 states
- The company has 12,000 lane kilometres under its road asset portfolio; this comprises 22 projects, which are 11 toll projects and 11 annuity projects
- ITNL's order backlog as on 31 March 2011 was USD2.5 billion



Source: ITNL, Aranca Research

Revenue IL&FS Transportation Networks Limited



Notes CAGR: Compounded Annual Growth Rate, BOT – Build Operate Transfer, km - kilometers

# Roads

NOVEMBER  
2011

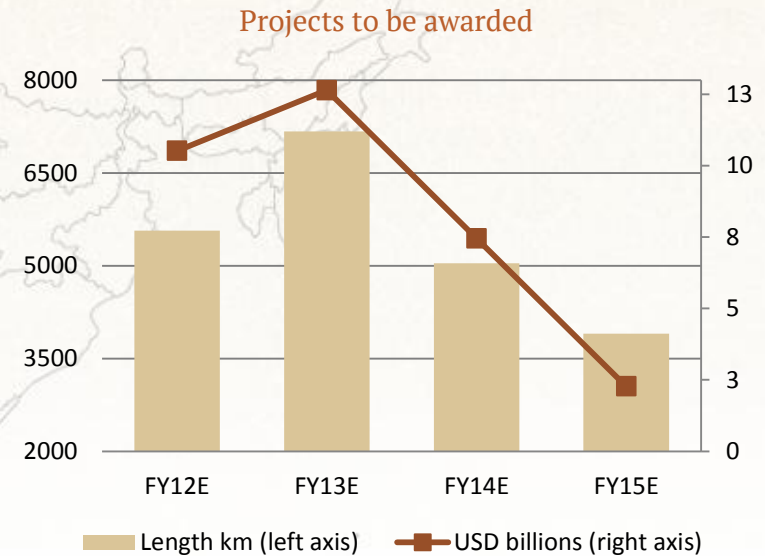
## Contents

- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories
- ❖ Opportunities
- ❖ Useful information

For updated information, please visit [www.ibef.org](http://www.ibef.org)

## Future prospects remain bright for the roads sector ... (1/3)

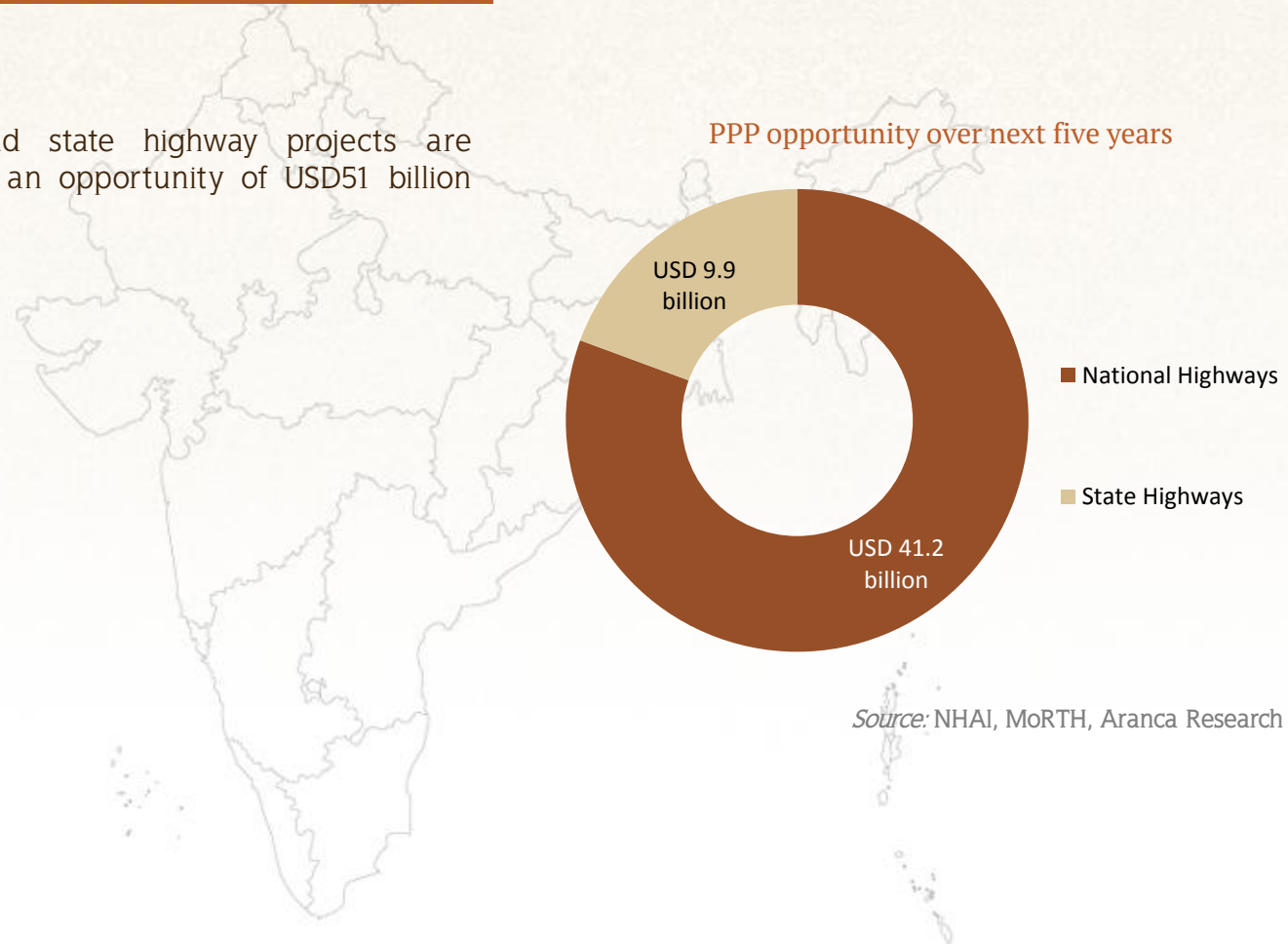
→ Approximately 12,700 kilometres of projects are expected to be awarded by NHAI over the next two years



