INFRASTRUCTURE 2019

JANUARY

IKASHI WEALTH
Authored by: Yogesh Sharma

INDUSTRY OVERVIEW

OUTLOOK

Infrastructure sector is a key driver for the Indian economy. The sector is highly responsible for propelling India's overall development and enjoys intense focus from Government for initiating policies that would ensure time-bound creation of world class infrastructure in the country. Recent incentives re-affirm the central government's strong commitment to infrastructure with public spending rising sharply. Policy actions to revive stalled projects, expedite approvals, introduce the hybrid annuity and toll-operate-transfer models in highways, sustain the rapid growth in renewable capacity – all augur well

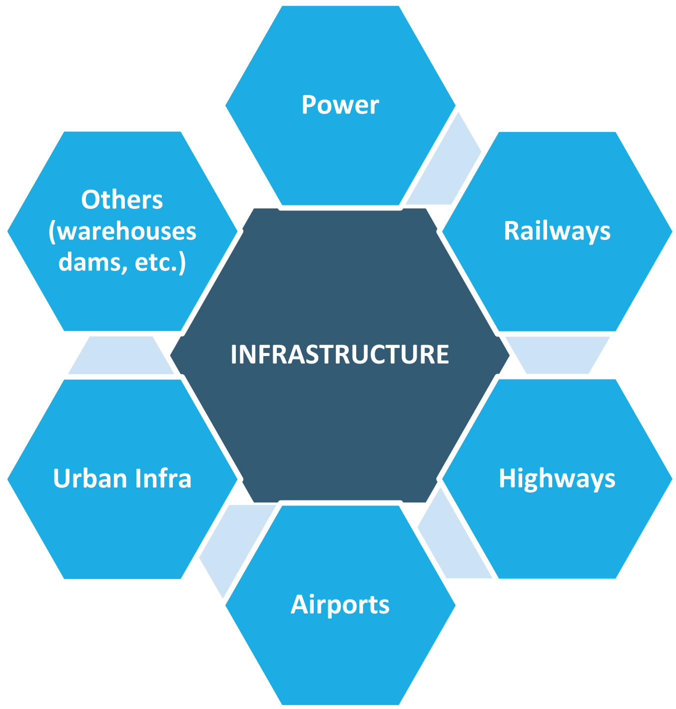
Increased impetus to develop infrastructure in the country is attracting both domestic and international players. Private sector is emerging as a key player across various infrastructure segments, ranging from roads and communications to power and airports. In order to boost the construction of buildings in the country, the Government of India has decided to come up with a single window clearance facility to accord speedy approval of construction projects. The sector has become the biggest focus area of the Government of India. Under Union Budget 2018-19, US$ 92.22 billion was allocated to the sector.

In 2018, India was ranked 44th out of 167 countries in World Bank's Logistics Performance Index (LPI) 2018. India was also ranked second* in the 2018 Agility Emerging Markets Logistics Index.

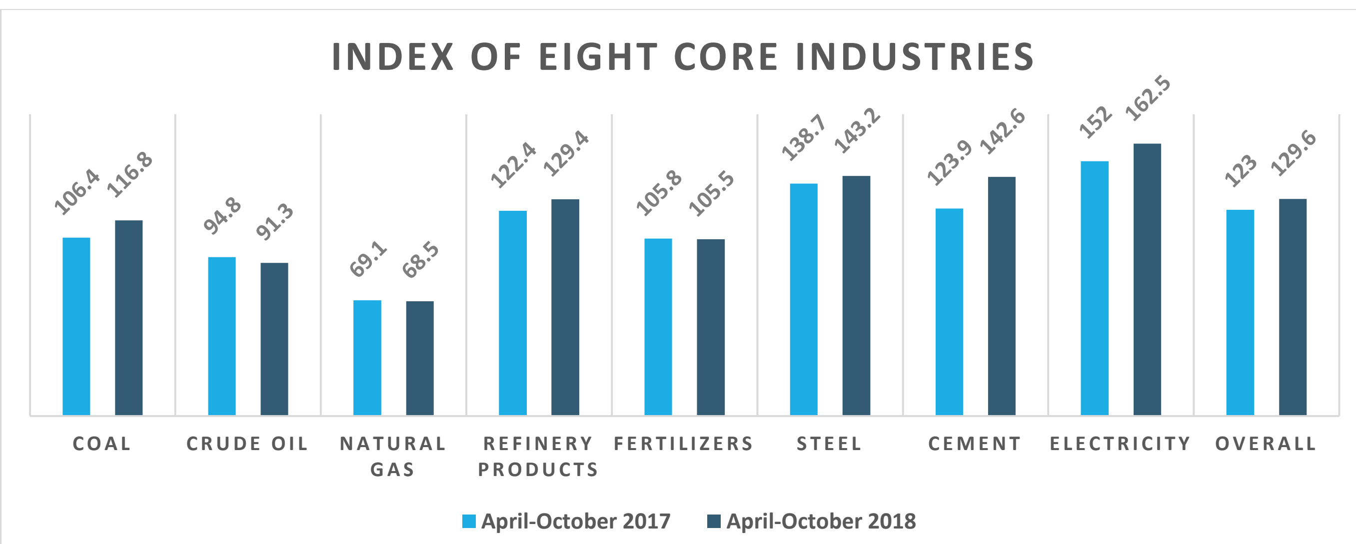
Yet, a number of challenges remain that need decisive tackling. Speedy redressal of stressed assets and debt overhang will be crucial, as will be a comprehensive retooling of public-private partnership framework. Cooperative federalism will be tested as power distribution utilities and municipalities are fixed, which curb scale-up of investments. India's infrastructure spending will have to accelerate to at least USD$ 770 billion by FY22 to make a visible impact on service delivery and provide for rapid and inclusive economic growth.

MARKET SIZE, STURCTURE AND GROWTH

Infrastructure Industry can be structured and categorized in the following way – power, railways, airports, roads & highways, urban infrastructure development, and others, as depicted below:

