Connecting India: Unlocking Investment Potential in Transport Infrastructure

Summary Report

Citius TransNet Investment Trust | March 2026

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1 Overview of Macroeconomic scenario

1.1 Global Scenario

Review and outlook of global GDP

Global trade growth is expected to progress at a measured but steady pace in the coming years. Advanced economies are likely to expand more sustainably, while emerging markets and developing economies adjust to modest changes in their outlook.

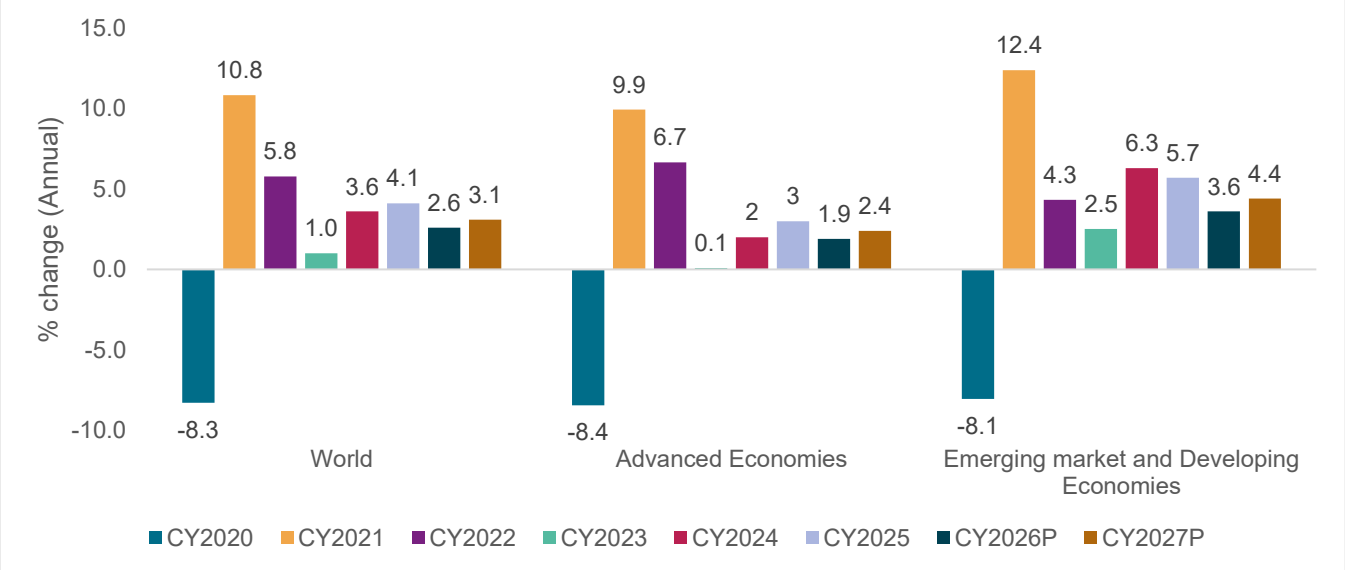
Beyond CY2025, the global economy is expected to enter a phase of steady and stable expansion, with growth broadly settling in the 3.0-3.2% range through CY2029, before moderating slightly to 3.1% in CY2030. This outlook suggests a shift from short-term cyclical fluctuations to a period of sustained global growth, supported by structural drivers such as technological progress, evolving demographics, and ongoing policy realignments.

From CY2025 onwards, global economic growth is projected to remain stable yet moderate, with the world economy expected to expand at around 3.1–3.2% annually through CY2030. The medium-term outlook suggests a phase of steady but range-bound growth, reflecting the gradual easing of inflationary pressures and a slow normalization of monetary conditions across major economies.

However, growth momentum is likely to remain constrained by structural and cyclical challenges, including relatively elevated interest rates, ongoing geopolitical uncertainties, trade and supply chain realignments, and the increasing economic impact of climate-related risks. While large economies are expected to demonstrate resilience supported by domestic demand and services sector strength, limited investment growth and subdued global trade may cap the pace of expansion.

Overall, the global economy is expected to transition into a period of stable but modest growth over the medium term, with downside risks continuing to outweigh the prospects of a strong acceleration.

IMF world trade growth projection

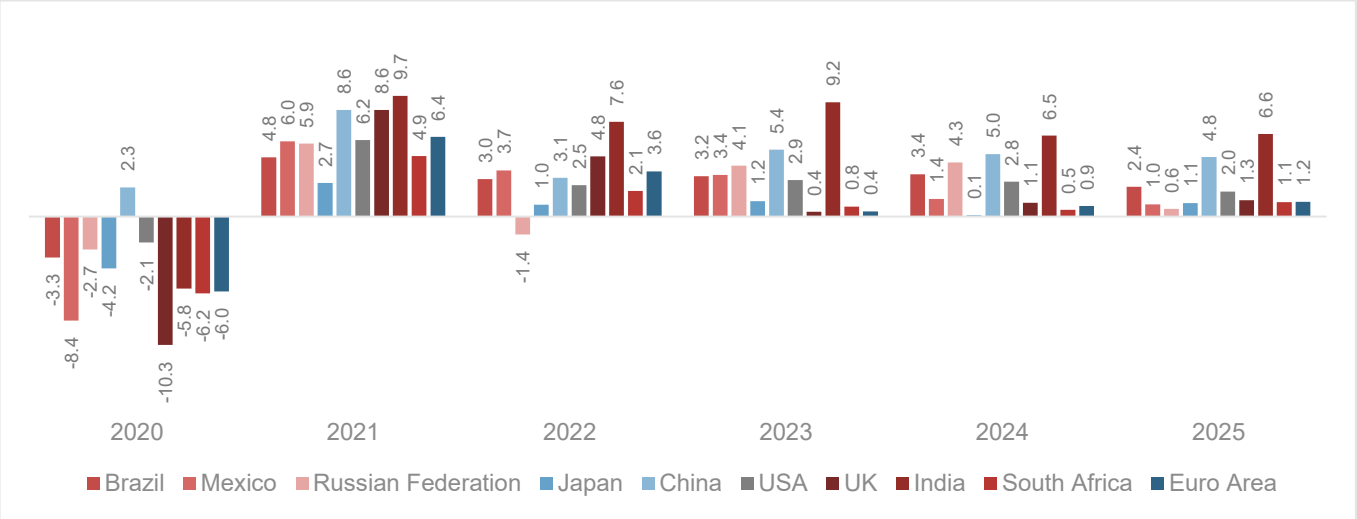


Advanced economies – US, Japan, Euro area; emerging market and developing economies – China, India, Russia, Brazil, Mexico, South Africa
Note: Average annual % change of export and import trade in goods and services has been considered
Source: IMF (World Economic Outlook - October 2025 update, January 2026 update), Crisil Intelligence

Review and outlook of GDP growth in key global economies

The following section lays out the GDP growth over the years for key global economies.

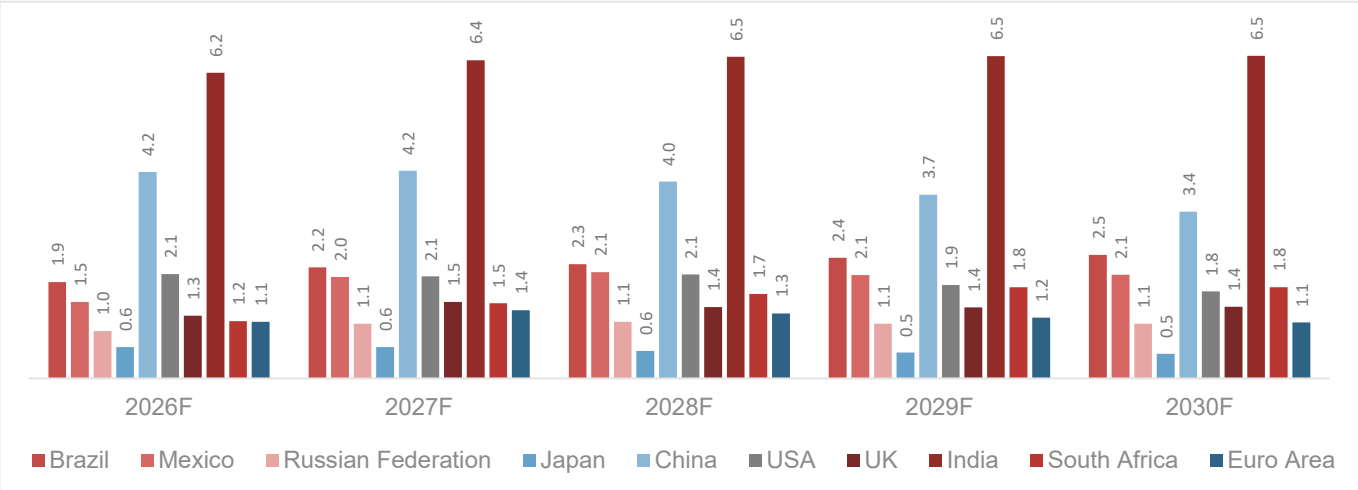
Review of GDP growth (% y-o-y) of key economies



Note: On Calendar Year (CY) basis
** Euro area comprises 20 member countries of the EU*
Source: International Monetary Fund (IMF); World Economic Outlook (WEO) - October 2025 update, Crisil Intelligence

According to IMF, the growth outlook for India, is relatively more stable at 6.2% in CY2026, supported by private consumption, particularly in rural areas.