Source: NHAI, MoRTH, Aranca Research

## Future prospects remain bright for the roads sector ... (2/3)

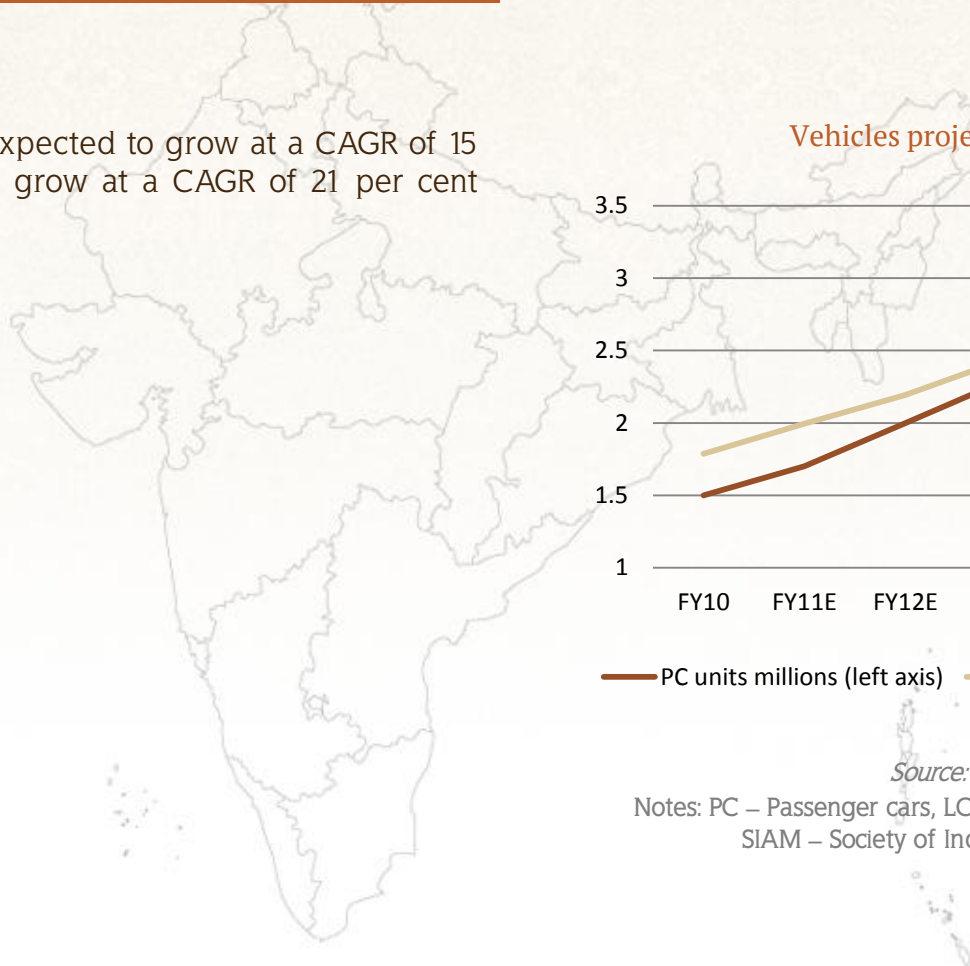
- Future national and state highway projects are estimated to create an opportunity of USD51 billion over next five years