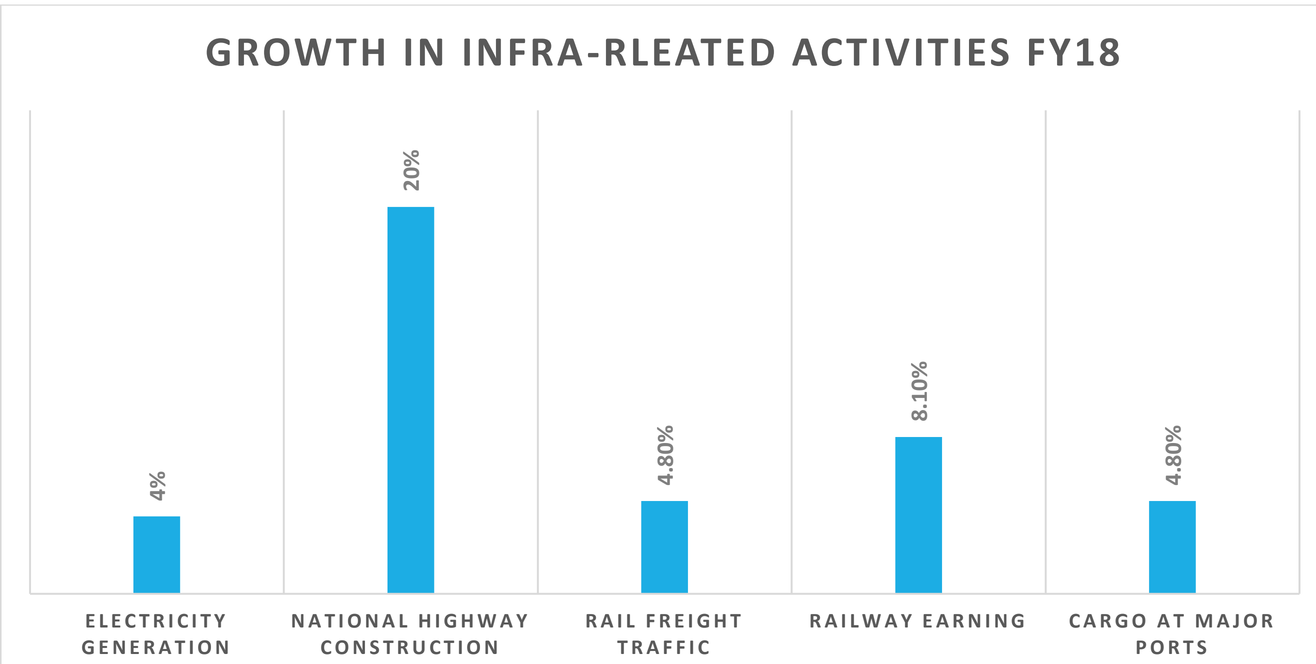


There are 8 industries core to the sector of infrastructure – Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity. The cumulative growth of the index was 4.3 per cent in 2017-18 and 5.4 per cent year-on-year in April-October 2018. During 2017-18, growth in the index was led by cement (6.3 per cent), Steel (5.6 per cent), and electricity (5.2 per cent). In April-October 2018, the growth was driven by 15.0 per cent y-o-y increase in cement production and 9.8 per cent y-o-y increase in coal production.



India is expected to become the third largest construction market globally by 2022. Under Union Budget 2018-19, US$ 92.22 billion was allocated to the sector. Foreign Direct Investment (FDI) received in Construction Development sector (townships, housing, built up infrastructure and construction development projects) from April 2000 to June 2018 stood at US$ 24.87 billion, according to the Department of Industrial Policy and Promotion (DIPP).

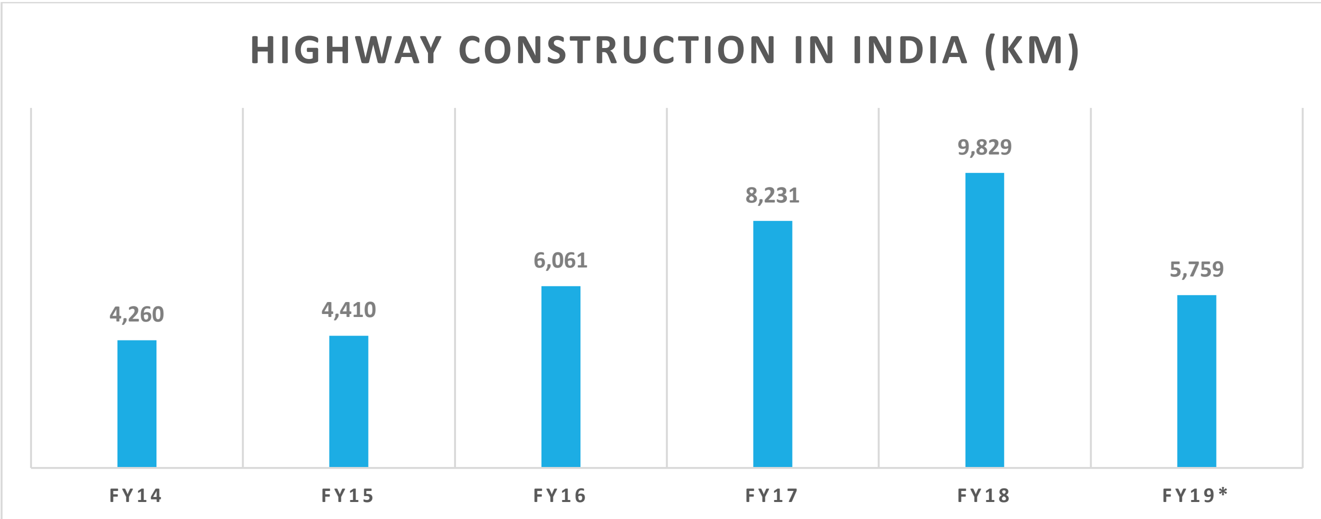
The logistics sector is growing at a CAGR of 10.5% annually and is expected to reach US$ 215 billion in 2020. National highway construction recorded the highest increase of 20 per cent, in line with government's increased focus on improving logistics. Freight traffic handled by Indian Railways increased 6.01 per cent year-on-year during April-October 2018(P) to 690.23 million tonnes while its gross earnings increased by 4.93 per cent year-on-year during the same time. Cargo handled by major Indian ports increased by 4.83 per cent during April-November 2018. Electricity generation in the country increased by 4.89 per cent during April-November 2018.



Highways & Roads

Highway construction in India increased at 23 per cent CAGR between FY14-18. In FY18, 9,829 km of highways were constructed with an expenditure of US$ 18.05 billion. Highway network in the country is expected to cover 50,000 km by 2019. National highway construction in India increased by 20 per cent year-on-year in 2017-18. A target of constructing 10,000 km long National Highways during 2018-19 was set up out of which 5,759 km have been constructed, as of November 2018.

In Union Budget 2018-19, Rs 71,000 crore (US$ 10.97 billion) was allocated for national highways while US$ 2.94 billion was allocated to Pradhan Mantri Gram Sadak Yojana (PMGSY) for development of roads in rural and backward areas of the country. All villages in India will be connected through a road network by 2019 under Pradhan Mantri Gram Sadak Yojana (PMGSY).



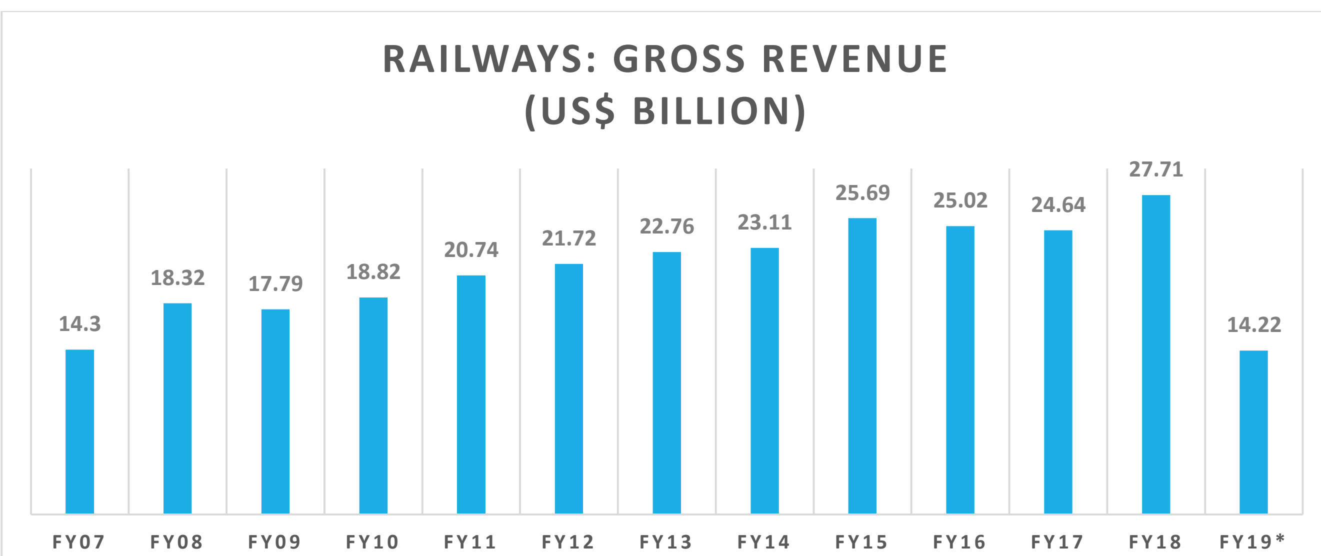
**Up to November 2018*

Indian Railways

Revenue growth for Indian Railways has been strong over the years. During FY07–18, gross revenues increased at a CAGR of 6.20 per cent to US$ 27.71 billion in FY18. Revenues from the sector are estimated to reach to US$ 44.5 billion by the end of FY20. Revenue during April-October 2018 (P) stood at US$ 14.22 billion.