Outlook of GDP growth (% y-o-y) of key economies



Note: On Calendar Year (CY) basis
** Euro area comprises 19 member countries of the EU*
Source: International Monetary Fund (IMF); World Economic Outlook (WEO) – October 2025 update, Crisil Intelligence

1.2 India Economy

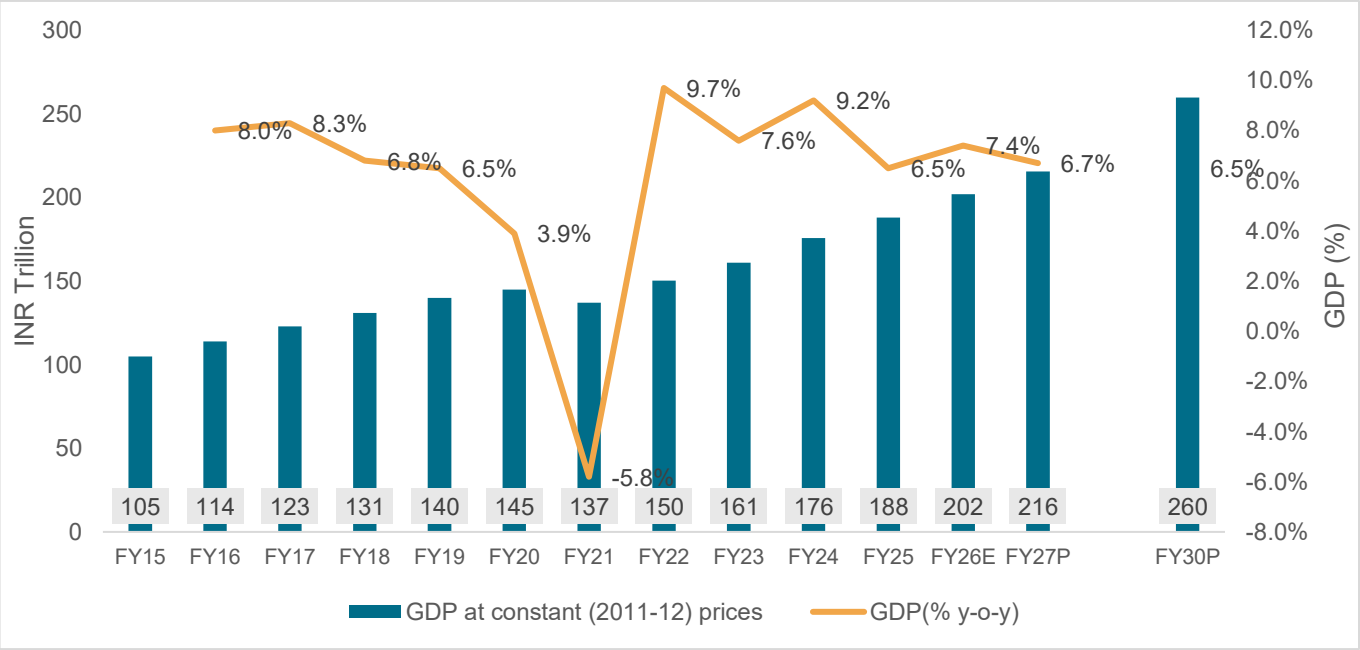
Review of real GDP growth over fiscals 2015-2025 and Outlook for fiscals 2026-2030

India ranks as the world's 4th largest economy and is the fastest growing among major economies with gross domestic product (GDP) for FY25 at 6.5%. India's economy has shown strong and steady progress over the past decade, with real GDP rising from INR 140 trillion in FY2019 to INR 188 trillion estimated in FY2025, reflecting a CAGR of around 5%. Despite periods of volatility, most notably the contraction in FY2021 due to the pandemic, the economy recovered sharply, supported by robust domestic demand, infrastructure spending, and the resilience of core sectors such as construction, manufacturing, and services.

A large part of the lower growth between fiscals 2018 and 2023 having CAGR 4.2% was because of the economy contracting 5.8% in fiscal 2021 owing to the fallout of Covid-19. The pandemic's impact was more pronounced on contact-sensitive services and social distancing norms-affected services such as entertainment, travel, and tourism, with many industries in the manufacturing sector also facing issues with shortage of raw materials/components as lockdown in various parts of the world upended supply chains.

Looking ahead, India's medium-term outlook for FY2026-30 remains broadly positive. For FY2026, GDP is projected at INR 202 trillion, reflecting growth of around 7.4%, consistent with consensus estimates from MoSPI, the Reserve Bank of India, and global institutions. Crisil projects FY2027 GDP at INR 216 trillion accounting for 6.7% y-o-y growth. This trajectory is supported by ongoing capex expansion, infrastructure development, stronger formalisation of the economy, and improving macroeconomic stability. Reforms such as the GST 2.0, focused on rate rationalisation and simplification have to boosted infrastructure and construction activity, further supporting medium-term growth.

India's GDP growth trend and outlook



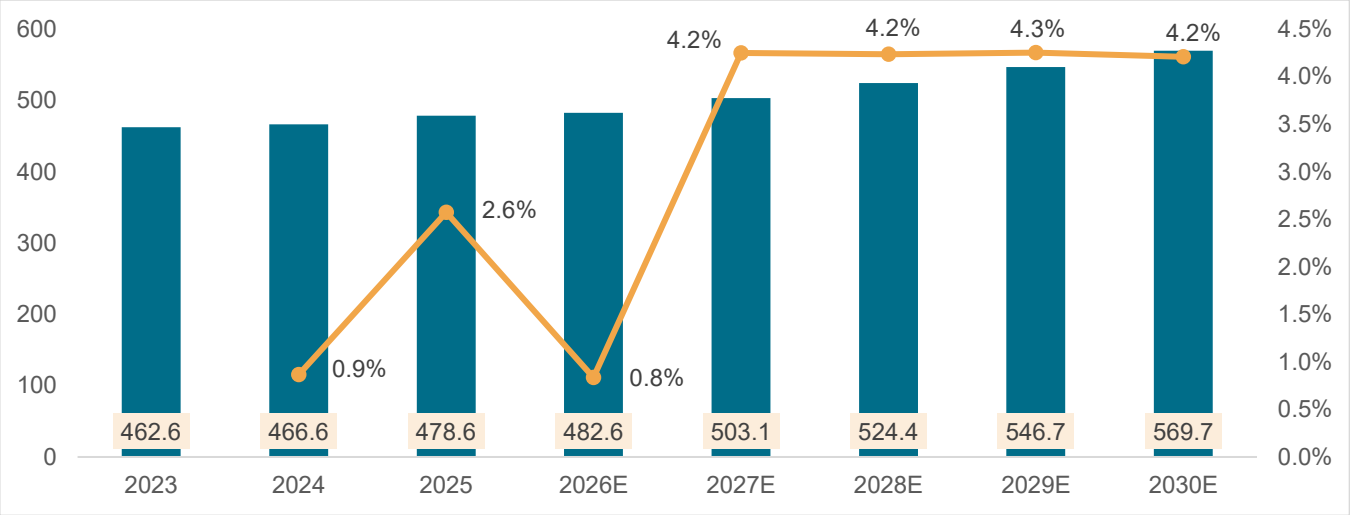
Note: P – Projected
Source: National Statistical Office (NSO), International Monetary Fund (IMF), Crisil Intelligence estimates

Trends in WPI

The Wholesale Price Index (WPI) has exhibited a steady upward trajectory, reflecting a gradual firming up of producer prices in line with improving industrial demand and input cost normalization. After witnessing subdued growth through FY2024 and FY2025, the WPI is projected to increase from 478.6 in FY2025 to 482.6 in FY2026, indicating a mild but steady pick-up in wholesale price pressures.

For FY2027, the index is expected to rise further to 503.1, driven by a combination of improving manufacturing output, moderate commodity price recovery, and strengthening domestic demand. This moderate inflation trend suggests a balanced recovery, where input costs remain contained even as capacity utilization improves across key sectors such as infrastructure, energy, and basic metals. Over the medium to long term (FY2028-FY2030), WPI is projected to maintain its upward trajectory, reaching 569.7 by FY2030. The gradual increase reflects expectations of sustained economic expansion, structural reforms boosting industrial activity, and stable commodity markets. The outlook also assumes continued fiscal support for infrastructure and manufacturing, alongside moderate imported inflation pressures. Overall, the WPI trajectory signals a moderate but durable recovery in wholesale prices, consistent with a stable inflation environment and healthy economic fundamentals over the forecast horizon.

WPI Outlook



E - estimated

Source: Ministry of Statistics and Programme Implementation (MoSPI), RBI, Crisil Intelligence

Outlook

The near-term inflation trajectory is expected to benefit from continued monetary policy transmission, favourable base effects, and softening input costs. The government's continued fiscal consolidation efforts, thrust on capital expenditure, and the implementation of GST 2.0 reforms are expected to further anchor inflation expectations over the medium term. In alignment with the Reserve Bank's medium-term inflation target of 4% (within a tolerance band of ±2%) till FY2030, policy efforts remain focused on anchoring inflation expectations while maintaining conditions conducive to growth. The trajectory over the medium term is expected to converge close to this target, supported by easing supply bottlenecks, moderation in commodity prices, and structural policy reforms. This macroeconomic backdrop of robust growth contained inflation, and a gradually easing interest rate environment translates into rising traffic volumes on roads and lower financing costs. Together, these dynamics are expected to bolster the revenue stability, cash flow visibility, and overall attractiveness of road InvITs as a resilient infrastructure investment avenue.

Risks and Uncertainties

While the overall inflation outlook remains benign, several upside risks persist. These include potential supply disruptions from adverse weather events, volatility in global commodity prices, and prolonged geopolitical conflicts. Conversely, downside risks could arise from the early resolution of geopolitical tensions, softening of global demand and commodity prices, and improvement in supply chain conditions.

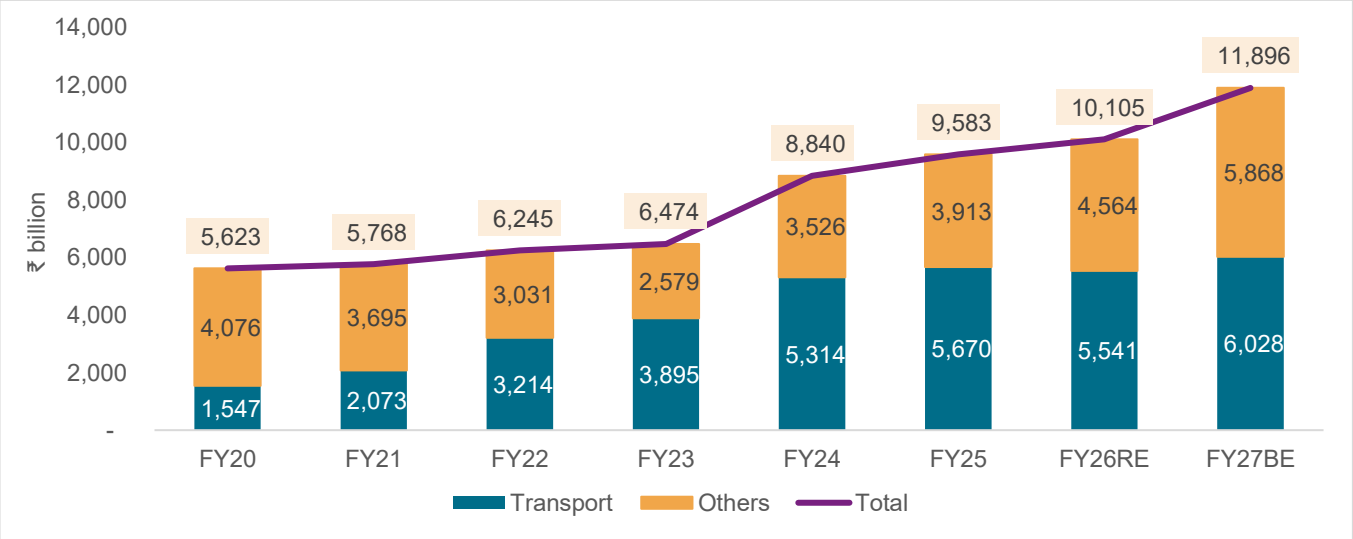
Overall, headline inflation is expected to remain within the target band of 2-6% during FY2025–26, supported by prudent monetary and fiscal policies, easing cost pressures, and stable domestic demand dynamics. Over the medium term, inflation is projected to align closely with the 4% target, reinforcing macroeconomic stability and supporting sustainable growth momentum.

