### EXECUTIVE SUMMARY

| One of the largest road networks in the world | • India has second largest road networks in the world, spanning over a total of 5.5 million kms. Over 64.5 per cent of all goods in the country are transported through roads, while, 90 per cent of the total passenger traffic uses road network to commute. |
| Rising budget allocation of road sector | • Under the Union Budget 2019-20, the Government of India has allocated Rs 1.12 trillion (US$ 15.48 billion) under the Ministry of Road Transport and Highways. |
| Growing private sector involvement | • As on September 2017, 312 projects were recommended for development by the Public Private Partnership Appraisal Committee (PPPAC). • Investment of US$ 31 billion for national highways is expected in PPP by 2020. |
| Rapid growth in national highways | • In FY18, national highway construction hit record of 26.93 km per day. It is forecasted to reach 30-32 km per day in FY19. • The length of national highways constructed reached 6,715 km at a pace of 24.42 kms per day between April-December 2018. As of March 01, 2019, the total length of National Highways in India stood at 132,499 km. • The Government of India aims to complete 200,000 km national highways by 2022. • In FY18, national highways of 9,829 kms in length were constructed with 20 per cent growth from 8,231 in FY17. |
| Overseas Investment for infrastructure development | • CPPIB (Canada Pension Plan Investment Board) plans to invest US$ 322 million for infrastructural development in India. • The Government has received public sector undertakings from countries like Malaysia and Japan for funding the upcoming highway projects in India – annuity model 60 per cent of the investment is borne by the private investors 40 per cent by NHAI in 5 equal instalments. • The Union Government and Asian Development Bank signed US$ 500 million loan agreement to build the longest bridge across river Ganga, in Bihar. The bridge is expected to be ready by 2020. |

*Source: MoRTH Annual Report 2015–16, NHAI, Make in India, Aranca Research, CARE Ratings*
ADVANTAGE INDIA
Greater connectivity between different cities, towns and villages has led to increased road traffic over the years.

- Growth in production of commercial vehicles at a CAGR of 5.87 per cent during FY10-18 to 894,551 in FY18, commands stronger road network in India.
- Rise in the number of 2 and 4 wheelers, increasing traffic supports the growth.

- The Government of India has set a target to complete 300 highways projects by March 2019.
  - The Government of India aims to construct 65,000 km of national highways at the cost of Rs 5.35 lakh crore (US$ 741.51 billion) by 2022.
  - The Government of India aims to focus on building world-class expressways in 2019.
  - Road building in India is second least expensive in Asia.\(^\)

- Growing participation of the private sector through Public-Private Partnership (PPP).
- As per Union Budget 2019-20, the Government of India provided an outlay of Rs 1.12 trillion (US$ 15.48 billion) under the Ministry of Road Transport and Highways.
- The total amount of investments* are estimated to reach Rs 1.58 trillion (US$ 2.25 billion) in FY19.

- Road infrastructure has been key government priority; sector received strong budgetary support over the years.
- Financial institutions received government approval to raise money through tax-free bonds.
- 100 per cent FDI is allowed under automatic route subject to applicable laws and regulations.

Note: * - investments include Budgetary support. IEBR refers to Internal and Extra Budgetary Resources and constitutes the resources raised by the public sector units through profits, loans and equity and Private sector investments. ^Asian Infrastructure Investment Bank Source: NHAI, Make in India, MoRTH, Business Monitor International, Aranca Research, Ministry of Road Transport and Highways, Asian Infrastructure Investment Bank (AIIB)
MARKET OVERVIEW
ROAD NETWORK IN INDIA IS SUB-DIVIDED INTO THREE CATEGORIES

Roads (Total length: 5.5 million kms)

- State highways
  - Total length: 155,222 kms.
  - Share: 3 per cent of the total roads in India.

- National Highways
  - Total length: 120,543 kms.
  - Share: 2 per cent of the total roads in India.

- Other Roads
  - Total length: 5,207,044 kms.
  - Share: 95 per cent of the total roads in India.