The Indian Railways received the highest ever budgetary allocation under Union Budget 2018-19 at US$ 22.86 billion. Out of this allocation, US$ 22.55 billion is capital expenditure that will be used for capacity creation and redevelopment of 600 railway stations.

Indian Railways will require investment of US$ 545.26 billion by 2032 for capacity addition and modernisation. The Ministry of Railways is working on a plan to earn US$ 1.56 billion over the next 10-20 years through a rail display network (RDN), enabling real-time information to passengers. The capital expenditure in the sector is expected to be increased 92 per cent annually. All Indian Railways trains will become electric by 2022.



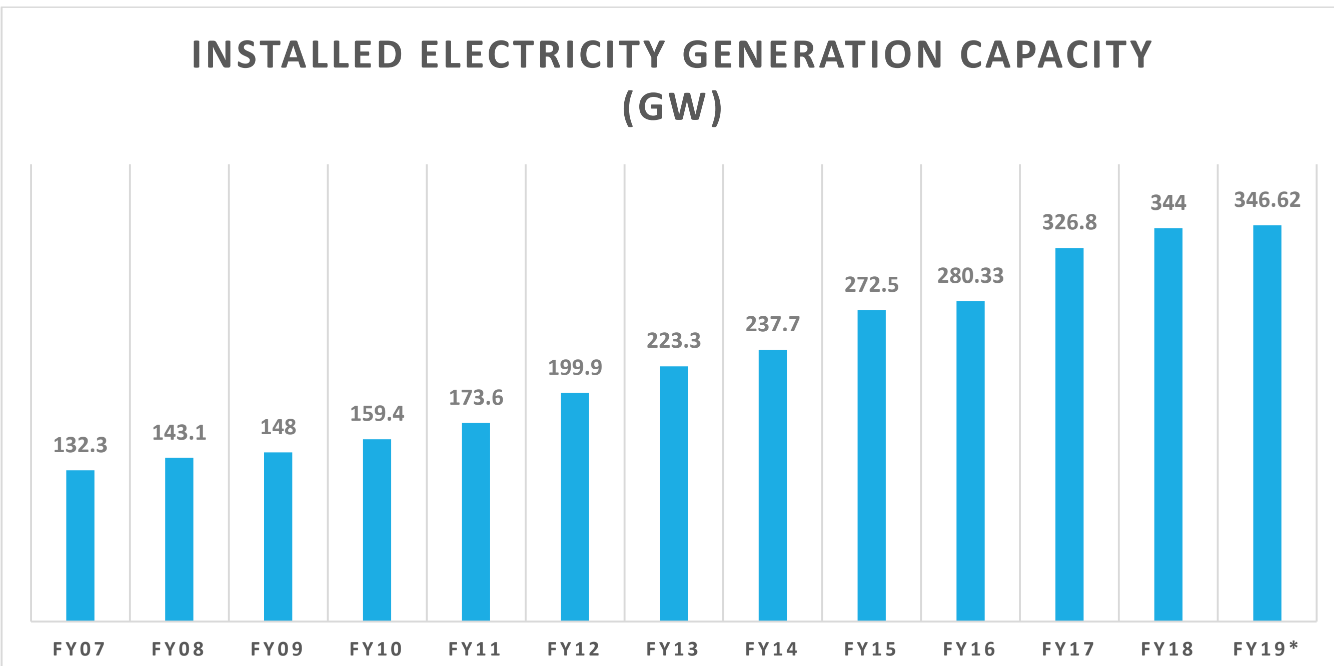
**Up to November 2018*

Power Generation

Indian energy sector is expected to offer investment opportunities worth US$ 300 billion over the next 10 years. During FY18 electricity generation in India reached 1,201.54 billion units (BU); while during April-November 2018, electricity generation in the country has reached to 849,202.43 GWH.

Installed capacity increased steadily over the years, posting a CAGR of 9.1 per cent in FY07–18 and stood at 344 GW by the end of FY18. As of November 2018, installed capacity has reached 346.62 GW. As of November 2018, 15 states have achieved 100 per cent electrification under the Saubhagya Scheme.

India is surging ahead in the area of renewable energy. Renewable capacity has reached 73 gigawatt (GW), which is 20 per cent of the country's total energy capacity. Generation has increased, and solar energy has made tremendous strides. Over the last four years, large-scale solar has seen an average annual growth rate of over 70 per cent. The installed solar capacity has increased from 2.6 GW in March 2014 to 23.1 GW in June 2018 – large-scale solar comprises over 94 per cent of this. At under Rs 3 per unit on an average, wind and solar energy is now cheaper than coal power.



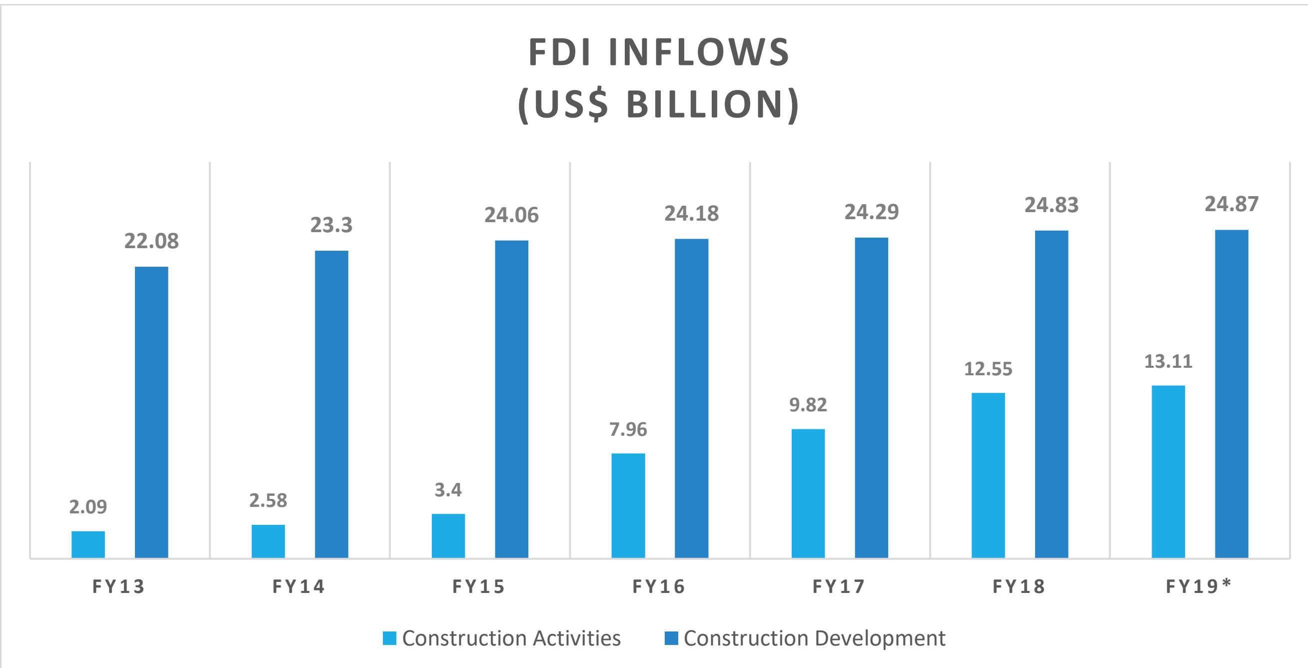
**Up to November 2018*

RECENT TRENDS AND GROWTH DRIVERS

Increasing Investments in Indian Infrastructure

Cumulative FDI inflows in the Construction Activities sector, which includes infrastructure, reached US$ 13.11 billion between April 2000 and June 2018 and in the Construction Development sector reached US$ 24.87 billion.