Review of budgetary support to infrastructure sector (FY2020-27)

India's infrastructure budgetary outlay has shown consistent and robust growth between FY2020 and FY2027, reflecting the government's sustained focus on capital formation and infrastructure-led development. The total allocation increased from ₹5,623 billion in FY2020 to an estimated ₹11,896 billion in FY2027, registering a compound annual growth rate (CAGR) of 11.3% over the period. The sharp rise from FY2023 to FY2024, when allocations surged from ₹6,474 billion to ₹8840 billion, highlights the government's strategic acceleration in infrastructure spending to support economic recovery and long-term capacity building.

Transport infrastructure remains the core focus of public investment, with allocations expanding more than threefold from ₹1,547 billion in FY2020 to ₹6,028 billion in FY2026. Non-transport sectors also grew steadily from ₹4,076 billion to ₹5,868 billion, underscoring balanced investment across multiple segments. This sustained rise in infrastructure outlay underpins India's commitment to improving connectivity, enhancing logistics efficiency, and stimulating private sector participation, thereby reinforcing the sector's role as a key pillar of national economic growth.

Infrastructure budgetary capital expenditure from FY20 to FY27 (Budget Actuals)



Note: RE: Revised Estimates, BE: Budget Estimates

Source: Budget estimates, Ministry of Finance, Crisil Intelligence

Key Infrastructure sector announcements (Budget 2026-27)

- Infrastructure capital expenditure for FY27 BE is 17.7% higher than FY26 RE, this increase was largely driven by investments in logistics, power and affordable housing.
- Strong emphasis on reducing logistics costs through better connectivity and transport systems, as high logistics cost (~8% of GDP) is cited as a structural barrier to competitiveness.
- Road infrastructure remains a priority, with the National Highways Authority of India (NHAI) allocation increased; while private BOT projects have been subdued, green shoots in the pipeline suggest future participation.
- Establishment of an Infrastructure Risk Guarantee Fund, which will offer partial credit guarantees to lenders. For next fiscal, Rs 1,000 crore are allocated for this fund.
- A new Dedicated Freight Corridor (DFC) linking Dankuni (East) and Surat (West) will be designed to speed bulk freight movement and ease mixed traffic congestion.
- Seven new high-speed rail corridors have been proposed to connect key economic centres and act as economic growth connectors.
- Expansion of inland waterways and coastal shipping signals a qualitative shift to multimodal transport operationalising 20 new national waterways and promoting coastal cargo to improve freight modal share (from 6% toward 12% by 2047) and reduce cost.
- Building maritime ecosystem capabilities through ship-repair hubs and a viability gap funding scheme for seaplane manufacturing, aiming to boost connectivity and tourism via water-based transport.
- Affordable housing and rural development allocations are significantly increased (e.g., Pradhan Mantri Awas Yojana-Gramin up ~69%), showcasing a qualitative focus on social and rural infrastructure that supports economic development and living standards.

Contribution of transport to total gross value added (GVA)

The transportation sector plays a critical role in India’s economic activity, with roads, railways, water, and air transport collectively contributing to 3.7% of total GVA added by economic activity in fiscal 2024. The trend over 2019-20 to 2023-24 reflects both the structural dominance of road transport and steady growth in other modes.

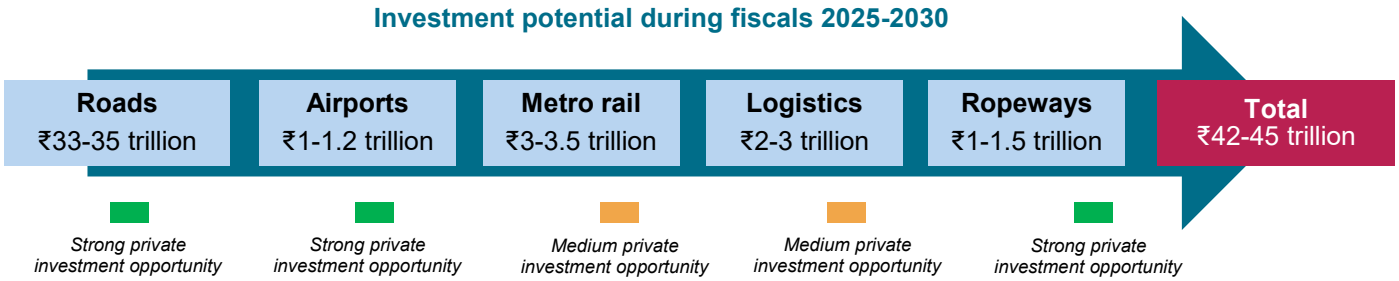
2 Transportation Sector in India

2.1 Overview

Infrastructure development is a key factor in India's long-term economic transformation, serving as a catalyst for productivity and connectivity. Over the past decade, the country has witnessed a fundamental transformation in its transport landscape, from expressways and dedicated freight corridors to modern metro systems and expanding airport networks. These developments have significantly improved connectivity, reduced logistics costs, and supported industrial growth, establishing infrastructure as a key pillar of India's growth narrative.

India's economic expansion and the government's long-term Viksit Bharat 2047 vision have placed infrastructure at the centre of policy planning. Total infrastructure investments are expected to nearly double from ₹47.8 trillion during FY2019-24 to ~₹93 trillion in FY2025-30, reflecting sustained public spending and growing private sector participation. Transport infrastructure alone is projected to attract ₹42-45 trillion over FY2025-30, underscoring its pivotal role in supporting the movement of goods, people, and services across sectors.

During FY2025-30, of the total investment potential across the transport infrastructure, roads is expected to attract the largest share at ₹33-35 trillion, followed by ₹3-3.5 trillion in metro rail, ₹2-3 trillion in logistics infrastructure, ₹1-1.5 trillion in ropeways, and ₹1-1.2 trillion in airports. These investments highlight the government's focus on multimodal transport integration, sustainable mobility, and logistics efficiency while also presenting significant opportunities for private participation.



Note: The logistics sector includes warehousing and distribution, rail freight terminals, civil aviation, ports and shipping, container freight station and inland container depot

Source: Crisil Intelligence

The funding composition of this investment pipeline reflects a balanced mix of central, state, and private participation. Public funding remains the principal driver, with the central government expected to contribute about 53% of total infrastructure investment, states accounting for 32%, and the private sector providing around 15%. The mix varies across modes: roads are predominantly financed by the central government, railways and urban transport involve larger state-level participation, and airports and logistics infrastructure attract higher private sector involvement due to their mature project structures and established concession frameworks. This diversification of funding sources demonstrates a clear policy intent, using public capital for backbone infrastructure while leveraging private capital for commercially viable assets.

2.2 Investment trends: Public expenditure on transport infrastructure as a share of GDP

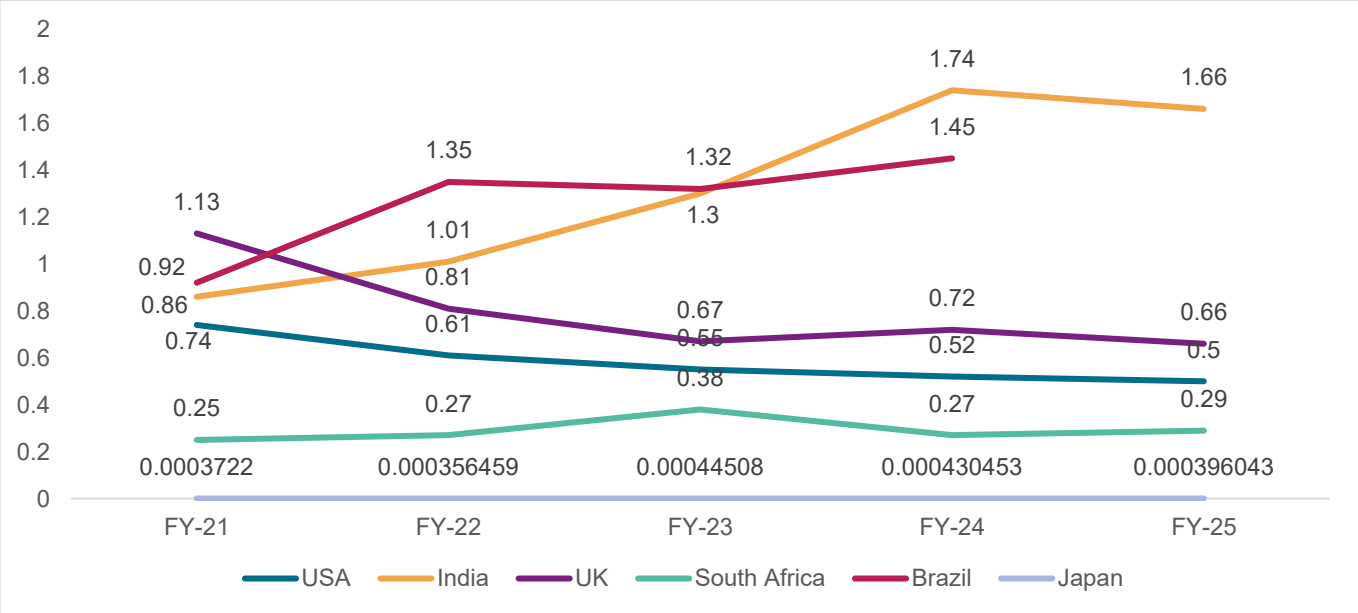
Infrastructure development and economic growth are intrinsically linked. A country's GDP growth trajectory is strongly influenced by the quality and scale of its infrastructure, which forms the backbone for productive activity. Efficient

transport networks, reliable energy supply, digital connectivity, and resilient urban systems reduce transaction costs, enhance productivity, and facilitate trade, both domestically and internationally.

Measuring infrastructure investment as a percentage of GDP provides critical insight into how economies prioritize long-term capital formation relative to their overall economic output. Higher infrastructure spending, when well-targeted, generates multiplier effects by stimulating demand in sectors such as steel, cement, and construction, while simultaneously creating durable assets that improve efficiency in the medium to long term. Conversely, underinvestment in infrastructure often results in bottlenecks that constrain growth, limit competitiveness, and exacerbate regional disparities.