Source: NHAI, MoRTH, Aranca Research

## Future prospects remain bright for the roads sector ... (3/3)

- Passenger cars are expected to grow at a CAGR of 15 per cent and LCV to grow at a CAGR of 21 per cent over FY10-15



Source: SIAM Report, Aranca Research

Notes: PC – Passenger cars, LCV – Light Commercial Vehicles, SIAM – Society of Indian Automobile Manufacturers

## Opportunities in the sector

### Significant potential for construction & EPC companies

- 2/3rd of NHAI road projects are yet to be awarded offering a huge opportunity for private players over the next 5 years
- India's construction sector is expected to grow at about 35 per cent over FY09-13

### Strong focus on infrastructure

- Government has realised the necessity of infrastructure building – spending is expected to touch USD1 trillion in the next five year plan (FY13-17)
- In the Union Budget FY12, the foreign institutional investment limit for investment in corporate infrastructure bonds has been raised by USD20 billion

### Major government initiatives to boost private and foreign investment

- Increased FII limit in infrastructure corporate bonds from USD5 billion to USD25 billion is also a step in the right direction
- FDI inflow to the construction sector (including roads and highways) has rose to USD1.1 billion in FY10 and is expected to continue

Notes: FDI – Foreign direct investment, FII – Foreign Institutional Investor  
EPC – Engineering, procurement and construction  
Source: NHAI, MoRTH, Union Budget, Aranca Research

## Contents

- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories
- ❖ Opportunities
- ❖ Useful information

## Industry Associations

### **Ministry of Roads Transport and Highways**

Transport Bhavan

1, Parliament Street

New Delhi –110001

Phone: 91-11-23719097, 23719955

E-mail: [ifcmost@nic.in](mailto:ifcmost@nic.in)

### **National Highway Authority of India**

G 5 and 6, Sector 10, Dwarka

New Delhi – 110 075

Phone: 91-11-25074100, 25074200

Fax: 91-11-25093507, 25093514

### **Indian Roads Congress**

Sector 6, (Near RBI Quarters), RK Puram, New Delhi – 110022

Phone: 91-11-26185303

Secretariat: 91-11-26716778, 26183669, 26185273, 26185315, 26185319

Fax: 91-11-26183669

E-mail: [secretarygen@irc.org.in](mailto:secretarygen@irc.org.in)

## Glossary ... (1/2)

- **BOT:** Build Operate Transfer
- **CAGR:** Compound Annual Growth Rate
- **EPC:** Engineering, procurement and construction
- **FDI:** Foreign Direct Investment
- **FY:** Indian Financial year (April to March) – So FY10 implies April 2009 to March 2010
- **GOI:** Government of India
- **INR:** Indian Rupee
- **LCV:** Light Commercial Vehicles
- **MoRTH:** Ministry of Roads Transport and Highways
- **NH:** National Highway
- **NHAI:** National Highway Authority of India
- **NHDP:** National Highway Development Project

## Glossary ... (2/2)

- **PPP:** Public Private Partnership (a type of joint venture between the public and private sectors)
- **UB:** Union Budget
- **USD:** US Dollar – Conversion rate used: USD1= INR48
- **WEF:** World Economic Forum
- Wherever applicable, numbers have been rounded off to the nearest whole number

## Disclaimer

India Brand Equity Foundation (IBEF) engaged Aranca to prepare this presentation and the same has been prepared by Aranca 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 Aranca and IBEF's knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Aranca 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 Aranca 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.