Private equity and venture capital (PE/VC) investments in the infrastructure reached US$ 1,827 million during January-November 2018. Moreover, Indian infrastructure witnessed 91 M&A deals worth US$ 5.4 billion in 2017.



*Up to June 2018

Railways

For 2018-19, the total capital expenditure of Railways is expected to be US$ 22.55 billion. As per Union Budget 2018-19, capacity constraints in the railways network will be eliminated through doubling of 18,000 km of tracks, third and fourth lines and conversion of 5,000 km of tracks into broad gauge. A new Metro Rail Policy was approved in August 2017.

Metro Rail: At least 10 Indian cities are working on metro railway projects and the government initiated a plan in 2012 to study the feasibility of such networks in all cities with a population of more than 2 million. Metro rail projects worth over $7.7 billion are underway in India and this pile will probably grow. Around 200 trains cover 70,000 km everyday on 190-km-long Metro corridors in Delhi. The numbers have increase after another 140 km addition of lines in 2016. A new Metro Rail Policy was announced in August 2017, which will give boost to private investments by mandating public private partnership (PPP) component in new projects. A new committee to lay down standards for metro rail systems was approved in June 2018.
As of August 2018, 22 metro rail projects are ongoing or are under construction.

Monorail: Monorail has made its beginning in India with Mumbai being the first city in the country to have this transport system in place. It took more than six years from the date of inviting Request for Qualification for MMRDA (Mumbai Metropolitan Region Development Authority) to complete a part of the project involving a stretch of 8.26 km. Monorail Projects are being developed in Chennai, Pune, Thiruvananthapuram, Bengaluru, Thane, Delhi, Port Blair, Dehradun, Chandigarh etc.

Roadways and Airports

Budget allocation for road sector increased to US$ 10.07 billion in 2017-18 from US$ 8.99 billion in 2016-17. 2,000 km of coastal connectivity roads have been identified for construction and development. Select airports in Tier 2 cities will be taken up for operation and maintenance in the PPP mode in the coming years. Road projects worth Rs 6.92 trillion (US$ 107.64 billion) approved in October 2017.

Metro Airports: The Airports Authority of India aims to bring around 250 airports under operation across the country by 2020. The AAI has developed and upgraded over 23 metro airports in the last 5 years. AAI plans to develop city-side infrastructure at 13 regional airports across India, with help from private players for building of hotels, car parks and other facilities, and thereby boost its non-aeronautical revenues.

Airport housing will also have height restrictions to avoid interference with flight paths. They will also have to be far from the runway and 45m above a defined level of the airport, which will allow 4-5 floors to be built. The development of Navi Mumbai airport has been approved. The project will be developed on 74:26 per cent partnership between MIAL and Cidco and airport's phase 1 with annual handling capacity of 10 million passengers each year rephrasing it from the origin.

Non-metro Airports: The AAI plans to spend over US$ 3.2 billion between 2018-22 to build new terminal and expand capacity of existing ones. The Government of Andhra Pradesh is to develop greenfield airports in six cities-Nizamabad, Nellore, Kurnool, Ramagundam, Tadepalligudem and Kothagudem under the PPP model.

Upfront subsidy has been proposed through which non-metro airports would be funded by imposing 2 per cent levy on both domestic and international airfares. About 22 airports to get connected under regional connectivity scheme of AAI. Over 30 airport development projects are under progress across various regions in Northeast India. AAI plans to develop over 20 airports in tier II and III cities in next 5 years. 56 new airports are expected to become functional in the country over the next few years, as of April 2018.

Telecom & Power

US$ 1.54 billion allocated in Union Budget 2018-19 for creation and augmentation of telecom infrastructure in the country. In the second phase of Strategic Crude Oil reserves, reserve capacity will be increased to 15.33 MT. In the second phase of Solar Park Development an additional capacity of 20,000 MW will be generated.

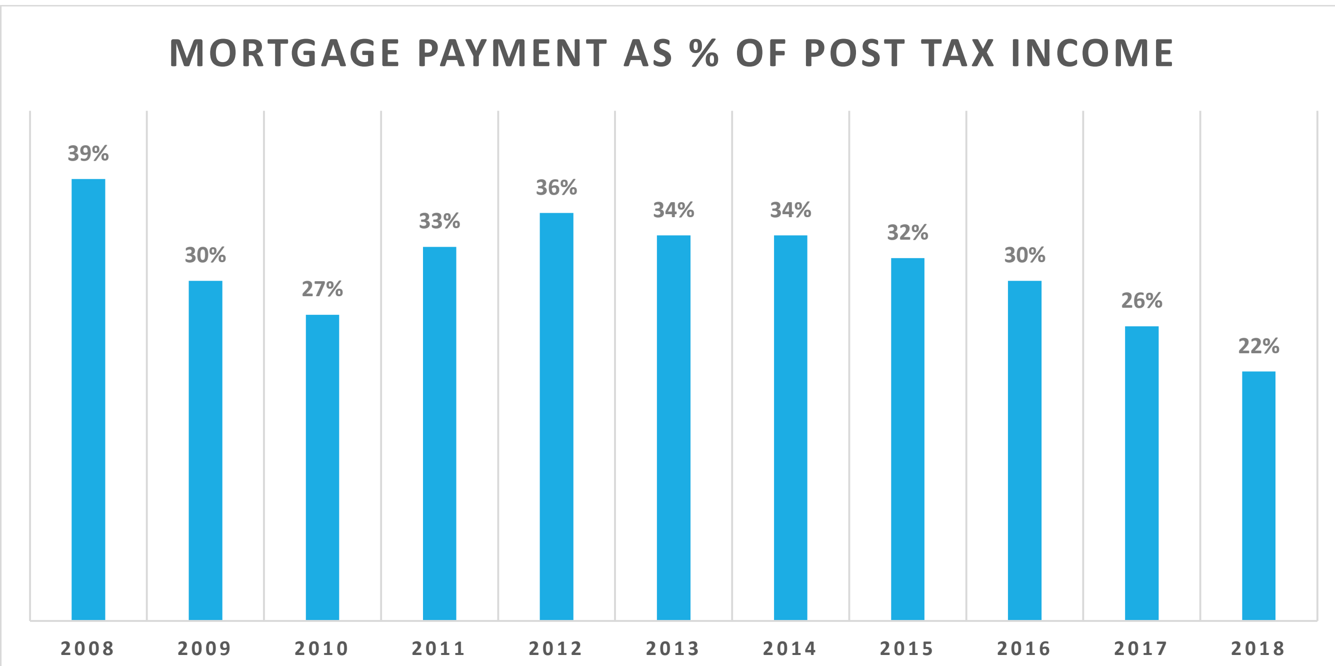
Construction

In 2017, government announced plans to facilitate higher investment in affordable housing. The National Housing Bank will refinance individual housing loans of about US$ 3.1 billion in 2017-18. The National Steel Policy 2017 aims at higher spending on infrastructure and construction through government initiatives.

Affordable Housing

In Budget 2017-18, affordable housing was given infrastructure status. "Housing for All" program, launched in June 2015 aims to build 20 million urban homes and 30 million rural houses by 2022. Homes in India are currently most affordable in nearly two decades with mortgage payment on US$ 46,547 house at 22 per cent of average post-tax income. During 2018, housing sales have grown about 16 per cent to 245,000 units in seven major cities (Delhi-NCR, Mumbai, Chennai, Kolkata, Bengaluru, Hyderabad and Pune).

As per Union Budget 2018-19, a dedicated Affordable Housing Fund (AHF) will be established under the National Housing Bank which will be funded by shortfall in priority sector lending and government bonds.
In May 2018, construction of additional 150,000 affordable houses was sanctioned under Pradhan Mantri Awas Yojana (PMAY), Urban. In November 2017, the Government of India increased the carpet area for houses falling under the affordable housing scheme, giving a boost to developers having large inventories.