Note: Data expected to be updated by June 2019 from Ministry of Roads Transport & Highways Annual Report 2018-19

Source: Ministry of Roads Transport & Highways Annual Report 2017-18
STRONG MOMENTUM IN EXPANSION OF ROADWAYS

- Highway construction in India increased at 23.25 per cent CAGR between FY14-18. In FY18, 9,829 km of highways were constructed with an expenditure of Rs 1.16 trillion (US$ 18.05 billion). The Government of India aims to construct 65,000 km of national highways at the cost of Rs 5.35 lakh crore (US$ 741.51 billion) by 2022.
- The Government of India has set a target for construction of 10,000 km national highway in FY19. During April-December 2018 a total of length of 6,715 km of national highways were constructed.
- Highway construction revenues is forecasted to grow at a CAGR of 20 per cent by 2020.
- Increasing industrial activity, increasing number of 2 and 4 wheelers would support the growth in the road transport infrastructure projects.
- In March 2019, National Highway projects worth Rs 1,10,154 crore were inaugurated and
- As of October 2018, the Municipal Corporation of Greater Mumbai (MCGM) awarded Mumbai Coastal Road Project worth Rs 21.26 billion (US$ 302.94 million) to Hindustan Construction Company Ltd (HCC) and Hyundai Development Corporation (HDC) joint venture.

**Note:** E – Estimate, Figures are as per latest data available, CAGR till FY18, * - between April-December 2018

**Source:** Ministry of External Affairs, Aranca Research, Crisil
With infrastructure investment set to go up, demand for construction equipment will rise further.

In 2018, about 98,204 units of construction equipment were sold which set a new record for India.

By FY20, construction equipment industry’s revenue is estimated to reach to US$ 7 billion.

By 2022F, construction equipment sales are forecasted to reach 110,815 units.

Key players:

• Universal Construction Machinery & Equipment.
• Volvo Construction Equipment India.
• ACE Construction Equipment.
• L&T Construction Equipment.
• Triton Valves.

Note:  F – Forecast,
Source: NBM & CW, Mahindra Website, Indian Construction Manufacturers’ Association, Off-Highway Research
RISING DEVELOPMENT OF NATIONAL HIGHWAYS

- Following projects were awarded by the NHAI

<table>
<thead>
<tr>
<th>Year</th>
<th>Project description</th>
<th>Total length (Kms)</th>
<th>Cost (US$)</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2018</td>
<td>4 laning on NH-161, Kandi to Ramsanpalle</td>
<td>39.98 km</td>
<td>185.61</td>
<td>GKC Projects</td>
</tr>
<tr>
<td>March 2018</td>
<td>4 laning of on NH-161 from Ramsanpalle village to Mangloor village</td>
<td>46.60 km</td>
<td>189.42</td>
<td>KNR Constructions</td>
</tr>
<tr>
<td>March 2018</td>
<td>4 laning on NH-161 from Mangloor village to Telangana /Maharashtra Border</td>
<td>48.96 km</td>
<td>167.23</td>
<td>Dilip Buildcon</td>
</tr>
<tr>
<td>March 2018</td>
<td>4 laning on NH-363 Repallewada to Telangana /Maharashtra Border</td>
<td>52.60 km</td>
<td>152.68</td>
<td>GKC Projects Limited</td>
</tr>
<tr>
<td>March 2018</td>
<td>4 laning on Ramdas to Gurdaspur</td>
<td>47.492 km</td>
<td>23.09</td>
<td>Inderjit Mehta Constructions Pvt Ltd (JV)</td>
</tr>
<tr>
<td>March 2018</td>
<td>Highway projects in Tamil Nadu</td>
<td>-</td>
<td>199.95</td>
<td>Oriental Structural Engineers</td>
</tr>
<tr>
<td>March 2018</td>
<td>Widening the Bangalore-Mysore section of NH-275 in Karnataka</td>
<td>-</td>
<td>959.65</td>
<td>Dilip Buildcon Ltd</td>
</tr>
<tr>
<td>March 2018</td>
<td>Development of 8 lane Expressway NH-248 BB</td>
<td>-</td>
<td>161.72</td>
<td>M/s Larsen and Tubro Ltd</td>
</tr>
<tr>
<td>March 2018</td>
<td>4 laning project</td>
<td>53.3 km</td>
<td>176.88</td>
<td>Adani Group</td>
</tr>
</tbody>
</table>

**Note:** NHAI: National Highways Authority of India.
**Source:** Media sources, Aranca Research
The Special Accelerated Road Development Programme for the North Eastern region (SARDP-NE) is aimed at developing road connectivity between remote areas in the North East with state capitals and district headquarters.

Implementation of the road development programme would facilitate connectivity of 88 district headquarters in North Eastern states to the nearest National Highways.

