



ROADS

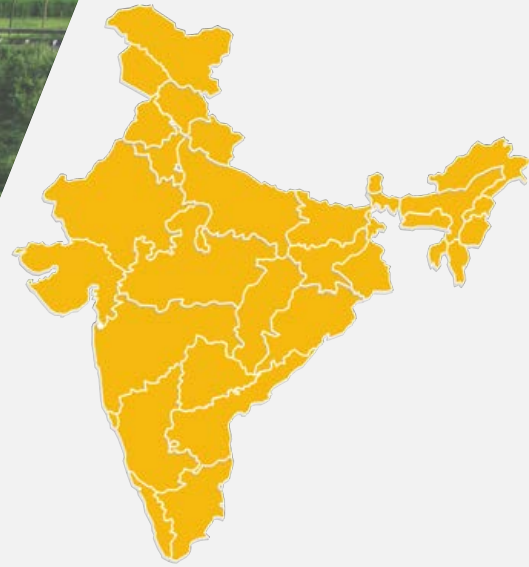
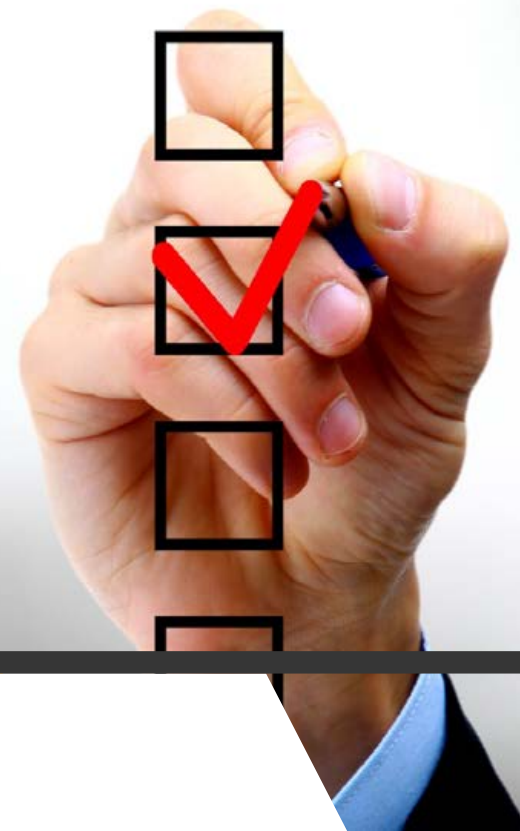


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EXECUTIVE SUMMARY

One of the largest road networks in the world

- India has second largest road networks in the world, spanning over a total of 5.8 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.
- For 2019-20, the Ministry of Road Transport and Highways is estimated the total expenditure of Rs 83,016 crore (US\$ 118.4 billion).

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 next five years, National Highway Authority of India (NHAI) will able to generate Rs 1 lakh crore (US\$ 14.30 billion) annually from toll and other sources.
- National Highway Authority of India (NHAI) is planning to raise Rs 40,000 crore (US\$ 5.72 billion) to monetise its highway assets through Infrastructure Investment Trust (InvIT).
- The Government of India aims to complete 200,000 km national highways by 2022
- NHs under the Bharatmala Pariyojana programme which aims to optimize the productivity of freight and passenger movement by filling the critical infrastructure gaps also sight to increase the number of districts with national highway linkages from 300 to 550.

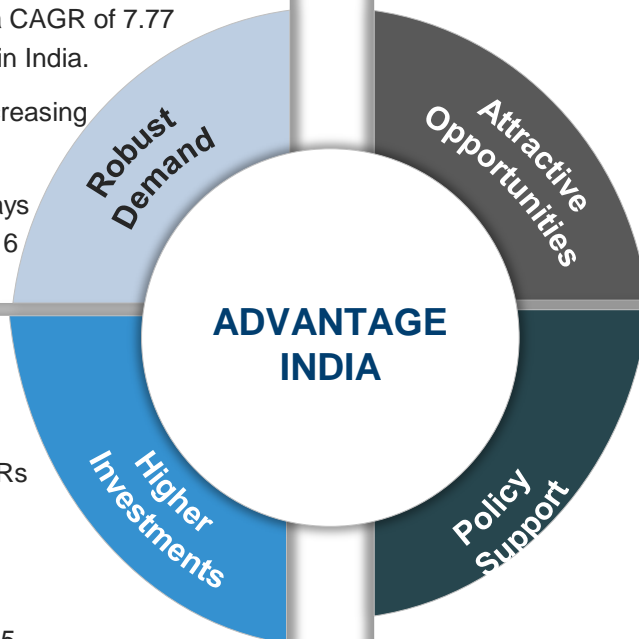
Overseas Investment for infrastructure development

- 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, TechSci Research , CARE Ratings

ADVANTAGE INDIA





- National Highway Building Authority (NHAI) invited bids for its fourth bundle of TOT also aims to achieve Rs 4,200 crore (US\$ 600.94 million)
- Growth in production of commercial vehicles to 1.11 million in 2018-19 from 0.57 million in 2009-10 at a CAGR of 7.77 per cent commands stronger road network in India.
- Rise in the number of 2 and 4 wheelers, increasing traffic supports the growth.
- The Ministry of Road Transport and Highways estimated the total expenditure of Rs 83,016 crore (US\$ 11.88 billion) for 2019-20.