Cross-country comparisons of infrastructure investment as a share of GDP also highlight differences in development strategies and fiscal priorities. Emerging economies typically allocate a higher proportion of GDP to infrastructure to bridge gaps in connectivity and basic services, while advanced economies may invest a relatively lower share, focusing instead on modernization and technological upgradation.

Public investment in Infrastructure as a percentage of GDP



Note: FY25 data point for Brazil is not available yet.
Note: Advanced economies show lower infrastructure spending as a share of GDP since much of their infrastructure is already developed and partly funded off-budget, whereas India's higher figure (~1.6% of GDP in FY24 vs. ~0.5% in the US) reflects substantial public investment in new infrastructure creation.
Source: World Bank, Office for national Statistics (UK), National Treasury Annual Report (South Africa), The Bank of Japan's Budget for expenses, India Budget, Crisil Intelligence

India's higher and rising investments reflect its aggressive infrastructure push under PM Gati Shakti, NIP, NMP and Bharatmala programmes. As already mentioned, these initiatives aim to close the infrastructure gap, improve logistics efficiency and support rapid urbanisation and economic growth. In FY2025, the collective public and private investment in infrastructure stood at around 4.6% of GDP, reflecting steady momentum in capital formation and greater private sector participation.

2.3 Key government policies in transport infrastructure

The Government's flagship initiatives ranging from Parvatmala, Bharatmala and Sagarmala to the National Logistics Policy and PM Gati Shakti are not only augmenting capacity but also reshaping the investment landscape across

asset classes. Roads, railways, ports, ropeways, airports, and urban transit systems (metros) are witnessing differentiated yet complementary growth trajectories, creating significant opportunities for investors, developers, and operators over the next five years. India's economic growth, with GDP forecast to grow between 6.5%-7.0% annually over the next five years, is a primary driver for both core road assets and related sectors.

The PM Gati Shakti- National Master Plan digitally integrates planning across ministries to strengthen multimodal connectivity and reduce project delays, while the National Logistics Policy (NLP) provides the operational backbone for efficient goods movement, targeting a reduction in logistics costs to below 10% of GDP by 2030.

Together, these initiatives are fostering seamless connectivity, improving logistics efficiency, and enhancing private sector participation.

National Infrastructure Pipeline (NIP)

The Government of India launched the National Infrastructure Pipeline (NIP) in December 2019 as a landmark initiative to systematically identify and develop large-scale infrastructure projects across the country. Covering the period from FY20 to FY25, the NIP initially envisaged investments worth ₹111 trillion, spanning over 7,400 projects. The sectors included in this pipeline are energy, roads, railways, ports, airports, urban, irrigation, rural infrastructure, digital infrastructure, agricultural and food processing infrastructure, social infrastructure and industrial infrastructure. Only projects with a capital outlay exceeding ₹1 billion are included, ensuring focus on transformative, high-impact ventures. The NIP serves as a structured framework to improve project preparation, accelerate approvals, and attract both public and private investment.

As of Feb 2026, India's National Infrastructure Pipeline (NIP) under the Gati Shakti framework has witnessed a significant expansion in both scale and scope. The NIP now comprises around 14,928 projects across 63 sub-sectors, with a total project cost of ₹216.02 trillion. Additionally, there are about 1,254 projects currently under various stages of development, reflecting steady implementation progress. Overall, the NIP has evolved into a robust platform aligning with the Gati Shakti master plan, focusing on multimodal connectivity and accelerated project execution.

National Monetization Pipeline (NMP)

NMP was announced in August 2021 on the principle of 'asset creation through monetisation' i.e., tapping private sector investment for new infrastructure creation. It aims to unlock value from existing government-owned infrastructure assets through monetization models such as PPPs, InvITs and concessions. Unlike privatisation, which involves selling ownership, the NMP allows private investors to operate and generate revenue from public assets for a fixed period, after which the assets are returned to the government.

The NMP framework employs a range of models, including Public-Private Partnerships (PPP), Infrastructure Investment Trusts (InvITs), and Toll-Operate-Transfer (TOT) concessions. These structures are designed to offer investors predictable and stable returns, while ensuring that ownership of the underlying assets remains with the public sector. This balance between private efficiency and public accountability underpins the NMP's design.

The National Monetisation Pipeline (NMP) for FY 2021-22 to FY 2024-25 envisaged a total monetisation potential of ₹6.0 lakh crore across core infrastructure sectors. Over the implementation period, the programme achieved approximately ₹5.0-5.2 lakh crore, representing about 89% of the overall target, reflecting strong execution and investor participation.

In line with this objective, National Monetisation Pipeline (NMP) 2.0 for the period FY 2025-26 to FY 2029-30 has been launched. The programme provides a medium-term roadmap for monetisation of revenue-generating infrastructure assets across key sectors, including transportation, energy, mining, and telecommunications. The

framework focuses on the transfer of revenue rights for a defined concession period, while ownership of the underlying assets remains with the public authority.

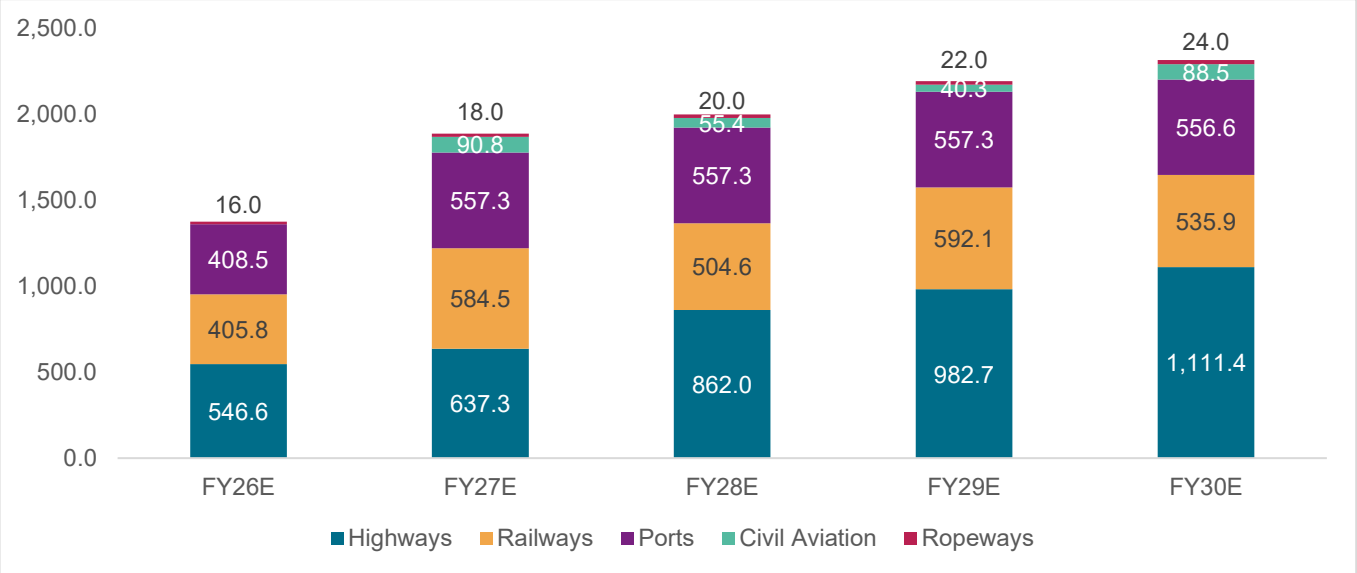
Within the transportation sector, NMP 2.0 places significant emphasis on assets with stable demand profiles and established operational performance. Monetisation is proposed across multiple modes, including:

- National highways through Toll-Operate-Transfer (TOT) and InvIT structures
- Railway assets such as freight terminals, station redevelopment projects, and commercial land development rights
- Port terminals and operational berths
- Airport assets through long-term concession models
- Ropeway projects under PPP frameworks

The monetisation process is expected to improve operational efficiency, enhance service quality through private sector expertise, and facilitate capital recycling for new infrastructure creation. The initiative also supports the development of long-term infrastructure investment platforms such as Infrastructure Investment Trusts (InvITs), thereby broadening the investor base for transportation assets.

The transportation sector constitutes a significant share of the overall monetisation pipeline, reflecting the government's focus on strengthening logistics efficiency and multimodal connectivity across the country.

Sector wise split of asset monetisation in transport infrastructure (in ₹ Billion)



Note - E: Estimates
Source: NMP2.0 document NITI Aayog, Crisil Intelligence

PM Gati Shakti - National Modal Plan for Multi Modal connectivity

Launched in October 2021, the Pradhan Mantri Gati Shakti (PMGS) initiative marks a paradigm shift in India's approach to infrastructure development and planning. It brings together 57 ministries and departments on a unified digital platform, facilitating coordinated and data-driven decision-making for infrastructure projects across sectors and regions.

PM Gati Shakti also ensures synergy among the government's flagship programmes, including Bharatmala Pariyojana (roads and highways), Sagarmala (ports and coastal infrastructure), UDAN (regional air connectivity), and Dedicated Freight Corridors (rail logistics). By aligning these initiatives under a single framework, the programme enhances last-mile connectivity, improves logistics efficiency, and supports the goal of reducing logistics costs as a share of GDP.

As of February 2026, more than 352 infrastructure projects with a combined investment value of approximately ₹16.1 trillion had been evaluated and fast-tracked under the PM Gati Shakti framework. These projects span critical sectors such as highways, ports, airports, power transmission, and industrial corridors, demonstrating the platform's role as a central enabler of integrated infrastructure delivery.

National Logistics Policy

Launched in September 2022, the National Logistics Policy (NLP) aims to build a unified, efficient, and technology-driven logistics ecosystem that enhances multimodal connectivity and strengthens India's trade competitiveness. The policy targeted reducing logistics costs below 10% by 2030, which has been achieved since logistics cost stands at 8% of GDP as of Feb 2026, bringing India closer to global benchmarks and improving supply chain resilience.

The NLP focuses on seamless multimodal integration, data-driven decision-making through the Unified Logistics Interface Platform (ULIP) and improving India's Logistics Performance Index (LPI) ranking to among the top 25 countries by 2030. It complements PM Gati Shakti by providing the operational and regulatory framework for efficient goods movement across transport modes and supports the development of Multimodal Logistics Parks (MMLPs), Private Freight Terminals (PFTs), and other logistics infrastructure.

India's progress under this policy is already visible in the World Bank's LPI 2023, India's rank improved to 38th, up from 54th in 2014, reflecting gains in connectivity, infrastructure, and supply chain digitisation.