The Government of India plans to invest Rs 1.45 lakh crore (US$ 22.40 billion) towards road infrastructure in North-East region between 2018-2020.

In April 2018, the Ministry of Road Transport and Highways approved Bharatmala Pariyojana Phase-I which includes improvement of 3,528 km road in North East region from 2017-18 to 2021-22.

In December 2017, Mr Narendra Modi, Prime Minister of India, announced investment of Rs 60,000 crore (US$ 9.33 billion) under SARDP between 2018-2020.

The details of various development and maintenance works under-taken in the North-East region are mentioned below:

<table>
<thead>
<tr>
<th>Project description</th>
<th>Total length (Kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length under NHDP Phase - III</td>
<td>110</td>
</tr>
<tr>
<td>Length of National Highways, State Roads under SARDP-NE are divided in 2 phases:</td>
<td></td>
</tr>
<tr>
<td>(i) Phase A</td>
<td>4,099</td>
</tr>
<tr>
<td>(ii) Phase B (approved for DPR preparation only)</td>
<td>3,723</td>
</tr>
<tr>
<td>Arunachal Pradesh Package of Roads and Highways</td>
<td>2,319</td>
</tr>
</tbody>
</table>

Note: data is expected to be updated by June 2019 from Ministry of Road Transport and Highways Annual Report FY19
Source: NHAI, MoRTH Annual Report 2017-18, PPP in India, Aranca Research
GROWTH IN PRIVATE PARTICIPATION

As of April 17, 2019, there were 1,749 PPP projects in India, of which 763 were related to roads and bridges.

Projects awarded under BOT is 37.48 per cent of the total awarded projects as of February 15, 2019.

During FY18, projects of about 209 kms were awarded to BOT players by NHAI.

Note: PPP - Public-private partnership, BOT - Build–operate–transfer, Projects awarded under BOT data is expected to be updated by May 2019 from Public Private Partnerships in India data
Source: MoRTH, Aranca Research, Department of Economic Affairs

For updated information, please visit www.ibef.org
PRIVATE PLAYERS GAINING TRACTION IN THE ROADS SECTOR

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

**Major private sector players**

- **IRB Infrastructure Developers Ltd**

- **IL&FS**
  - Major projects: North Karnataka Expressway, West Gujarat Expressway, Noida Toll Bridge, Ahmedabad - Mehsana Toll Road, East Coast Road, Kotakatta Kurnool Road Project, East Coast Road, Hazaribagh Ranchi Expressway Ltd, Karnataka Toll Bridges.

- **Ashoka Buildcon Limited**
  - Major projects: NH6 Dhankuni to Kharagpur, Sambalpur Baragarh, NH4 Belgaum Dharwad, NH-3 Pimpalgaon – Nashik – Gonde Road (JV with L&T), Jaora – Nayagaon Road, Chennai Outer Ring Road, Modhul – Nippani Road, Indore Edalabad Road, Wainganga Bridge, Ahmednagar Aurangabad Road.

- **HCC**

- **GMR**

**Notes:** NH – National Highway  
**Source:** Aranca Research
GROWTH DRIVERS
STRONG DEMAND AND POLICY SUPPORT DRIVING INVESTMENTS

Growing demand
- Rise in 2 and 4 wheeler vehicles.
- Increasing freight traffic.
- Strong trade and tourist flows between states.

Policy support
- Greater government focus on infrastructure.
- Standardised processes for bidding and tolling; clear policy framework.
- Tax sops, FDI, FII encouragement.

Increasing investments
- NHAI implementing one of the largest road projects.
- Rising private sector participation.
- Strong projected demand making returns attractive.

Source: Make in India, Aranca Research
Growing domestic trade flows have led to a rise in commercial vehicles and freight movement; supported by rise in production of commercial vehicles to 894,551 in 2017-18 from 567,000 in 2009-10 at a CAGR of 5.87 per cent.

Road's traffic share of the total traffic in India has grown from 13.8 per cent to 65 per cent in freight traffic and from 32 per cent to 90 per cent in passenger traffic over 1951–2017.