- The Government of India has set a target to complete one road projects every two days as a part of 100-day plan.
- India has joined league of 15 of global alliance which will work towards the ethical use of smart city technologies
 - 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.
 - 12,000 km of national highways to be built by end of FY20.
 - 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.
- Transfer to National Investment Fund (NIF) is estimated at Rs 6,070 crore (US\$ 868.51 million) for 2019-20.

- 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.
- The finance bill 2019, done certain changes in the Central Roads and Infrastructure Fund Act, that central government will now be responsible for formulating criteria for any state road project.

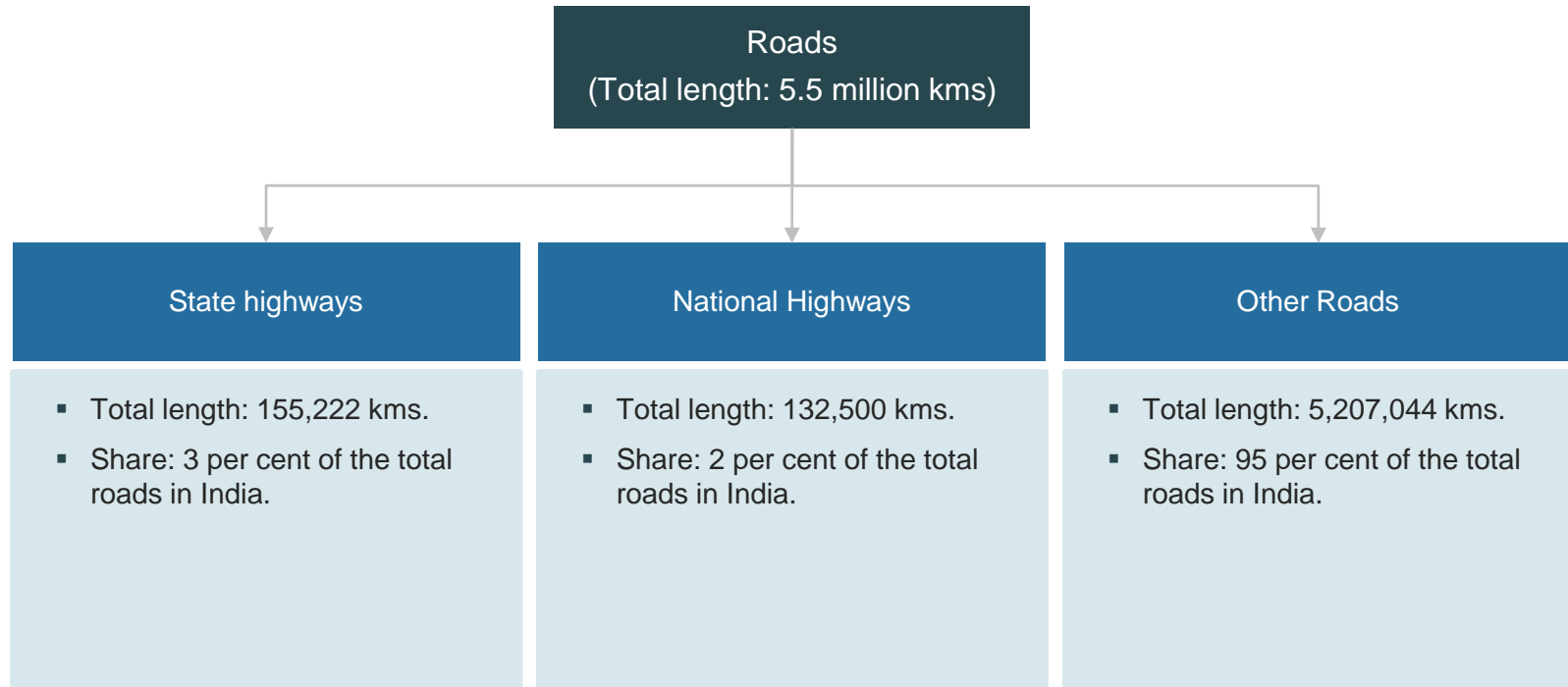
*Note: * - investments include Budgetary support, IEBR refers to Internal and Extra Budgetary Resources and constitutes the resources raised by the public sector units through profits, loans and equity and Private sector investments, ^Asian Infrastructure Investment Bank*

Source: NHAI, Make in India, MoRTH, Business Monitor International, TechSci Research, Ministry of Road Transport and Highways, Asian Infrastructure Investment Bank (AIIB)