Developing North East

As of September 2018, US$ 27.07 billion has been sanctioned for construction of about 12,000 km of road in the northeast region in India. In December 2017, the North East Special Infrastructure Development Scheme (NESIDS) was approved by Government of India with 100 per cent funding from the central government for infrastructure projects in the region. In October 2017, the Govt. announced that highway projects worth US$ 22.6 billion would be undertaken in the north-east region of the country in the coming two to three years. In August 2017, India-Japan Coordination Forum for Development of North East was formed to focus on major projects such as road and network development, disaster management, connectivity, and electricity provision.

With an eye on China, India is working on a slew of road & bridge projects to improve connectivity with Bangladesh, Nepal, & Myanmar. It is also pulling out all stops to expedite the South Asian Sub-Regional Economic Cooperation (SASEC) road connectivity program in the backdrop of China's ambitious One Belt One Road (Obor).

Government announced plans to invest US$ 6.98 billion in Northeast States. Arunachal Pradesh was brought on the railway map of India with India's longest rail-cum-road bridge — the 4.94-km long Bogibeel bridge over Brahmaputra. It has also announced plans to convert all meter gauge tracks in the northeastern states to broad gauge tracks.

Logistics & Warehousing

Logistics and warehousing play an important role in the industrial advancement of the country. They are a fundamental part of business infrastructure and one of the key enablers in the global supply chain. In 2017, the logistics sector was given infrastructure status in India. Logistics market in India stood at US$ 160 billion in 2017. The sector is expected to grow at a CAGR of 10.5 per cent to reach US$ 215 billion by 2020.

In 2018, India was ranked 44th out of 167 countries in World Bank's Logistics Performance Index (LPI) 2018. India was also ranked second in the 2018 Agility Emerging Markets Logistics Index. In 2017, about 22 million people were employed in the logistics sector. It is expected to employ about 40 million people by 2020. In 2017-18, logistics cost in India was 14 per cent of the GDP. However, it is expected to go down to 10 per cent by 2022.

Investment in the logistics sector is expected to reach US$ 500 billion annually by 2025. Warehousing in India is expected to get investment of US$ 7.12 billion from 2018 to 2020. As of October 2018, Hiranandani Group is planning to enter the logistics and warehousing sector with an investment of US$ 356.23 million in two projects in the first quarter of 2019.

Other Initiatives

Government Initiatives: The Government is making an attempt to revive and give boost to Public Private Partnerships. For creating an eco-system to make India a global hub for electronics manufacturing a provision of US$115.62 million in 2017-18 in incentive schemes like M-SIPS and EDF. Introduction of National Steel Policy in 2017 to aim at higher spending on infrastructure and construction through government initiatives. Total allocation for infrastructure in Budget of 2018-19 stands at US$ 92.22 billion. In November 2017, logistics sector was given the status of infrastructure, to boost investments in the sector.

International Associations: In June 2018, the Asian Infrastructure Investment Bank (AIIB) has announced US$ 200 million investment into the National Investment & Infrastructure Fund (NIIF). Japanese investment has played significant role in India's growth story. Japan has pledged investments of around US$35 billion for the period of 2014-19 to boost India's manufacturing and infrastructure sectors. As of October 2018, the US government's Overseas Private Investment Corporation (OPIC) is planning to invest in India's infrastructure, port and solar energy sectors.

Urban Indian Real Estate: With every sixth urban person globally being an Indian, the real estate and construction sector holds significant opportunity for both global and domestic companies engaged across the value chain. India will need to construct 43,000 houses every day until 2022 to achieve the vision of Housing for All by 2022. Hundreds of new cities need to be developed over the next decade. This has the potential for catapulting India to 3rd largest construction market globally. The sector is expected to contribute 15 per cent to the Indian economy by 2030. The recent policy reforms such as the Real Estate Act, GST, REITs, steps to reduce approval delays etc. are only going to strengthen the real estate and construction sector.

AREA OF CONCERNS & CRITICAL FACTORS

Thermal generation is in distress, with ~35 GW of capacity stranded on account of slow demand growth, domestic fuel constraints and delay in pass-through of charges in duties and taxes. As pressure builds to push stressed assets through the National Company Law Tribunal (NCLT) process, sharp haircuts loom. Here, policy actions, including centralised procurement, improving coal availability, decommissioning of old projects and pass-through of costs can alleviate pain.

India would fall short of the government's target of achieving 175 GW of solar capacity by 2022, as per Centre for Science and Environment (CSE). The existing banks do not focus on universal energy access and those still deprived are the poorest of the poor. Thus, out of the ambit of these banks, special finance mechanism is needed to target these people. The key concerns identified by the report, said inconsistent policy has been the bane of the renewable energy sector.

The CSE report recommended increase in the share of distributed renewable generation — solar rooftops and mini-grids -- besides encouraging 'smart grids' that use communications infrastructure, control systems and information technology for efficient delivery. It also suggested investing in developing inexpensive energy-storage capacity, adding that an indigenous research can improve existing technology in terms of cost and performance.

Also, private investments remain concentrated. Critical sectors such as railways and urban infrastructure have not been able to make fast-enough progress to attract private monies despite their size and potential, while viability of power distribution remains critical to the sector value chain.

The investability in the infrastructure industry, thus depends on the following critical factors:

Policy Direction

- **Policy Consistency** focused, clear programs and projects' pipeline
- **Public Financing** budgetary outlays when not de-licenses

Institutional Strength & Regulatory Maturity

- **Implementation Capacity** Capacity/autonomy of the organisations
- **Financing Models** PPP models, and access to capital markets
- **Regulatory Robustness** regulatory independence and effectiveness

Financial Sustainability

- **Cost Recovery** Extent of cost recovery and subsidy dependence
- **Demand Risk** Off-take and market risk in the sector

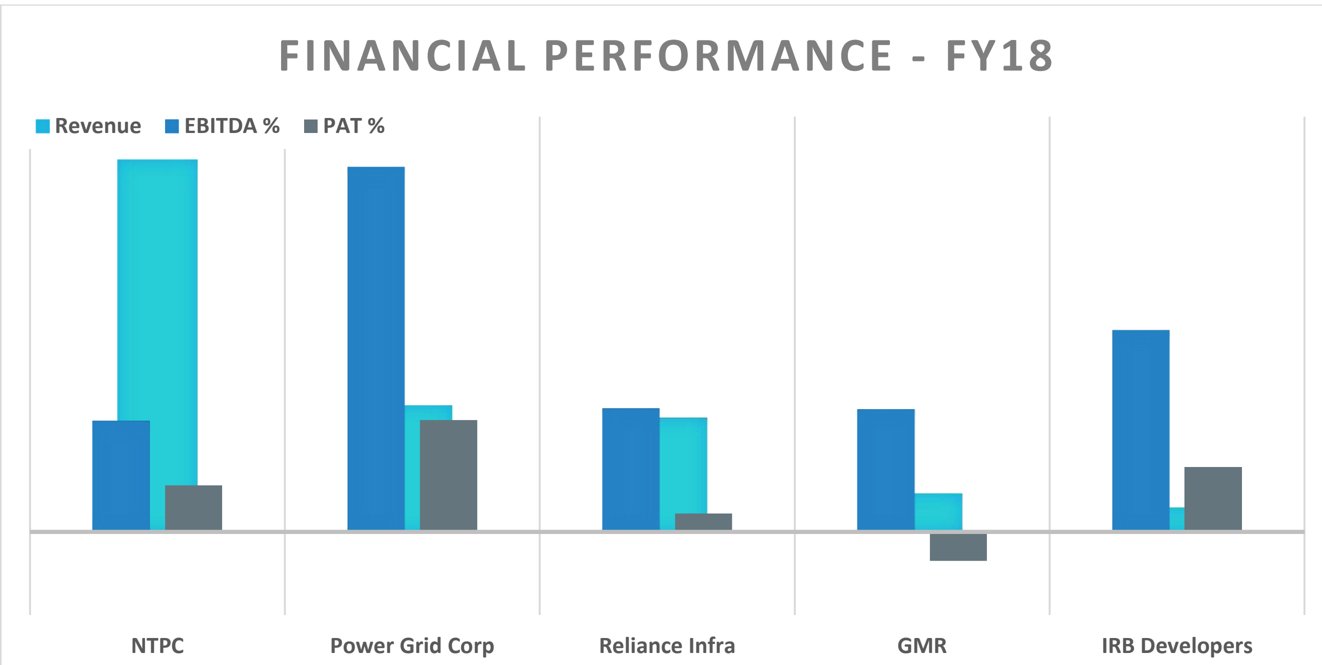
Implementation Ease

- **Track Record** Past performance and versus targets
- **Externalities:** Approval, clearance and land availability