Higher individual discretionary spending has led to increased spending on cars, motorbikes and scooters;

- Domestic sales of passenger vehicles increased at a CAGR of 4.26 per cent during FY12-18 and reached 3.29 million during FY18 from 26,65,015 in FY13.
- Domestic sales of commercial vehicles in the country increased at a CAGR of 1.56 per cent in FY12-18, with the number reaching 856,453 during FY18 from 7,93,211 in FY13.
POLICY INITIATIVES IN THE RIGHT DIRECTION … (1/2)

Rural Development

- The Prime Minister's Gram Sadak Yojana (PMGSY) is a scheme for development of rural roads in India. The Government of India has succeeded in providing road connectivity to 85 per cent of the 178,184 eligible rural habitations and all villages are expected to be connected through a road network by 2019. Total length of roads constructed were 47,447 km in 2017-18.
- In April 2018, the Government of India signed a US$ 210 million deal with World Bank to improve rural roads at a stretch of 10,510 km in Madhya Pradesh under the Gram Sadak Yojana programme.
- Construction of roads under PMGSY increased to 48,719 km in 2017-18 from 25,316 km in 2013-14. Road construction in 2018-19 (up to January 2019) stood at 24,368 km.
- Under the Union Budget 2019-20, the Government of India allocated Rs 19,000 crore (US$ 2.63 billion) for the Pradhan Mantri Gram Sadak Yojana (PMGSY).
- The Government of India will spend around Rs 1 lakh crore (US$ 15.26 billion) during FY18-20 to build roads in the country under Pradhan Mantri Gram Sadak Yojana (PMGSY).

Taxes and other sops

- Companies enjoy 100 per cent tax exemption in road projects for 5 years and 30 per cent relief over the next 5 years.
- Companies have been granted a capital of up to 40 per cent of the total project cost to enhance viability.

Encouragement of Infrastructure Debt Funds (IDFs)

- Government of India has set up the India Infrastructure Finance Company (IIFCL) to provide long-term funding for infrastructure projects.
- Interest payments on External Commercial Borrowings for infrastructure are now subject to a lower withholding tax of 5 per cent vis-à-vis 20 per cent earlier.
- IDF income is exempt from income tax.
- In May 2018, IIFCL Mutual Fund launched infrastructure debt fund (IDF) scheme with Corporation Bank, Oriental Bank of Commerce & IIFCL as investors and Canara Bank & HUDCO as strategic investors.

Source: News Articles, Union Budget 2018-19, Aranca Research
## Bhoomi Rashi
- The portal accelerates the process of publication of notifications for land acquisition.
- It has been useful in reducing the time taken for providing notification regarding approval and publication of land acquisition.

## Bidder Information Management System (BIMS)
- BIMS is a database that provides information about bidders’ basic details, civil works experience, cash accruals and network, annual turnover, etc.
- This portal will enable objective and transparent evaluation which will accelerate project implementation.

## Central Road Fund (CRF)
- In 2018-19 Rs 46,636 lakhs (US$ 66.73 million) worth of amount has been released Under Central Road Fund (CRF).
- The Central Road Fund (Amendment) Bill, 2017 has been passed by the Lok Sabha, Government of India which would result in revenues of Rs 2,300 crore (US$ 358.7 million) for national waterways in the country.

## Goods and Services Tax (GST)
- The GST on construction equipment has been reduced to 18 per cent from 28 per cent, which is expected to give a boost to infrastructure development in the country.

## Investment in roads and other infrastructure
- Under the Union Budget 2019-20, the government has allocated Rs 1.12 trillion (US$ 15.48 billion) under the Ministry of Road Transport and Highways.
- The total amount of investments* are estimated to reach Rs 1.58 trillion (US$ 2.25 billion) in FY19.

## Bharatmala Pariyojana Project
- A total length of 34,800 km road projects have been proposed to be constructed with an estimated outlay of Rs 5.35 trillion (US$ 74.15 billion), under Bharatmala Pariyojana Phase-I.
- As of November 2018, total length of projects awarded was 6,460 kms for a total cost of Rs 1.52 trillion (US$ 21.07 billion) under Bharatmala Pariyojana (including residual NHDP works).
- A total of 65,000 km of roads and highways are to be constructed under Bharatmala Pariyojana.

---

**Note:** * - investments include Budgetary support. IEBR refers to Internal and Extra Budgetary Resources and constitutes the resources raised by the public sector units through profits, loans and equity and Private sector investments.  
**Source:** News Articles, Press releases, Ministry of Road Transport and Highways
Roadways has been the key focus area for budget allocations over the years.

As per Union Budget 2019-20, the government provided an outlay of Rs 1.12 trillion (US$ 15.48 billion) under the Ministry of Road Transport and Highways.