MARKET OVERVIEW



ROAD NETWORK IN INDIA IS SUB-DIVIDED INTO THREE CATEGORIES



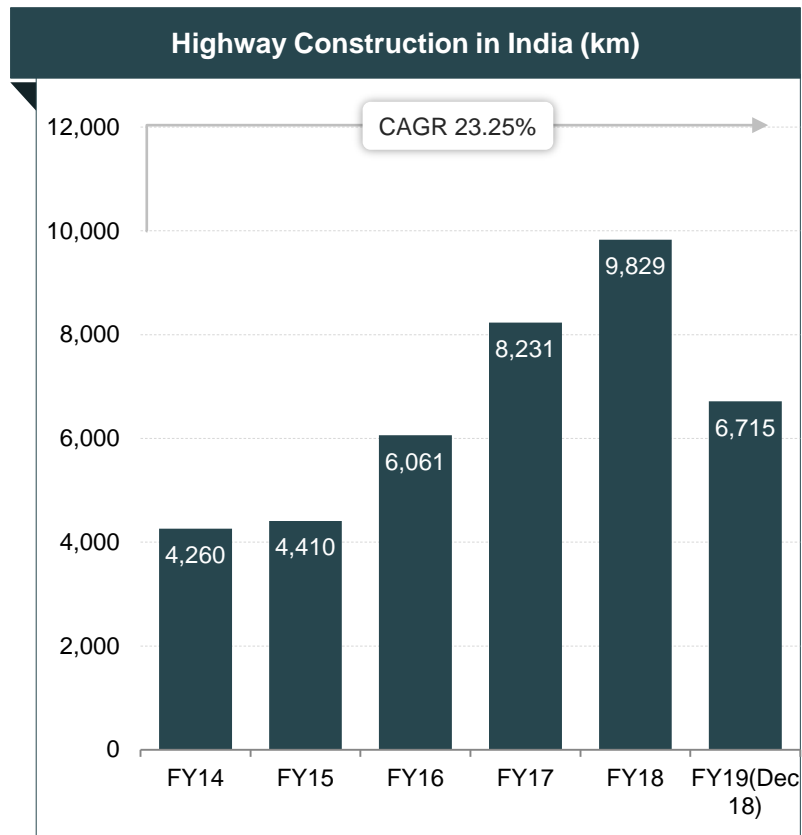
Source: Ministry of Roads Transport & Highways Annual Report 2017-18

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 will use the waste of plastic for the construction of roads. One of the road has been recently constructed with plastic waste near Dhaula Kuan also planning for the construction of Delhi-Meerut Expressway and Gurugram-Sohna road.
- 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.
- In March 2019, National Highway projects worth Rs 1,10,154 crore were inaugurated
- The Ministry of Road Transport & Highways is planning to build 12,000 km of highways by end of FY20.
- On May 2018, Delhi-Meerut Expressway was inaugurated as the first national highway in the country with 14 lanes, dedicated cycle tracks and pedestrian paths with several eco-friendly features.
- 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,

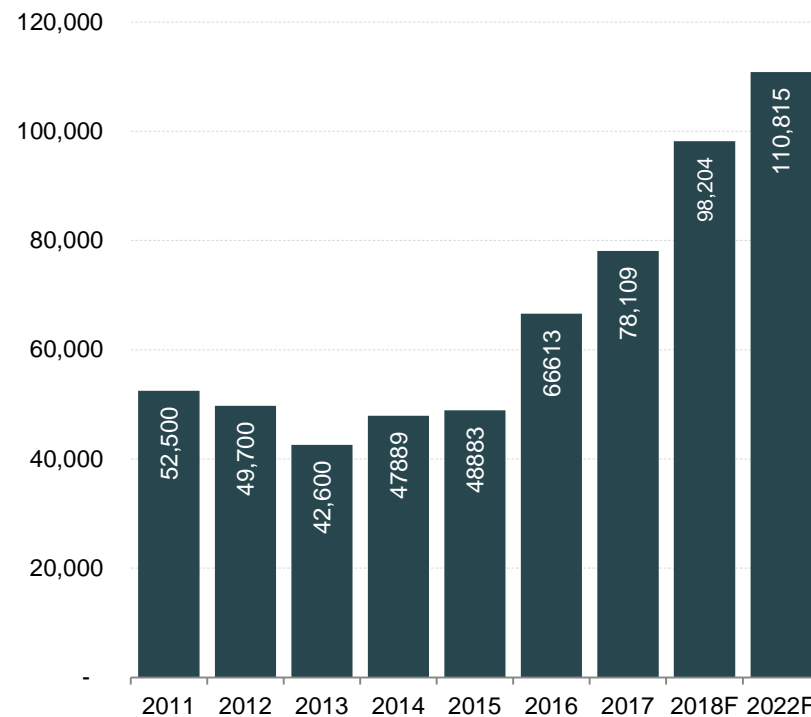
Source: Ministry of External Affairs, TechSci Research, Crisil



ROBUST INDIAN CONSTRUCTION EQUIPMENTS

- 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.
- The government's move to cut GST rates on construction equipment from 28 per cent to 18 per cent is supposed to give boost to the industry.
- Key players:
 - Universal Construction Machinery & Equipment.
 - Volvo Construction Equipment India.
 - ACE Construction Equipment.
 - L&T Construction Equipment.
 - Triton Valves.