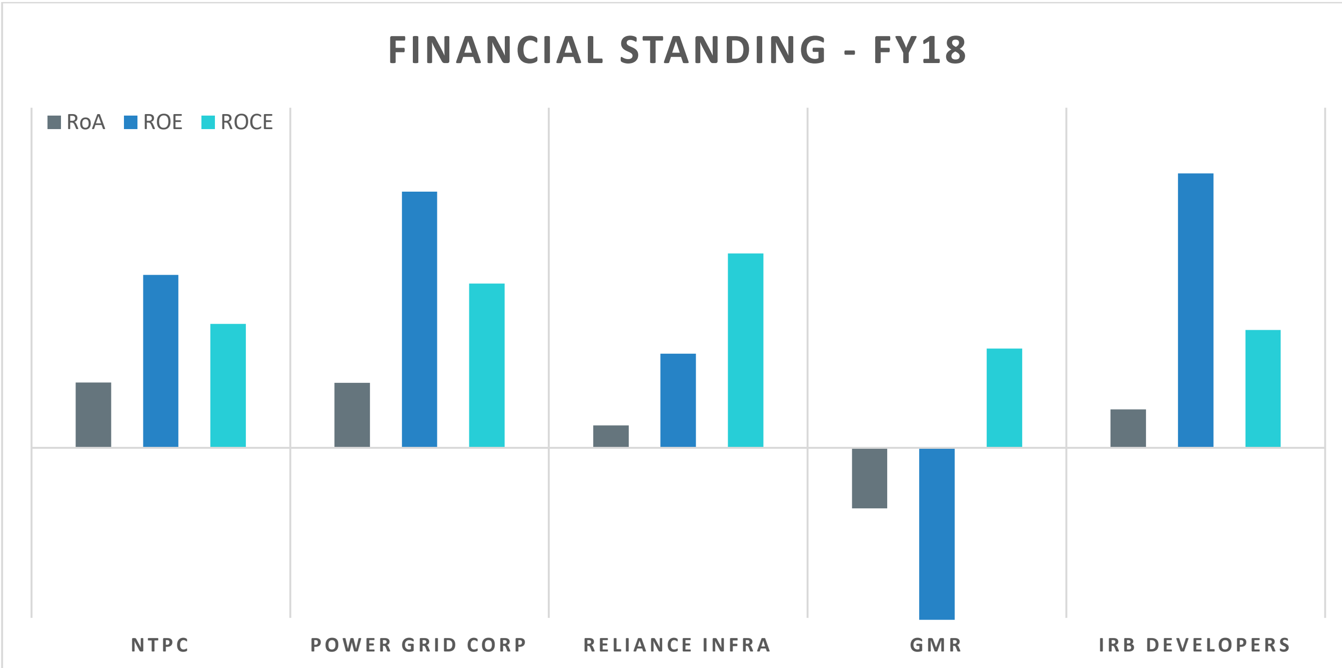
INDUSTRY PLAYERS

The five most prominent players in the industry have been listed below with their FY18 fundamentals:

Company	Price (INR)	Market Cap (INR Crore)	Revenue (INR Crore)	EBITDA %	Net Profit %	TTM P/E	P/B	TTM PEG	Dividend Yield
NTPC	138.5	114200	89,642	26.8%	11.2%	11.09	1.12	1.53	3.7%
Power Grid Corp	185.9	97255	30,431	87.9%	26.9%	11.31	1.79	1.64	2.8%
Reliance Infra	271.8	7149	27,569	29.8%	4.4%	7.3	0.28	-1.91	3.5%
GMR	15.7	9476	9,274	29.5%	-7.0%	NA	1.8	0.08	0.0%
IRB Developers	148.6	5223	5,863	48.58%	15.7%	6	0.92	8.5	3.4%



Company	RoA	ROE	ROCE	D/E	Interest Coverage	Current Ratio	Inventory Days
NTPC	3.8%	10.2%	7.3%	1.10	4.1%	0.80	26
Power Grid Corp	3.8%	15.1%	9.7%	2.30	2.4%	0.40	13
Reliance Infra	1.3%	5.5%	11.4%	0.80	1.0%	1.00	6
GMR	-3.6%	-39.6%	5.8%	6.10	0.7%	1.10	4
IRB Developers	2.3%	16.2%	6.9%	2.30	2.4%	0.30	31



Please find more information on financial performance of the above-mentioned companies in Appendix 1 & 2

COMPETITVE LANDSCAPE

Below is the profile, background and products of the most prominent 3 companies in the Indian banking industry:

❖ Reliance Infrastructure

Reliance Infrastructure Limited is one of the largest infrastructure companies, developing projects through various Special Purpose Vehicles (SPVs) in several high growth sectors such as power, roads, metro rail and airport in the infrastructure space and the defense sector.

The company is also a leading utility company with presence across the chain of power businesses, such as generation, transmission, distribution and power trading. RInfra through its SPVs has executed a portfolio of infrastructure projects such as a metro rail project in Mumbai on build, own, operate and transfer (BOOT) basis; eleven road projects with total length of about 1,000 KM on build, operate and transfer (BOT) basis.

RInfra along with its wholly owned subsidiary company has installed capacity of 441 MW of power; distributes power to over 40 lakh consumers in Delhi. RInfra also provides EPC services for developing power infrastructure and road projects. It has executed 11 road projects with total length of 1,000 km build operate and transfer (BOT) basis. RInfra is the largest National Highways Authority of India (NHAI) concessionaire under build, operate, transfer (BOT) scheme.

1929	The company was incorporated on October 1st, at Mumbai under the Companies Act, VII of 1913 as "Bombay Suburban Electric Supply Limited".
1981	The company was awarded a contract for 34.5 KV distribution systems at A1-Jubail in Saudi Arabia. Another contract valued was awarded by Electricity Corporation of Saudi Arabia for A1 Qaseem Rural Electrification Distribution.
1992	The name of the company was changed from Bombay Suburban Electric Supply, Ltd to its abbreviated version BSES Ltd.
1994	The Company entered into a MOU with National Thermal Power Corporation Ltd. to promote a joint venture company as a subsidiary in order to avail enormous opportunities in the power sector in construction, erection and other project management activities. The Company held 51% of the equity of the subsidiary company.
2003	The name of BSES Ltd changed to Reliance Energy Ltd.

2008	Reliance Infrastructure has bagged the contract for four-laning of the Gurgoan-Faridabad road and along with this the upgradation of the Ballabgarh-Sohana road on a build, operate and transfer (BOT) basis. This project involves the construction of 66 km of road on high density traffic zone and the project is expected to be completed in two years from the date of commencement with a concession period of 17 years. Company name has been changed from Reliance Energy Ltd to Reliance Infrastructure Ltd.
2013	The company joined the league to bid for constructing the US$ 4 billion Indian railways Church-Gate-Virar elevated corridor project.
2018	The company is expected to become debt free by 2019 after it has sold the power distribution business to Adani Transmission Limited (ATL). Reliance Infrastructure (RInfra) bagged package-7 of Nagpur- Mumbai Samruddhi Expressway project from the Maharashtra State Road Development Corporation (MSRDC).