Between FY09 and FY19, budget outlay for road transport and highways increased at a robust CAGR of 16.82 per cent.

Source: Respective Union Budgets, Aranca Research
FUTURE PROSPECTS REMAIN BRIGHT FOR THE ROAD SECTOR … (1/2)

- National Highway Development Project (NHDP) is a 7 phase project amounting to US$ 60 billion. The projects aims to widening, up-gradation and rehabilitation of 47,054 kilometres of national highways.

- In FY18, NHAI awarded 150 road projects covering 7,400 kilometres worth Rs 1,220 billion (US$ 18.93 billion). A total of 892 km and 2,345 km national highway projects were awarded and constructed, respectively between April – August 2018.

- The Ministry of Road Transport and Highways has fixed an overall target to award 15,000 km projects and construction of 10,000 km national highways in FY19. A total of about 295 major projects including bridges and roads are expected to be completed during the same period.

- In the coming years, NHAI’s increased delegation autonomy along with Bharatmala Pariyojana initiative is expected to enable growth in awarding momentum.

Note: ^ - between April – August 2018, Projects awarded by NHDP data is expected to be updated by June 2019 from Ministry of Road Transport and Highways Annual Report FY19
Source: NHAI, MoRTH Annual Report 2017-18, Crisil Research
PRIVATE FUNDING BEING ENCOURAGED TO REDUCE FINANCE CONSTRAINTS

- Cumulative FDI in construction development^ since April 2000 stood at US$ 24.91 billion as of December 2018.
- Maif 2 Investments India Pvt Ltd became the first largest foreign investment in Indian roads sector under toll-operate-transfer (TOT) mode worth Rs 9,681.5 crore (US$ 1.50 billion).

Note: ^ - FDI in construction development Includes: Townships, housing, built-up infrastructure and construction-development projects, * - till December 2018
Source: DPIIT, Aranca Research
KEY INDUSTRY ASSOCIATIONS
## 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

### 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
USEFUL INFORMATION
GLOSSARY

- 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
- US$ : US Dollar – Conversion rate used: US$ 1 = INR54.43
## Exchange Rates

### Exchange Rates (Fiscal Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR Equivalent of one US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004–05</td>
<td>44.95</td>
</tr>
<tr>
<td>2005–06</td>
<td>44.28</td>
</tr>
<tr>
<td>2006–07</td>
<td>45.29</td>
</tr>
<tr>
<td>2007–08</td>
<td>40.24</td>
</tr>
<tr>
<td>2008–09</td>
<td>45.91</td>
</tr>
<tr>
<td>2009–10</td>
<td>47.42</td>
</tr>
<tr>
<td>2010–11</td>
<td>45.58</td>
</tr>
<tr>
<td>2011–12</td>
<td>47.95</td>
</tr>
<tr>
<td>2012–13</td>
<td>54.45</td>
</tr>
<tr>
<td>2013–14</td>
<td>60.50</td>
</tr>
<tr>
<td>2014–15</td>
<td>61.15</td>
</tr>
<tr>
<td>2015–16</td>
<td>65.46</td>
</tr>
<tr>
<td>2016–17</td>
<td>67.09</td>
</tr>
<tr>
<td>2017–18</td>
<td>64.45</td>
</tr>
<tr>
<td>2018–19</td>
<td>69.89</td>
</tr>
</tbody>
</table>

### Exchange Rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR Equivalent of one US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>44.11</td>
</tr>
<tr>
<td>2006</td>
<td>45.33</td>
</tr>
<tr>
<td>2007</td>
<td>41.29</td>
</tr>
<tr>
<td>2008</td>
<td>43.42</td>
</tr>
<tr>
<td>2009</td>
<td>48.35</td>
</tr>
<tr>
<td>2010</td>
<td>45.74</td>
</tr>
<tr>
<td>2011</td>
<td>46.67</td>
</tr>
<tr>
<td>2012</td>
<td>53.49</td>
</tr>
<tr>
<td>2013</td>
<td>58.63</td>
</tr>
<tr>
<td>2014</td>
<td>61.03</td>
</tr>
<tr>
<td>2015</td>
<td>64.15</td>
</tr>
<tr>
<td>2016</td>
<td>67.21</td>
</tr>
<tr>
<td>2017</td>
<td>65.12</td>
</tr>
<tr>
<td>2018</td>
<td>68.36</td>
</tr>
</tbody>
</table>

*Source: Reserve Bank of India, Average for the year*
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.