Total number of construction equipment units sold



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

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

Note: NHAI: National Highways Authority of India.

Source: Media sources, TechSci Research

SPECIAL ACCELERATED ROAD DEVELOPMENT PROGRAMME FOR THE NORTH EAST REGION

- 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:

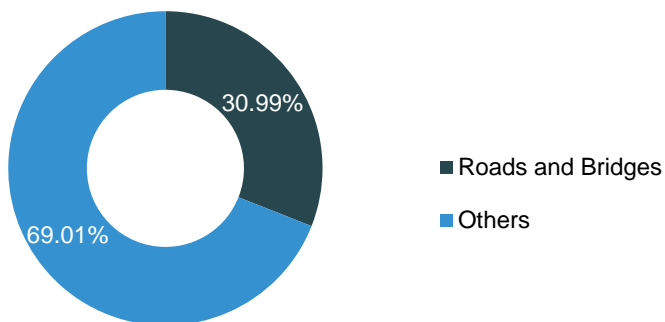
| Project description | Total length (Kms) |
|--|--------------------|
| Length under NHDP Phase - III | 12,125 |
| Length of National Highways, State Roads under SARDP-NE are divided in 2 phases: | |
| (i) Phase A | 4,099 |
| (ii) Phase B (approved for DPR preparation only) | 3,723 |
| Arunachal Pradesh Package of Roads and Highways | 2,319 |

Note: data is expected to be updated by June 2019 from Ministry of Road Transport and Highways Annual Report FY19

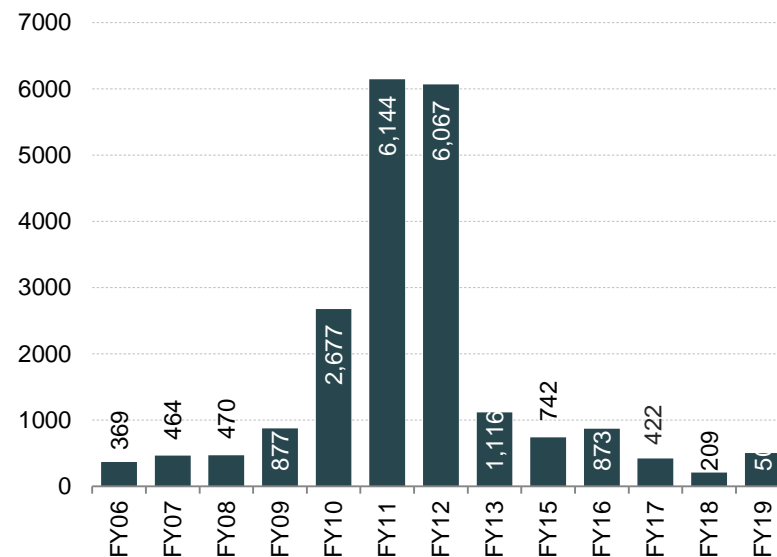
Source: NHAI, MoRTH Annual Report 2017-18, PPP in India, TechSci Research

GROWTH IN PRIVATE PARTICIPATION

Total PPP projects in India (as of November 2019)



Projects awarded to BOT private players (in Kms)