❖ GMR Group

GMR Group is one of the fastest growing infrastructure enterprises in India with a rich and diverse experience spanning three decades. It has been developing projects in high growth areas such as Airports, Energy, Transportation and Urban Infrastructure. GMR is uniquely placed to build state of the art projects in sectors that are of critical importance in the process of development.

Using the Public Private Partnership model, the Group has successfully leveraged its core strengths to implement several iconic infrastructure projects in India. GMR is present across the country in sectors like Airports, Highways, Energy, Power Transmission and Urban Infrastructure. Six airports, 14 power projects, 2 coal mines, six transportation projects and one urban infrastructure ongoing projects.

1996	GIL incorporated as Varalakshmi Vasavi Power Projects Limited, a public limited company
2000	Name was changed to GMR Infrastructure Limited.
2003	GMR Consortium selected as developer of Hyderabad International Airport
2006	Signed Operations, Management and Development Agreement (OMDA) for Delhi International Airport

2008 GMR Hyderabad International Airport Limited (GHAIL) gets Minimum obstacles Clearance Altitude (MoCa) clearance to commence commercial operations at Rajiv Gandhi International Airport in Hyderabad.

2010 GMR Energy Limited (GEL) wins the bid for Rajasthan Rajya Vidut Prasaran Nigam Ltd (RRVPNL) Power Transmission Project

2011 It successfully commissioned its first 25 MW Solar Project in the State of Gujarat. This is one of the biggest Solar Projects in India.

2012 GHIAL has been awarded the prestigious "National Tourism Award 2010-'11" under the 'Best Airport' category.

2018 GMR lead Delhi International Airport Limited (DIAL) attained 28th position globally in terms of cargo volume handled with one million metric tonnes in one year.
GMR infra signed a pact with Andhra Pradesh Gas Development Corporation (APGDC) for supply of piped natural gas.

❖ IRB Infrastructure Developers

IRB Infrastructure Developers Limited is a road build, operate and transfer (BOT) operator. The company's principal activity is the construction and maintenance of roads. Its business segments include road infrastructure projects, which includes development and operation of roadways; real estate, which includes real estate development, and others, which includes windmill (sale of electricity generated by windmill), hospitality and airport infrastructure. Its construction business complements its BOT vertical by executing engineering, procurement and construction, and operation and management (O&M) aspects of BOT concessions. It has a portfolio of over 20 road BOT projects.

It has in-house integrated project execution capabilities in both its business verticals, including construction, and operation and maintenance of highways. Its clients include government agencies, such as National Highways Authority of India (NHAI) and state road development authorities, which develop highways.

12,800 km under Build, Operate and Transfer (BOT) and Hybrid Annuity Model (HAM including 4,055 km under Operate and Maintenance (O&M) model. 11 build, operate and transfer (BOT) projects in operation. 17 build, operate and transfer (BOT) and hybrid annuity model (HAM) projects in portfolio.

1998 IRB Infrastructure Developers was incorporated as a private limited company.

2009 First airport project in the IRB's portfolio – greenfield airport project in Sindhudurg, Maharashtra. Awarded first Dahisar Project – first mega highway project in India. IRB wins the CNBC TV 18 Essar Steel Infrastructure Excellence Award

2011 Awarded "Ahmedabad Vadodara Project", the first ever ultra-mega project of NHAI on BOT basis & DBFOT pattern in the state of Gujarat

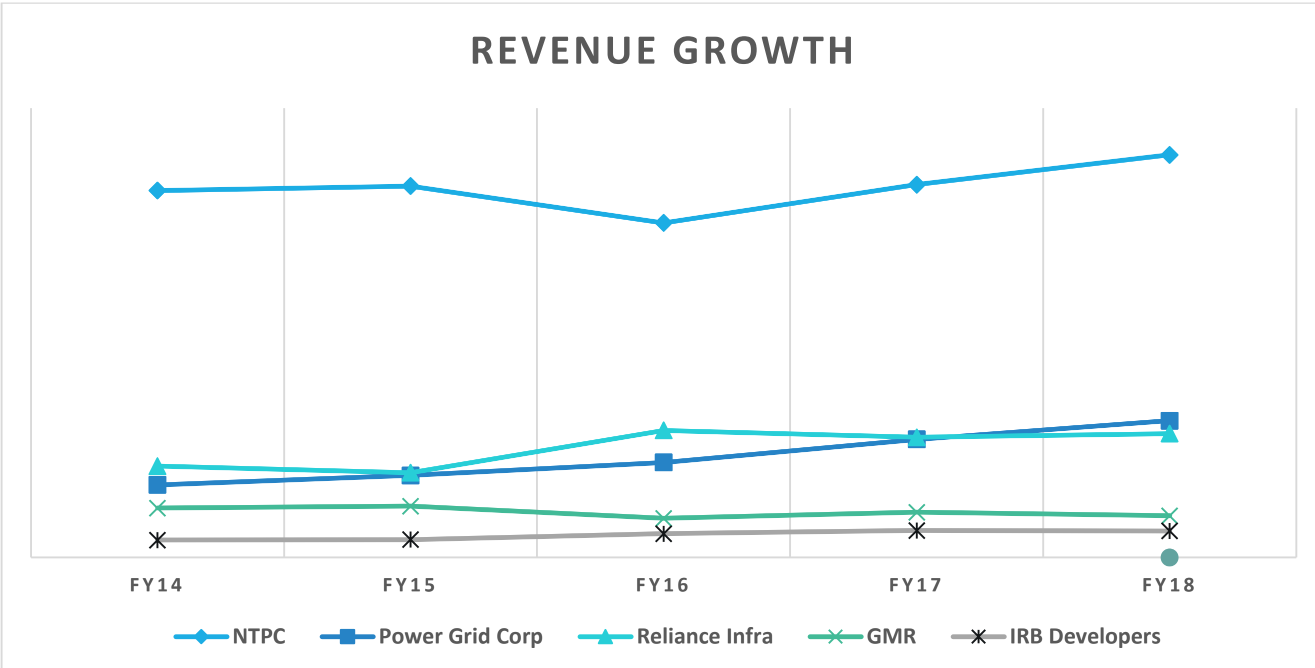
2012 IRB Infra acquired MVR Infrastructure & Tollways Pvt. Ltd

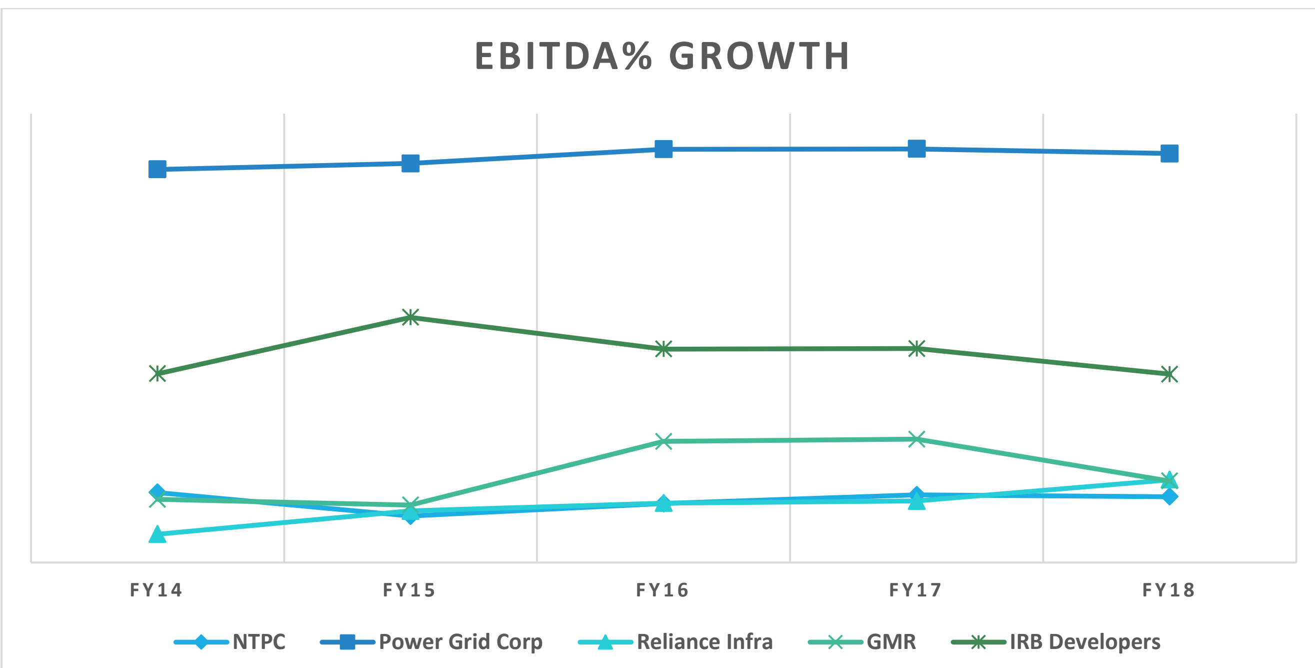
2017 IRB Infra the company completed the process of acquisition of remaining 26 per cent stake in M.V.R. Infrastructure And Tollways Pvt Ltd. IRB Infra received letter of award from National Highways Authority of India for hybrid annuity project under Phase VI in Gujarat. IRB Infra received letter of award from National Highways Authority of India for two hybrid annuity projects under National Highways Development Project (NHDP) Phase VI in Tamil Nadu. Successfully Launched India's first ever Infrastructure Investment Trust Fund and raised Rs. 5032 crore (US$ 750.04 million)