Sagarmala Programme

The Sagarmala Programme, launched in 2015, is a flagship initiative of the Government of India aimed at fostering port-led economic growth through modernization and efficient utilization of India's 7,500 km coastline and 14,500 km of navigable waterways. Encompassing over 800 projects across port modernization, connectivity enhancement, industrialization, and coastal community development, the programme involves a total investment of about ₹3.59 trillion. Key components include port upgrades and new port construction (₹1.6 trillion), connectivity improvements via road, rail, and waterways (₹1.2 trillion), development of 14 Coastal Economic Zones (₹550 billion), and coastal community initiatives (₹240 billion). As of 2025, more than 277 projects are completed, expanding port capacity from 1,560 MTPA in 2015 to over 2,600 MTPA, with turnaround times reduced to under 48 hours. Looking ahead, Sagarmala is expected to cut logistics costs by 10–15%, raise port capacity to over 3,500 MTPA by 2030, and generate around 10 million jobs, while complementing other national programmes like Bharatmala Pariyojana and PM Gati Shakti to strengthen India's multimodal infrastructure network.

Bharatmala Pariyojana

The Bharatmala Pariyojana, launched in 2017, is a flagship highway development initiative of the Government of India designed to optimize the movement of freight and passengers across the country through the expansion and modernization of the national highway network. The programme aims to build a seamless road network connecting economic corridors, border and coastal areas, ports, and backward regions, thereby improving connectivity between rural and urban centers. Phase I (2017–2028) targets the development of about 34,800 km of corridors, comprising 24,800 km of new construction and 10,000 km of upgrades at an estimated cost of ₹6.92 trillion (₹6,920 billion). As of Dec 2025, around 26,425 km have been awarded and over 21,783 km completed.

Looking ahead, the government plans to extend the initiative under Bharatmala Phase II and subsequent phases, covering up to 83,600 km of highways in total and connecting over 550 districts, ensuring that 80% of districts are linked by National Highways.

Parvatmala Pariyojana

Parvatmala Pariyojana is a Government of India initiative launched in 2022 to develop ropeway connectivity in hilly and difficult terrains as a sustainable alternative to conventional road transport. Implemented through the National Ropeways Development Programme under the Ministry of Road Transport and Highways, the scheme aims to enhance last-mile connectivity, promote tourism, and reduce travel time and congestion in mountainous regions. It also seeks to cut down carbon emissions and improve accessibility for remote communities by leveraging the Hybrid Annuity Model (HAM) for ropeway development and private sector participation.

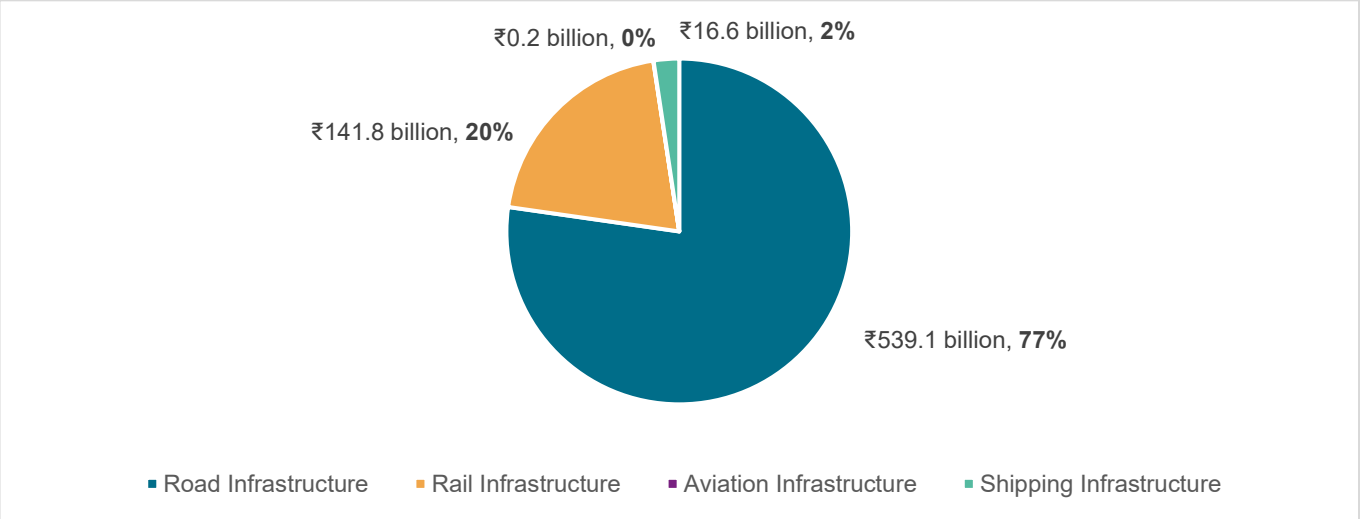
2.4 Current bid pipeline under various concession models

As of 20th February 2025, India's infrastructure industry boasts over 562 ongoing projects across various sectors and concession models, driven by increased public-private participation over the past few decades.

The current project pipeline is divided between the central government with 342 projects (61%) and state government with 220 projects (39%). The central government projects, core to the monetization pipeline cost around ₹600.72 billion while state government projects cost about ₹97.09 billion.

The road infrastructure sector dominates the project pipeline, with a substantial 77% share of the total project cost, valued at ₹539.1 billion, and 387 live tenders. The rail infrastructure sector follows, with 150 live tenders and 20% of the total project costs. 20 shipping projects are valued at ₹16.6 billion which accounts for 2% of the total projects cost, while 5 aviation projects are valued at ₹0.2 billion.

Share of various sectors in current bid pipelines (basis cost of projects)



Source: Projects Today, Crisil Intelligence

2.5 Outlook

By the close of this decade, India’s transport infrastructure is set to undergo a sweeping transformation. The evolution will not merely be about expanding physical networks, but about creating a seamless, technology-driven ecosystem that connects people, goods, and markets more efficiently than ever before.

- **Roads:** The road sector continues to dominate India's transport landscape and is projected to account for nearly 80% of the total potential investment in the transport segment over the next five years. This is driven by the vast scale and reach of India's road network, the second largest in the world and its critical role in carrying over 60% of freight and 85% of passenger traffic nationwide. Government initiatives such as the Bharatmala Pariyojana, National Infrastructure Pipeline (NIP), and National Monetisation Pipeline (NMP) have significantly accelerated highway development, expressway expansion, and rural connectivity. The sector also benefits from mature and replicable PPP models, including the Hybrid Annuity Model (HAM), Build-Operate-Transfer (BOT), Toll-Operate-Transfer (TOT), and Infrastructure Investment Trusts (InvITs), which continue to attract strong institutional and global investor interest.

  Overall, the roads sector is expected to sustain high growth momentum, with aggregate investments estimated at ₹33-35 trillion between FY2025 and FY2030, underscoring its central role in India's infrastructure expansion.

- **Ports:** India's port sector is projected to grow at a compound annual growth rate (CAGR) of around 5% between FY2025 and FY2030, supported by favourable trade dynamics, increased consumption, and growing containerisation. In FY2025, port traffic expanded by 4-6%, driven primarily by an 11% rise in container throughput and steady growth in petroleum, oil, and lubricants (POL) cargo. However, traffic in some bulk commodities showed mixed trends, iron ore volumes declined by 17% due to reduced demand from China, while coal imports fell by 3% as domestic production ramped up. Despite these variations, long-term prospects remain positive, aided by rising containerisation, policy support under Sagarmala, and ongoing capacity modernisation at major ports. India's ports are well-positioned to benefit from global trade realignment and continued growth in domestic manufacturing and consumption.

- **Airports:** Crisil Intelligenceprojects air passenger traffic recording a 7-10% on-year rise in fiscal 2026 to 425-450 million in fiscal 2026 aided by strong demand across travel segments viz. leisure, VFR (Visiting Friends and Relatives), corporate and MICE (Meetings, Incentives, Conferences and Exhibitions) coupled with increased capacity deployment by airlines expanding network aided by new aircraft deliveries and capacity expansion at major airports such as Delhi, Bangalore, Hyderabad, Chennai etc. Freight air traffic is projected to reach 5.1- 5.3 MT by fiscal 2030 driven by the country's accelerating economic growth post-pandemic and its emerging prominence in global supply chains. The 'China Plus One' strategy adopted by global players is likely to further boost freight demand, as India positions itself as a preferred alternative to China. As cargo-handling capabilities continue to improve, India is poised to develop into a significant trans-shipment hub, with volumes expected to surge in the coming years.

- **Metro rail:** India's urban metro rail network, the third largest in the world, has grown rapidly, spanning over 1,000 km across 23 cities as of FY2025. The network has expanded at a compound annual growth rate (CAGR) of about 17% since 2002, reflecting sustained investments in urban mobility. An additional 1,032 km of metro corridors has been approved and is under various stages of implementation, which will expand the operational network to 27 cities by FY2030. The sector's growth is being driven by rising urbanisation, improved affordability, and strong policy push from both central and state governments. With estimated investment opportunities of ₹3-3.5 trillion by FY2030, metro systems are set to play a vital role in improving urban connectivity, reducing congestion, and cutting carbon emissions to support India's transition toward sustainable and efficient mass transit systems.

- **Logistics:** India's rank in the World Bank's Logistics Performance Index improved to 38 in 2023 from 54 in 2014, signalling structural improvements in multimodal efficiency. The Viksit Bharat 2047 vision reinforces the urgency of building a world-class logistics ecosystem that reduces costs, enhances competitiveness and strengthens the supply chain for both internal and overseas trade. India's logistics cost accounted for 13-14% of gross domestic

product (GDP) and 9.09% of non-services output in fiscal 2024, as per the report titled *Assessment of Logistics Cost in India* by the National Council for Applied Economic Research that was commissioned by the Department for Promotion of Industry and Internal Trade. The logistics cost as a % of logistics has already come down to 8% in FY2026. This may be attributed to several initiatives, such as the PM Gati Shakti, dedicated freight corridors, Bharatmala Pariyojana, Sagarmala Project, integrated check posts, development of the Unified Logistics Interface Platform (ULIP) and the Logistics Efficiency Enhancement Programme (LEAP).

- **Ropeways and way-side amenities (WSAs)** are the other two areas in which significant progress is expected over the next five years. An investment target of ₹1-1.5 trillion has been set for 250+ ropeway projects and completion of more than 1,000 WSAs.