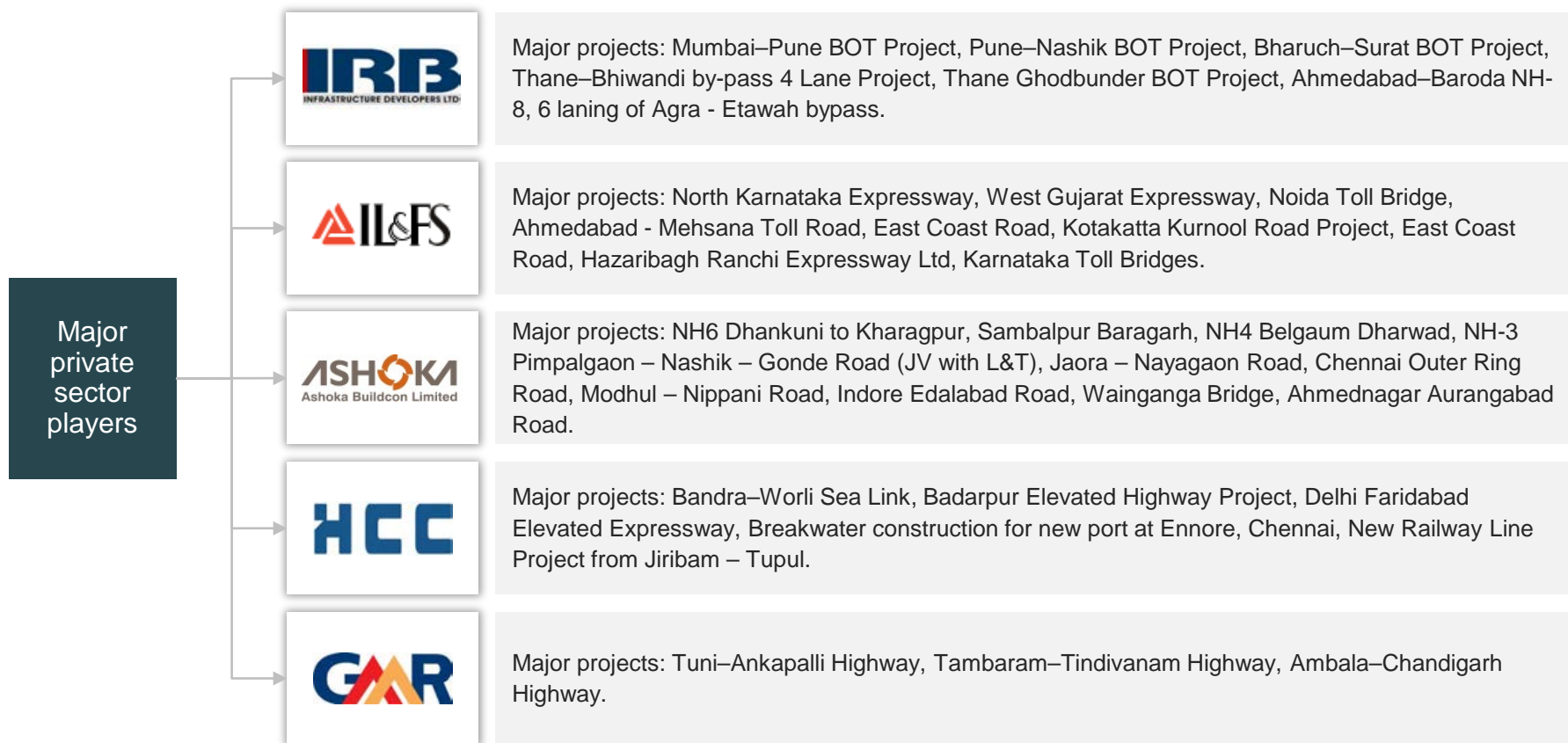
- As of November 2019, there were 9,242 PPP projects in India, of which 2,864 were related to roads and bridges.
- Projects awarded under BOT is 37.48 per cent of the total awarded projects as of February 15, 2019.
- During FY18, projects of about 209 kms were awarded to BOT players by NHAI.

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, TechSci Research, Department of Economic Affairs

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.