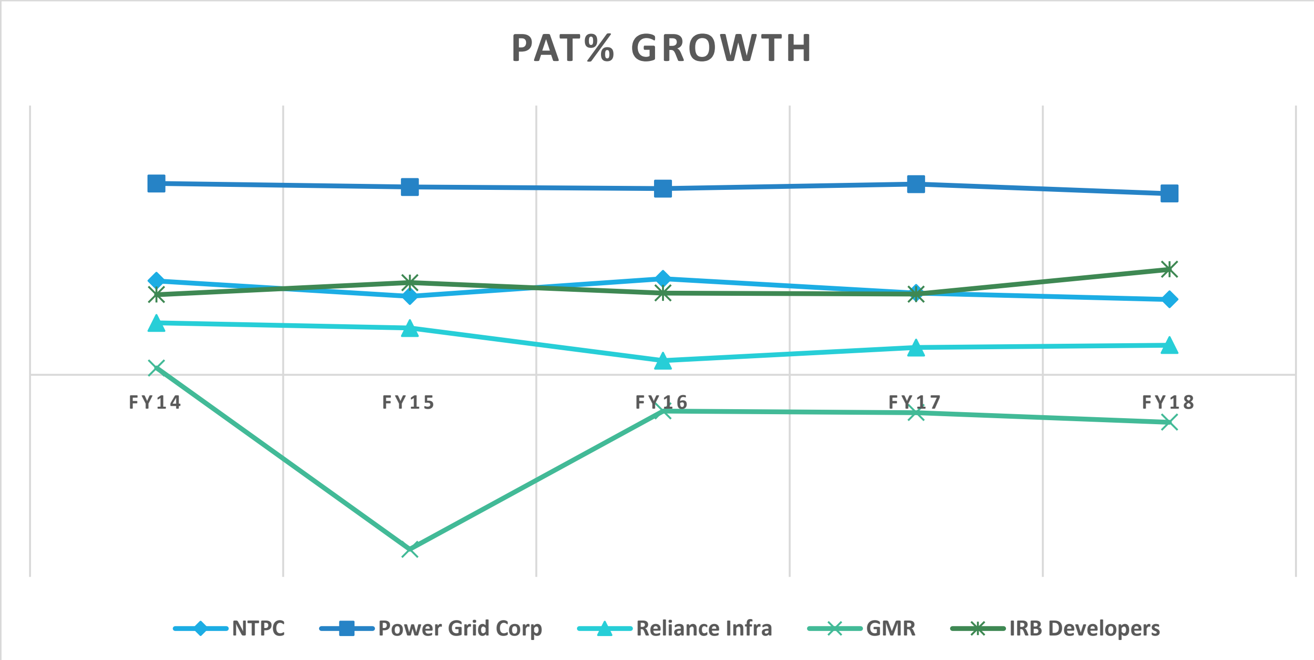
2018 Shares of IRB developers rose by 5.6 per cent after company achieved financial closure of the project including four laning of Poondiyankuppam to Sattanathapuram section ofNH-45A within the timeline

APPENDIX

Appendix 1







Appendix 2

Company	Metric	Mar-18	Mar-17	Mar-16	Mar-15	Mar-14
NTPC	RoA	3.8%	4.3%	4.8%	4.5%	5.7%
	ROE	10.2%	11.0%	11.8%	12.2%	13.1%
	ROCE	7.3%	7.9%	5.7%	5.4%	6.7%
	D/E	1.10	1.00	0.90	1.00	0.70
	Interest Coverage	4.1%	4.6%	4.2%	4.7%	6.8%
	Current Ratio	0.80	0.70	0.90	1.20	1.60
	Inventory Days	26	30	36	37	27
Power Grid Corp	RoA	3.8%	3.8%	3.3%	3.1%	3.2%
	ROE	15.1%	14.9%	13.6%	13.1%	13.1%
	ROCE	9.7%	9.4%	4.0%	3.7%	3.7%
	D/E	2.30	2.30	2.40	2.40	2.30
	Interest Coverage	2.4%	2.5%	2.5%	2.6%	3.0%
	Current Ratio	0.40	0.40	0.40	0.40	0.50
	Inventory Days	13	13	14	15	17
Reliance Infra	RoA	1.3%	1.4%	0.8%	2.5%	2.8%
	ROE	5.5%	6.1%	3.5%	6.9%	7.4%
	ROCE	11.4%	9.7%	1.3%	3.8%	4.1%
	D/E	0.80	0.90	1.20	0.90	0.90
	Interest Coverage	1.0%	0.9%	1.1%	1.6%	2.1%
	Current Ratio	1.00	1.00	1.10	1.00	1.00
	Inventory Days	6	6	8	13	10

GMR	RoA	-3.6%	-1.5%	-4.6%	-4.1%	0.0%
	ROE	-39.6%	-11.7%	-54.3%	-56.0%	0.2%
	ROCE	5.8%	9.2%	-6.5%	-5.4%	0.0%
	D/E	6.10	4.00	6.90	8.60	6.00
	Interest Coverage	0.7%	1.3%	0.9%	0.3%	0.5%
	Current Ratio	1.10	1.10	0.80	0.50	0.50
	Inventory Days	4	5	10	10	12
IRB Developers	RoA	2.3%	1.5%	1.5%	1.4%	2.9%
	ROE	16.2%	13.6%	13.2%	12.4%	12.9%
	ROCE	6.9%	7.0%	1.6%	1.5%	3.4%
	D/E	2.30	2.50	3.00	2.60	2.90
	Interest Coverage	2.4%	1.7%	1.8%	1.7%	1.9%
	Current Ratio	0.30	1.10	0.80	0.90	1.00
	Inventory Days	31	22	22	25	26

Appendix 4: Exchange Rate Applied

Year	INR / US$	Year	INR / US$	Year	INR / US$
2004-05	44.95	**2010-11**	45.58	**2016-17**	67.09
2005-06	44.28	**2011-12**	47.95	**2017-18**	64.45
2006-07	45.29	**2012-13**	54.45	**Q1 2018-19**	67.04
2007-08	40.24	**2013-14**	60.5	**Q2 2018-19**	70.18
2008-09	45.91	**2014-15**	61.15	**Q3 2018-19**	72.15
2009-10	47.42	**2015-16**	65.46		