3 Road Infrastructure in India

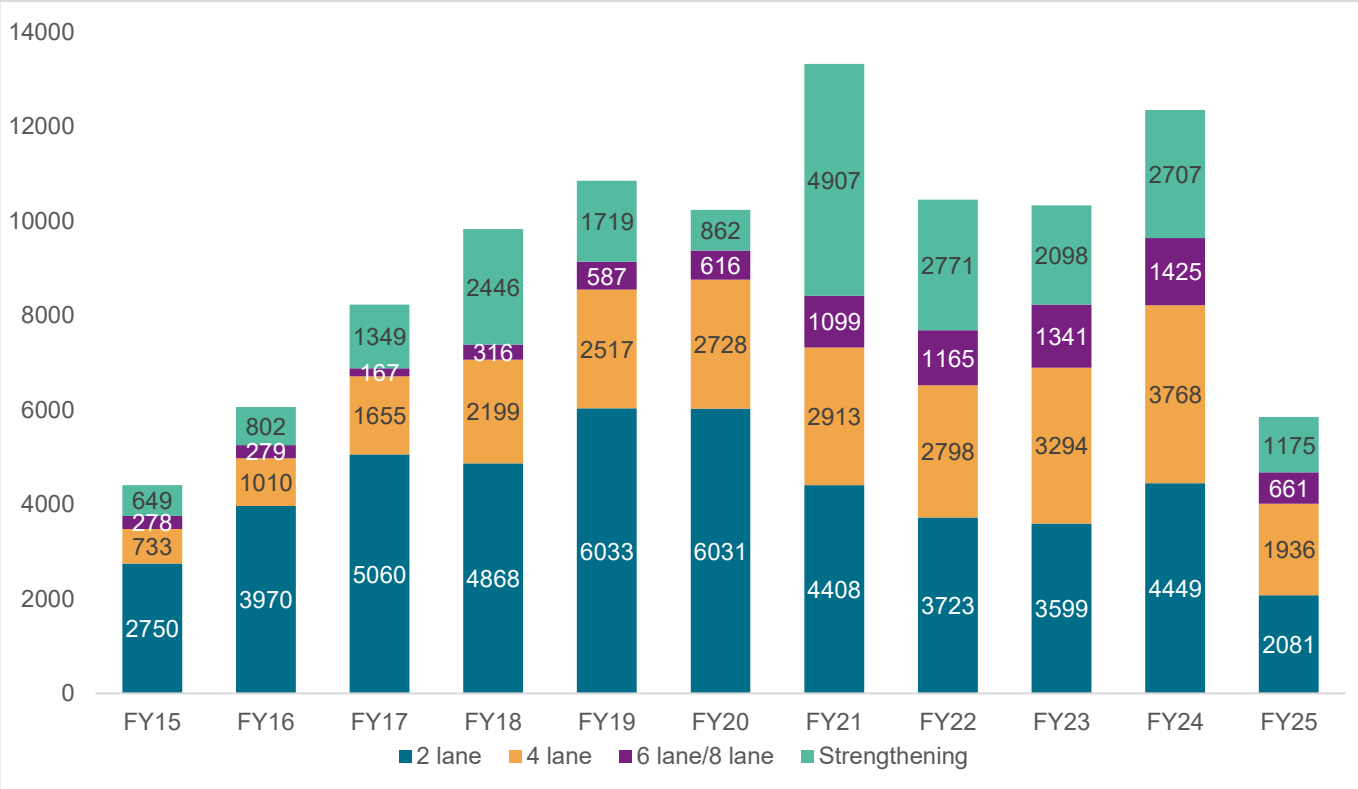
3.1 Overview

India has second largest network of roads in the world. India's logistics ecosystem is road-dominant, with roads accounting for nearly 90% of passenger traffic and close to 64.5% of freight traffic as of 2025. This makes the sector not only a facilitator of day-to-day mobility but also a central pillar in ensuring supply chain efficiency, rural connectivity, and market access.

The contribution of the road transport sector to India's Gross Value Added (GVA) has shown a relatively stable trend over the last decade, though with some fluctuations in recent years. From FY14 to FY20, the sector consistently accounted for around 3.2%-3.3% of GVA at constant prices, reflecting its steady role in supporting economic activity.

Over the past decade, India has prioritised road development through major programmes such as Bharatmala, PMGSY and the National Infrastructure Pipeline, supported by strong budgetary allocations, digital tools like FASTag, and innovative financing models such as HAM and TOT. This push has accelerated construction, expanded access in remote areas and strengthened logistics efficiency. National highways have grown rapidly from about 91,287 km in 2014 to 146,572 km in 2025 with four-lane and above stretches rising sharply, improving connectivity and reducing travel time.

Length of National Highway Lane increase (in km)



Note: Data of FY25 is till 31st December 2024

Source: MoRTH Annual Report 2024-25, Crisil Intelligence

There has been a steady rise in overall lane addition, with major growth observed in FY21 when total additions were 13,327 km. In the early years, the expansion was largely driven by 2-lane highways, which later shifted to 4 and 6-lane/ 8-lane roads. From FY15 to FY24 the share of 4-lane roads has increased by a CAGR of 20% and share of 6-

lane/ 8-lane roads has increased by a CAGR of 28.5% from FY18 to FY24, reflecting a transition toward higher-capacity and better-quality road infrastructure. Strengthening of existing roads has emerged as a consistent component, pointing to a growing emphasis on maintenance and lifecycle improvement rather than only new construction. It is expected that this steady momentum with substantial contributions from 2-lane and 4-lane expansions alongside strengthening works is continued FY25 onwards, demonstrating the government's focus on both expanding connectivity and enhancing the durability of the national highway network.

Long-term Enablers to Accelerate Growth Momentum in Roads

The outlook for India's road infrastructure sector remains highly positive, supported by strong policy measures, robust investment pipelines, and structural reforms. The major demand drivers of roads infrastructure are increased preference of travel via road and freight traffic over the roads. Roads continue to be the most preferred mode of travel for freight transportation in FY25 with a modal share of 63% and this number is expected to grow by a CAGR of 5-7% till FY30. Several long-term enablers are expected to drive accelerated growth momentum over the coming years.

Awarding rebound	NHAI plans to bid out 124 road projects with total length of 6300-6400 kms in fiscal 2026, an increase of 12% from fiscal 2025. Out of these 124 projects, 9.7% (12 projects) are BOT, 25% (31 projects) are EPC and 65.3% (81 projects) are HAM projects.
6-8 lane highways	20,000 Km of high-speed corridors to be constructed in next 5 years, with a long-term goal of constructing 50,000 Km of high-speed corridors (4-6 lanes with design speed 200-250 km/hr but speed limit of 120km/hr) network in India by fiscal 2040.
Private investments	Favorable amendments in the model concession agreement (MCA) coupled with a strong pipeline of 53 projects worth Rs 2.1 trillion with will attract higher private sector investments. Policy changes include relaxed bidder eligibility criteria and modifications to HAM and BOT concession agreements. These changes aim to attract smaller players, protect developers' returns, and ease cash flows, thereby revitalizing interest in the sector. Further changes in MCA of EPC and HAM are in pipeline.
Toll collection	Toll collections rose from ₹0.76 billion/day in FY21 to about ₹2 billion/day in FY25 marking CAGR of 27.3% driven by growing traffic and higher toll rates, further toll collections are expected to reach ₹2.18 billion/day in FY26 . The steady growth in toll collection and the expected increase in annual toll collection provide a stable revenue stream for investors and support the financial sustainability of projects.
Monetization	Ministry of Road's transport and highways (MoRTH) successfully monetized Rs 1.5 trillion of assets by Nov 2025 in first phase of National monetization pipeline (NMP), roads target for NMP 2.0 is 3.5 Rs trillion.

Source: Crisil Intelligence

NHAI's Debt Position

A striking trend is the increase in NHAI's outstanding debt over the last decade. From just ₹234 billion in FY2014, debt levels have surged to reach approximately ₹3.48 trillion in FY2022 and then reduced to ₹2.76 trillion at the start

of FY26 with the help of asset monetization pipeline (TOT and InvITs). This steep rise highlights NHAI's growing reliance on borrowings to fund highway expansion, particularly in periods when budgetary support has stabilised.

The debt build-up has significant implications. While it has enabled accelerated project execution, high repayment obligations may constrain NHAI's financial flexibility. This makes asset monetisation tools such as the Toll -Operate -Transfer (TOT) model, InvITs, and securitisation critical for sustaining investment flows into the sector while reducing dependence on debt.

Types of PPP models

Type of project	Description	Development risk	Financing risk	Traffic risk and accrual of toll fee collection	Net cash outflow for the government	Revenue for private party	Concession period	Award criteria
BOT-Toll	Private party builds the road, undertakes O&M and collects toll	Concessionaire	Concessionaire	Concessionaire	Yes (in the form of grant/equity support)	Toll	20-30 years for the NHAI** and other authorities	Highest revenue sharing bid/highest premium/ lowest equity support
BOT-Annuity	Private party builds the road, undertakes O&M* and collects annuity from the granting authority	Concessionaire	Concessionaire	Authority	Yes, net payment to be made is the difference between the toll collection and the annuity payable	Annuity payment	15-20 years for the NHAI and other authorities	Lowest annuity
BOT-HAM	Private party builds the road, undertakes O&M. Gets 40% of payment during construction and 60% as annuity along with interest	Concessionaire	Concessionaire	Authority	40% during construction and 60% as semi-annual annuity along with interest, net of toll collected	Construction grant plus annuity payments, interest on annuities, inflation-indexed O&M payments	Around 15 years of operations plus additional construction period	Lowest project cost plus O&M cost
TOT	Private party pays an upfront bid concession fee	Authority (in case upgradation of lanes is	Concessionaire	Concessionaire	No	Toll	15, 20, 30 years#	Highest upfront payment

Type of project	Description	Development risk	Financing risk	Traffic risk and accrual of toll fee collection	Net cash outflow for the government	Revenue for private party	Concession period	Award criteria
	(summation of NPV of free cash flow based on concessionaire estimates) to the authority, undertakes O&M plus certain capex and collects the toll during concession period	taken up during the concession period)						
Tolling (OMT)	Private party pays the estimated toll upfront to the authority and collects it during the concession period	No development by tolling contractor	Concessionaire	Concessionaire	No	Toll	One year for NHAI projects	Highest revenue-sharing bid

Note: Development risk refers to construction risk in developing a road project

**Operations and maintenance*

*** National Highways Authority of India*

Source: Crisil Intelligence, NHAI

Asset Monetisation Models

Asset monetisation has emerged as a central financing strategy for India's infrastructure development, particularly in the highways sector. It refers to the structured process of unlocking the economic value of operational public assets by transferring their rights to private entities for a defined period in return for upfront or periodic consideration. This approach enables the creation of a cycle, completed assets are monetised to generate fresh capital, which is then reinvested in new infrastructure, thereby expanding the overall asset base without exerting additional fiscal pressure The National Highways Authority of India (NHAI), under the guidance of the National Monetisation Pipeline (NMP) prepared by NITI Aayog, has institutionalised asset monetisation as a long-term strategy. The objective is to tap into private sector capital and operational efficiencies while recycling funds into greenfield projects and capacity augmentation.