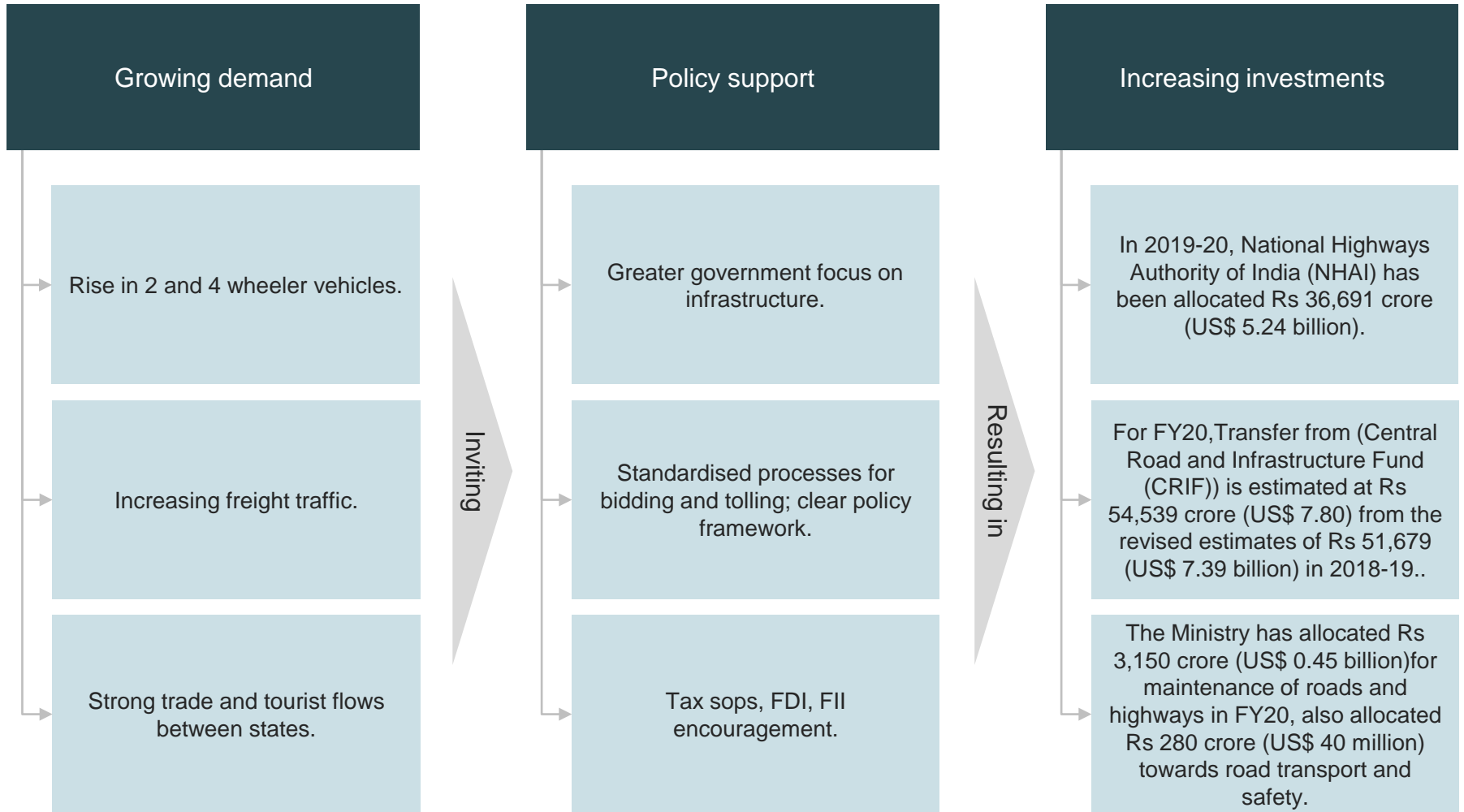


Notes: NH – National Highway
Source: TechSci Research

GROWTH DRIVERS



STRONG DEMAND AND POLICY SUPPORT DRIVING INVESTMENTS

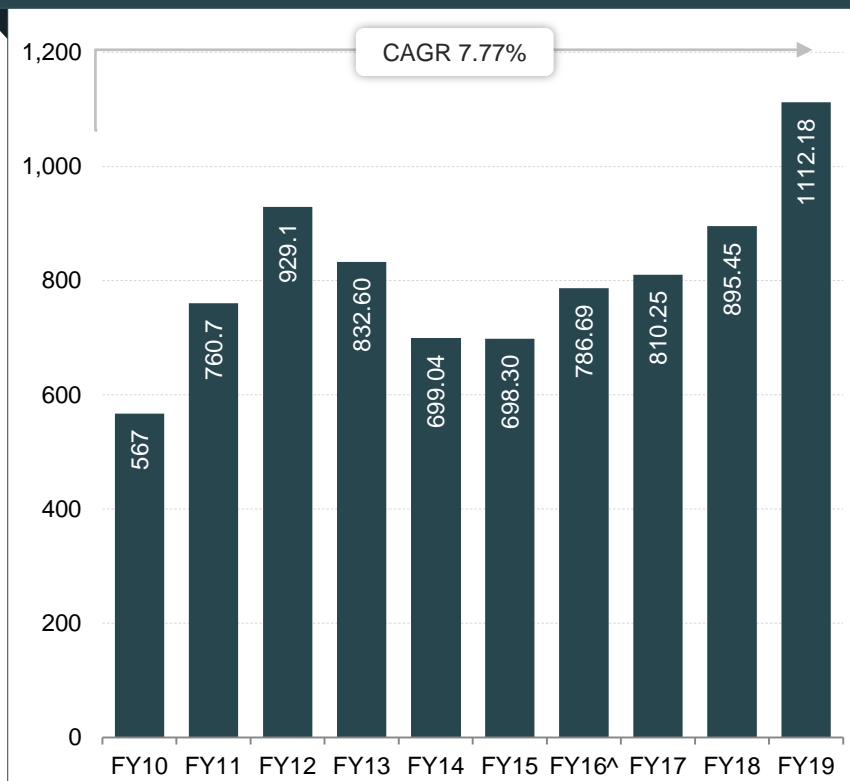


Source: Make in India, TechSci Research

RISING TRADE, VEHICULAR PRODUCTION

- Growing domestic trade flows have led to a rise in commercial vehicles and freight movement; supported by rise in production of commercial vehicles to 1.11 million in 2018-19 from 0.57 million in 2009-10 at a CAGR of 7.77 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 6.17 per cent during FY14-19 and reached 3.38 million during FY19 from 2.50 million in FY14.
 - Domestic sales of commercial vehicles in the country increased at a CAGR of 9.74 per cent in FY14-19, with the number reaching 1.01 million during FY19 from 0.63 million in FY14.

Trends in commercial vehicle Production (in '000)



Note: ^- Only Oct-March 2016 data is available for 2015-16.
Source: SIAM, TechSci Research

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.
- To widen and revamp 1.25-lakh km of roads government of India has approved the launch of Phase-III of its rural road programme Pradhan Mantri Gram Sadak Yojana (PMGSY).
- As per Union Budget 2019-20, Pradhan Mantri Gram Sadak Yojana (PMGSY) has brought many socio economic gains in the rural areas. 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).
- As per Union Budget 2019-20, 30,000 kms of PMGSY roads have been built using Green Technology, Waste Plastic and Cold Mix Technology, thereby reducing carbon footprint.
- PMGSY-III is envisaged to upgrade 1,25,000 kms of road length over the next five years, with an estimated cost of Rs 80,250 crore (US\$11.48 billion).

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.
- As per the Union Budget 2019-20, government proposed to permit investments made by FIIs/FPIs in debt securities issued by Infrastructure Debt Fund – Non-Bank Finance Companies (IDF-NBFCs) to be transferred/sold to any domestic investor within the specified lock-in period.
- 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, TechSci Research

POLICY INITIATIVES IN THE RIGHT DIRECTION ... (2/2)

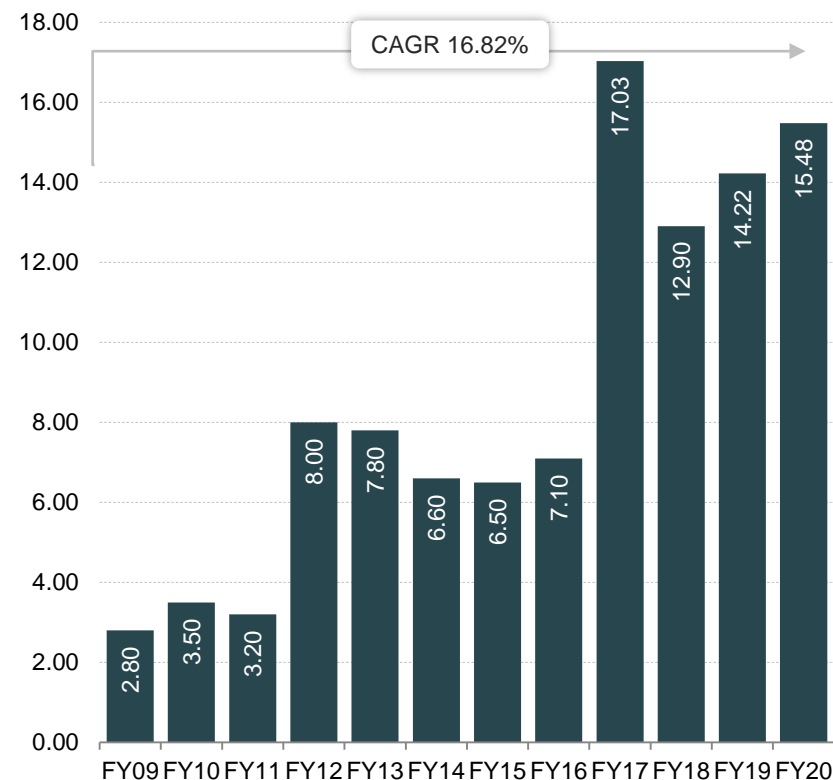
| | |
|--|--|
| Bhoomi Rashi | <ul style="list-style-type: none"> ▪ The portal accelerates the process of publication of notifications for land acquisition. ▪ It has been useful in reducing the time taken for providing notification regarding approval and publication of land acquisition. |
| Bidder Information Management System (BIMS) | <ul style="list-style-type: none"> ▪ 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) | <ul style="list-style-type: none"> ▪ In 2018-19 Rs 46,636 lakhs (US\$ 66.73 million) worth of amount has been released Under Central Road Fund (CRF). ▪ In 2019-20, the transfer from CRIF is estimated at Rs 54,539 crore (US\$ 7.80 billion) which is a 6 per cent increment from the revised estimates of Rs 51,679 crore (US\$ 7.39 billion) in 2018-19. |
| Goods and Services Tax (GST) | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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. ▪ Government plans to invest Rs 15 lakh crore (US\$ 214.62 billion) in the next five years. |
| Bharatmala Pariyojana Project | <ul style="list-style-type: none"> ▪ By 2024, Bharatmala Pariyojana is expected to see 55 per cent of cost overrun and awarding activities to be completed. ▪ 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. ▪ The National Highway Authority (NHAI) will consider only those projects that require minimal land acquisition of worth about Rs 3 trillion (US\$ 42.92 billion) under the Bharatmala Pariyojana scheme. ▪ 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

BUDGETARY OUTLAY FOR ROADS

- 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.
- Huge investments have been made in the sector with total investment increasing more than three times from Rs 51,914 crore (US\$ 7.43 billion) in 2014-15 to Rs 158,839 crore (US\$ 22.73 billion) in 2018-19.

Outlay for roads under the respective Union Budgets (US\$ billion)