3.2 Private Sector Participation in Roads sector

Private sector participation in India's road sector has evolved significantly, with distinct trends emerging across the key contract models - BOT (Toll), HAM, EPC and TOT. Each model has seen a change in risk appetite, competition, and qualification requirements as both the market and policy environment mature.

BOT (Build-Operate-Transfer)

Build operate transfer model has two types of models: BOT- Toll and BOT -Annuity.

During the early phases of highway development, the Build -Operate -Transfer (BOT) (Toll) model dominated bidding activity, with developers willing to take on traffic and revenue risks in anticipation of strong returns. However, mounting challenges such as aggressive bidding, delays in land acquisition, and traffic underperformance led to significant stress in BOT projects between FY12 and FY15. As a result, private participation through BOT (Toll) declined sharply. In 2023-24, BOT-Toll projects accounted for a negligible share of awards, but by 2024-25 their share rose closer to 3% of NHAI's total project awards, signalling cautious market recovery.

Private bidders under BOT-Toll are becoming more risk-sensitive. They are demanding more favourable contract terms regarding traffic risk, concession duration, and protections such as "buy-out" clauses (for when traffic falls below projections) and clarity on what constitutes competing roads. The government has already amended the Model Concession Agreement (MCA) for BOT-Toll projects (in March 2024) to address some of these concerns easing performance security requirements, modifying equity holding requirements, and looking to make terms more investor-friendly.

Overall, the BOT-Toll is being revived but with an explicit effort by the government to reduce downside risks for bidders. However, the concessionaire generates revenue through fixed annuity payments received from the authority over the concession period.

HAM (Hybrid Annuity Model)

HAM remains the dominant PPP model in recent years. In the fiscal period 2024-25, HAM projects accounted for about 65% of awards by NHAI, overtaking EPC in terms of value of project awards. This dominance reflects policy preference, since HAM allocates traffic risk largely to the government while allowing private players to share construction, operations, and finance risk.

The Hybrid Annuity Model (HAM) combines elements of Engineering, Procurement, and Construction (EPC) and annuity-based approaches, aiming to balance financial responsibility between the government and the concessionaire. Under this model, the concessionaire's financial burden during the construction phase is reduced, while assured revenues are ensured during the operational phase through fixed annuity payments, interest on the diminishing balance of project cost, and inflation-linked O&M payments. The concessionaire undertakes both construction and maintenance responsibilities, while revenue risks arising from fluctuations in user fees are borne by the authority. Variability in user fee gives rise to revenue risk, which is borne by the authority. However, the concessionaire generates revenue through fixed annuity payments received from the authority over the concession period.

The Hybrid Annuity Model (HAM) has undergone significant changes, as outlined in the HAM MCA 2022

Key changes include the change in timing of premium payment, redefinition of project milestones, and interest on annuity payments linked to the average one-year MCLR of the top five scheduled commercial banks +1.25%. Additionally, lenders will receive the first charge on all receivables, and there will be deemed termination of projects prior to the appointed date. The model also includes maintenance obligations and toll fee notifications. These changes aim to improve private participation and project awards in the road sector Furthermore, given the relevant authority is the central government or its agencies, the counterparties present a low risk of default, offering assurance regarding the stability of the revenue under the concession agreements with these authorities [Please retain]The model is also expected to boost private investments in national highways over the next five years Despite initial delays in land acquisition and caution shown by lenders, the HAM has seen increased participation in awarding, with

a total of 6,306 km awarded in fiscal 2022, of which ~3,468 km was under the HAM. The share of private investment is expected to increase, driven by the changes to the HAM bid eligibility and MCA changes. The HAM roads awarding in FY24 and FY25 was 654 km and 264 km respectively.

TOT (Toll Operate Transfer)

TOT has emerged as an important financing tool because it allows NHAI (and other authorities) to monetise existing operational assets and raise upfront capital. Private bidders (often infrastructure funds, financial investors, trusts) are attracted by the predictability of cash flows from already operational toll roads, especially those with vintage (age, traffic history) that reduces uncertainty.

Because many of the TOT assets now being bundled under this model are parts of the Golden Quadrilateral or similar well-established highway stretches, bidders are able to base their offers on actual toll collection data, operations cost and maintenance records making bids less speculative. This tends to reduce variance among bids and limit extreme discounting or over-optimism.

Overall, the evolution of bidding behaviour across BOT, HAM, EPC and TOT models reflects a maturing road infrastructure market in India. Private participation has shifted from aggressive, risk-heavy bidding to more balanced and risk-sensitive strategies as both developers and the government have learned from past experience. Tightened qualification criteria, revised concession agreements and the diversification of models are improving the quality and financial sustainability of awarded projects.

In India's PPP road projects, non-EPC players such as financial investors, infrastructure funds, and institutional investors can participate directly or through SPVs, with eligibility focused on financial strength and infrastructure investment experience rather than construction credentials. Models like TOT and InvIT especially encourage such participation, emphasizing asset monetisation, creditworthiness, and long-term operational capability in line with MoRTH and NHAI guidelines.

At the same time, the continued dominance of HAM and the steady rise of TOT demonstrate that well-structured contracts with predictable cash flows can attract strong investor interest, while reforms to BOT-Toll are gradually restoring confidence in revenue-risk projects. Together, these trends signal a more stable, disciplined and diversified pipeline of private participation, which should enhance execution quality, mobilise long-term capital and support the rapid expansion of India's national and state highway networks.

Outlook on Asset Monetisation of road projects

India's road infrastructure sector is one of the largest and fastest growing in the world, forming the backbone of national connectivity and economic development. Delivering such a vast and expanding network requires substantial and sustained investment, far exceeding the capacity of public budgets alone. Over the past two decades, the financing framework for road projects has evolved from traditional government funding to a diversified mix of public, private and blended mechanisms. This evolution has allowed the government to leverage private capital and expertise, introduce innovative risk-sharing arrangements, and accelerate project execution while maintaining fiscal prudence. It has been central to achieving the scale, speed and quality of road development under flagship programmes such as the National Highways Development Project (NHDP) and Bharatmala Pariyojana.

Crisil Intelligence projects that the monetisation potential for road assets is ~₹5.9 trillion until fiscal 2030, nearly double of the ₹2.8 trillion proceeds from monetisation until fiscal 2025.

In recent years, several investors and infrastructure developers have adopted a brownfield acquisition strategy to acquire operational or near-operational HAM road projects.

Acquisition of HAM projects through a brownfield strategy exemplifies a maturing Indian road sector where operational efficiency, risk mitigation, and capital recycling converge to support sustainable infrastructure development and private sector participation in the national asset monetization agenda.

National Monetisation Pipeline Phase 2

Asset class wise monetization pipeline FY26 - FY30 (in ₹ Billion)

Asset classes	Mode of Monetization	Length (in km)	FY26	FY27	FY28	FY29	FY30	Total
Stretches where user fee is accruing to NHAI	InvIT/ TOT model	12,000	325	388	457	533	616	**2319**
Under construction stretches where user fee will accrue to NHAI	InvIT/ TOT model	4,700	-	-	128	145	163	**436**
Projects at the end of their concession periods	InvIT/ TOT model	2,500	96	108	120	132	144	**600**
Project to be awarded under DBFOT (Toll) mode	DBFOT (Toll) model	2,100	125.6	141.3	157	172.7	188.4	**785**
Total		**21,300**	**546.6**	**637.3**	**862**	**982.7**	**1111.4**	**4140**

Source: NMP2.0 document NITI Aayog, Crisil Intelligence

Cash-Flow by recipient/Private Investment from highway projects (in ₹ Billion)

Accrual Heads	FY26	FY27	FY28	FY29	FY30	Total (FY26 to FY30)	Flows for the period FY31 and beyond
Consolidated Fund of India	421	496	705	810	923	3,355	-
Direct investment	18.8	84	138.2	153.9	169.6	564.5	220.6

Source: NMP2.0 document NITI Aayog, Crisil Intelligence

3.3 Awarded and Upcoming Projects

Mode-wise Projects proposed to be Awarded by NHAI

The table below presents the BOT project pipeline; it is expected to support private sector participation over medium to long run. Additionally, long-term project pipeline of 53 highway projects worth ₹2.1 trillion is being prepared under the BOT model.

Projects Pipeline under HAM

	FY22	FY23	FY24	FY25
Length awarded(km)	8,781	10,989	11,537	11,269
Cost (₹ Billion)	3,295.64	4,691.07	4,454.71	4,365.22

Source: MoRTH, Crisil Intelligence

Pipeline/upcoming projects by NHAI, MoRTH

During FY26, the National Highways Authority of India (NHAI) plans to implement 124 projects with a cumulative investment of approximately ₹3.45 trillion (₹3,454.65 billion), covering a total road length of 6,378 km.

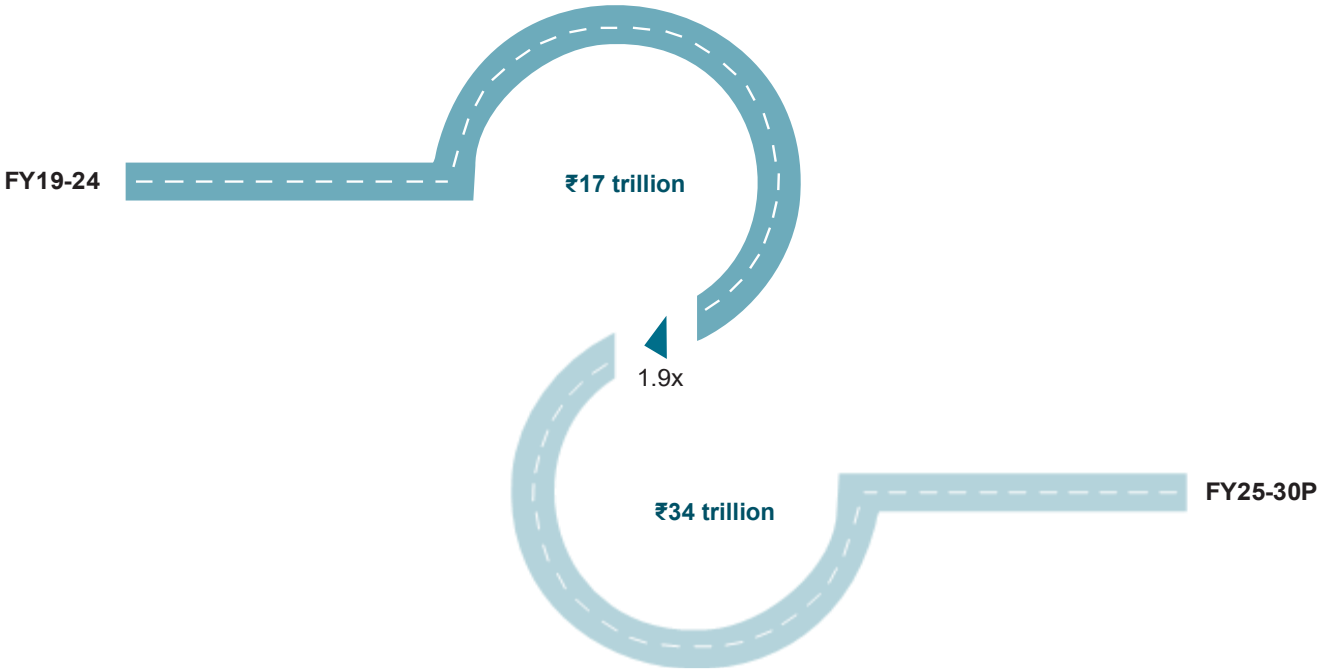
Of these, the Hybrid Annuity Model (HAM) will dominate with 81 projects spanning 4,699 km, representing an investment of about ₹2,475.09 billion. The Engineering, Procurement and Construction (EPC) mode accounts for 31 projects totaling 683 km, with an estimated cost of ₹358.31 billion. Meanwhile, the Build-Operate-Transfer (BOT) mode will see 12 projects covering 996 km, entailing an investment of around ₹621.25 billion.