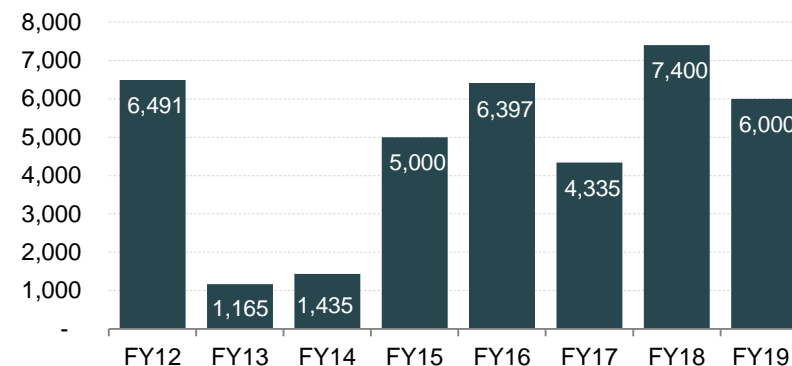


Source: Respective Union Budgets, TechSci Research

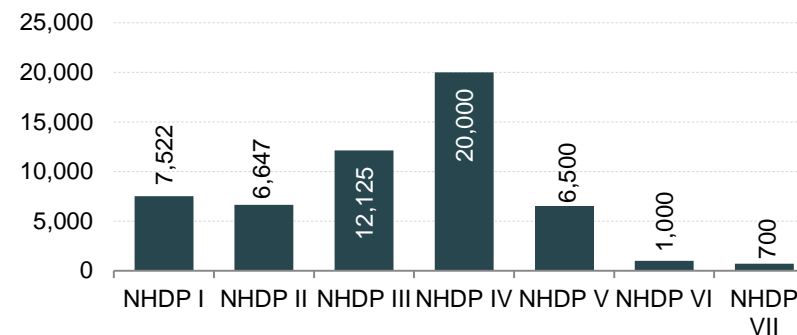
FUTURE PROSPECTS REMAIN BRIGHT FOR THE ROAD SECTOR ... (1/2)

- 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.
- The consumption on the NHAI incorporates funding provide towards projects under the National Highways Development Project (NHDP) which are the Golden Quadrilateral, the North-South and East-West Corridors, and four-laning of 12,109 kms under phase III.
- The Ministry of Road Transport & Highways is expected to award road projects with a total length of around 4,500 km worth Rs 50,000 crore (US\$ 7.15 billion) in 2020.

Projects awarded (in kilometres)



Projects awarded (in kilometres) by NHDP as of 31st December 2018



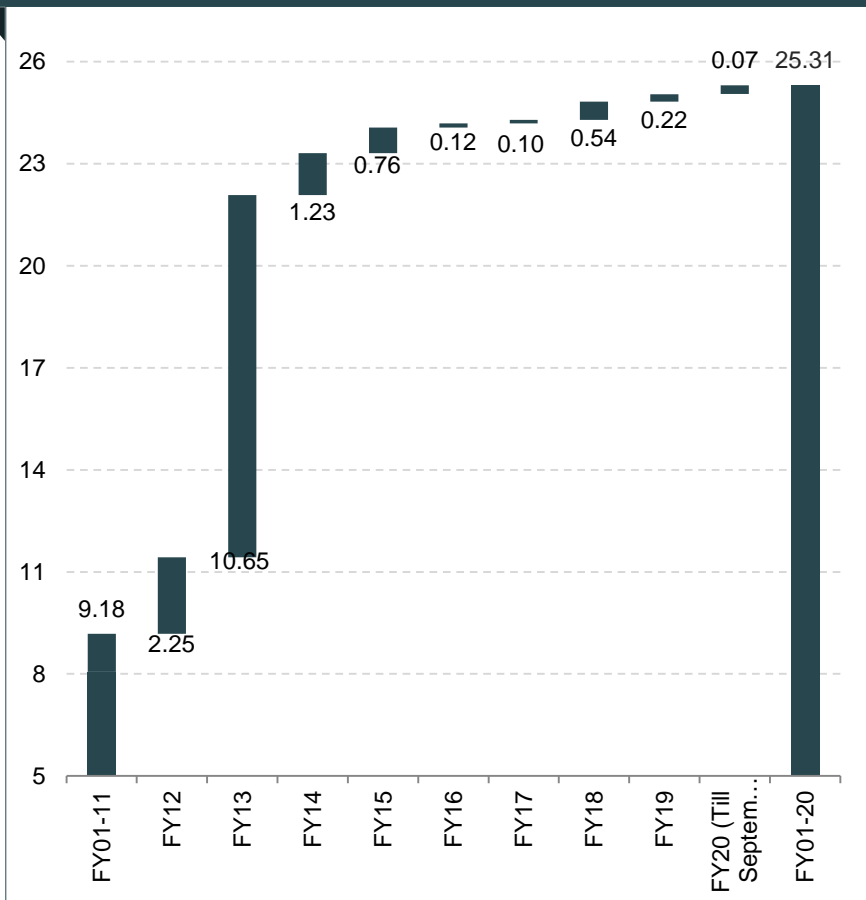
Note: Projects awarded by NHDP data is expected to be updated by June 2019 from Ministry of Road Transport and Highways Annual Report FY19

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\$ 25.31 billion as of September 2019.
- 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).

FDI[^] Inflows (US\$ billion) (up to September'19)



Note: [^] - FDI in construction development Includes: Townships, housing, built-up infrastructure and construction-development projects,

Source: DPIIT

KEY 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



- 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)

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

Exchange Rates (Calendar Year)

| Year | INR Equivalent of one US\$ |
|------|----------------------------|
| 2005 | 44.11 |
| 2006 | 45.33 |
| 2007 | 41.29 |
| 2008 | 43.42 |
| 2009 | 48.35 |
| 2010 | 45.74 |
| 2011 | 46.67 |
| 2012 | 53.49 |
| 2013 | 58.63 |
| 2014 | 61.03 |
| 2015 | 64.15 |
| 2016 | 67.21 |
| 2017 | 65.12 |
| 2018 | 68.36 |

Source: Reserve Bank of India, Average for the year

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