The upcoming MoRTH project pipeline comprises a total of 25 PPP-based projects across three implementation models. Under the Build-Operate-Transfer (BOT) model, 4 projects are planned with a combined estimated cost of ₹185.6 billion. The Design-Build-Finance-Operate-Transfer (DBFOT) model includes 1 project valued at ₹57.3 billion. The Hybrid Annuity Model (HAM) accounts for the largest share with 18 projects, representing an investment of ₹706.9 billion. Altogether, these projects amount to a total estimated cost of ₹1,211 billion.

3.4 Outlook

India's road sector is poised to maintain strong momentum, underpinned by its central role in facilitating both freight and passenger mobility. Accounting for over 60% of total freight and nearly 85% of passenger traffic, roads form the backbone of India's transport ecosystem. The sector is expected to attract the largest share of transport investments, approximately ₹33-35 trillion between FY25-30.

Capex in roads sector (₹ billion)



Source: Crisil Intelligence

Growth Drivers and Demand Outlook

Road freight is expected to maintain a healthy growth trajectory, with volumes projected to expand by 5-7% annually in FY2026. This follows robust growth of 6-8% in FY2025, driven primarily by the sustained movement of bulk goods and the growing share of non-bulk commodities such as agricultural produce, consumer goods, and e-commerce deliveries. Rising rural connectivity, expanding industrial corridors, and increasing consumption demand are expected to sustain medium-term freight growth.

Passenger traffic will similarly benefit from continued improvements in intercity expressways and rural road connectivity. Highway expansions and new expressway developments are expected to improve travel time efficiency, safety, and service reliability-making road travel more competitive relative to other transport modes.

Investment and Policy Landscape

Capital expenditure in the road sector is projected to increase from around ₹17 trillion during FY2019-24 to about ₹33-35 trillion in the medium-term span of 5 years, nearly 1.9 times higher. This surge will be driven by a combination of public and private investments, supported by government policy thrust on network expansion, asset monetisation, and multimodal integration.

The share of private investments is anticipated to increase from 11% between FY2019-24 to 16-18% between FY2029-30, with government increasingly shifting its focus to asset monetization models which provide stable, long-term, annuity-like returns and lower risk for private investors. Financing diversification is being achieved through models such as Hybrid Annuity Model (HAM), Build-Operate-Transfer (BOT), Toll-Operate-Transfer (TOT), and Infrastructure Investment Trusts (InvITs). The success of these models has strengthened investor confidence and attracted long-term institutional and global capital.

Capacity Augmentation and Network Expansion

The next phase of highway development will focus on capacity augmentation, expressway expansion, and corridor-based planning. MoRTH aims to upgrade 25,000-30,000 km of two-lane highways into four lanes (with estimated investment of ₹8-10 trillion) and convert about 16,000 km of four-lane highways into six lanes. The upcoming FY2026-30 build programme will prioritise systematic widening of high-traffic corridors and development of new greenfield expressways and access-controlled highways.

Guided by Vision 2047 and the Viksit Bharat roadmap, India targets the development of 50,000 km of high-speed corridors by FY2037, scaling up to 200,000-230,000 km by FY2047. These initiatives are expected to enhance logistical efficiency, reduce transit times, and lower logistics costs, aligning with the government's broader target of achieving single-digit logistics costs as a percentage of GDP.

Technological Advancements and Innovation

Technology adoption is emerging as a key enabler in improving construction efficiency and network management. MoRTH is encouraging the use of advanced materials and construction techniques to reduce costs and enhance pavement quality. Research initiatives are underway on the use of bio-bitumen from agricultural waste and performance-based bituminous mixes. Additionally, digital tolling, contactless payment systems, and intelligent transport management solutions are being rolled out to improve traffic flow and reduce congestion.

Multimodal Integration and Logistics Efficiency

To strengthen last-mile connectivity and multimodal freight integration, 73 Multi-Modal Logistics Parks (MMLPs) are planned under the PM Gati Shakti initiative. These will serve as nodal hubs connecting road, rail, and air cargo networks, improving modal balance and supply chain competitiveness. The corridor-based development of MMLPs, along with expressway spines and grade-separated bypasses, is expected to enhance logistics efficiency during FY2026-30.

The road sector's medium-term outlook remains robust, supported by sustained policy push, strong investment appetite, and increasing technological sophistication. Continued government focus on improving network quality, safety, and digital integration will be critical in achieving the objectives of Vision 2047.

4 Overview of logistics

4.1 Key Components of Logistics

Overview of Key Components of Logistics

Key components of logistics

Segment	Sub-Segment	Key characteristics
Transportation modes	Road transportation	Roads are the most important mode of transport catering to commoditised, piecemeal cargo segments, in addition to full truck load cargo. Roads are typically most competitive for short distances (250-300 km). They are also a preferred mode for transport of non-bulk items
	Rail Transportation	Rail freight is generally preferred for medium to long distance hauls for bulk and container cargo. These services are offered either by the Indian Railways (as in case of coal, iron ore, etc) or CTOs in case of container logistics
	Air transportation	Air transportation involves the movement of goods by aircraft, including passenger and cargo planes. This mode is largely preferred for high-value time-sensitive cargo, perishable goods, and express packages.
	Sea Transportation (Coastal shipping)	Sea transportation involves the movement of goods by ships and boats on oceans, seas, and inland waterways. Preferred for Bulk commodities (e.g., oil, coal, grain), containerized cargo, project cargo, and breakbulk cargo, serving primarily international routes.
Logistics support infrastructure	Warehousing & Distribution	Warehousing involves the storage of goods and merchandise to protect the quality and quantity of stored product. It is an integral part of the logistics value chain, facilitating the collection, storage, sorting and dissemination of goods
	Rail linked terminals (including PFTs & GCTs)	A goods shed is a rail linked terminal that facilitates loading, unloading and in-transit storage of commercial cargo transported by the Indian Railways. Rail linked private terminals (PFT/GCTs) serves domestic cargo, facilitating access to rail transport, and providing services such as warehousing and transportation for incoming and outgoing cargo, including last mile connectivity. Some rail linked private terminals also provide value-added services such as cargo aggregation and packaging
	Container train operators (CTOs)	CTOs are licensed by the Indian Railways to provide EXIM/domestic container haulage services.

Segment	Sub-Segment	Key characteristics
	ICDs/CFSs	ICDs are dry ports located away from seaports, equipped to handle customs clearance, container storage, and multimodal cargo movement CFSs are located near seaports where cargo is consolidated, stuffed and destuffed for customs clearance, and short-term container storage
	Bulk Liquid storage	Bulk Liquid storage refers to specialised tanks or terminals designed to safely store large volumes of liquids such as Chemicals, fuels, oils or food-grade fluids for industrial use or transport.
	MMLPs	MMLPs serve as major freight aggregation and distribution hubs. They reduce traffic congestion on city roads and streamline the movement of goods, as trucks can drop off/pick up cargo at a single location for onward multimodal transport

Source: Crisil Intelligence

4.2 Market Size of Key Components of Logistics

Market Size - Logistics support Infrastructure

Performance of rail-linked sectors was relatively better vis-à-vis other sectors. CTOs and rail freight terminals registered a double-digit growth at ~12-13% each. In container logistics, higher hinterland exports and increased haulage through rail aided CTOs/ICDs to perform better vis-à-vis CFSs. Improved haulage also helped increase rail linked private terminals' penetration. While warehousing grew at 9% CAGR over fiscal 2020-25.

Review and outlook segment wise - Market Size in revenue

Segment	FY25E (Rs billion)	CAGR (FY20-25E)	CAGR (FY25E-30P)
Rail Linked Terminals	80	~12%	~13%
CTO	120	~12%	~14%
CFS/ICD	80	~9%	~10%
Industrial Warehousing	1450	~9%	~11%

Source: Industry, Crisil Intelligence

Review and outlook segment wise - Investments (Rs billion)

Segment	FY21-FY25E	FY26E-30P
Rail Linked Terminals	80-85	200-220
CTO	30-40	50-60
CFS/ICD	15-20	20-25

Segment	FY21-FY25E	FY26E-30P
Industrial Warehousing	300-350	700-800

Source: Industry, Crisil Intelligence

Rail Linked Terminals Market

Rail linked private terminals are poised to gain market share from Indian Railways' goods sheds

Rail freight terminals that do not facilitate custom clearances at their site can be broadly classified into captive rail sidings, goods shed (operated by the Indian Railways) and rail linked private terminals (handles third-party cargo). Within these, goods sheds and rail linked private terminals come under commercial freight terminal market, where services on a commercial basis are provided to a wide customer base.

Captive rail sidings

Captive siding is a rail freight terminal that facilitates loading and unloading of goods directly at manufacturing plants (or strategic locations for distribution of goods). Such terminals permit receipt and dispatch of domestic as well as imported raw materials and finished goods. In some cases, the Indian Railways also permits manufacturers to allow co-users to use the siding for their respective in-house requirements. Currently, there are around 1,000 captive sidings in India.

Goods shed (Indian Railways)

A goods shed is a rail freight terminal that facilitates loading, unloading and in-transit storage of commercial cargo transported by the Indian Railways and can be owned by the Indian Railways or private parties. At present, there are around 1,000 goods sheds across India.

Rail linked private terminals

A Rail linked private terminal serves domestic cargo, primarily facilitating access to rail transport, and providing services such as warehousing and transportation for incoming and outgoing cargo, including last mile connectivity. Few terminals also provide value-added services such as cargo aggregation, packaging, etc.

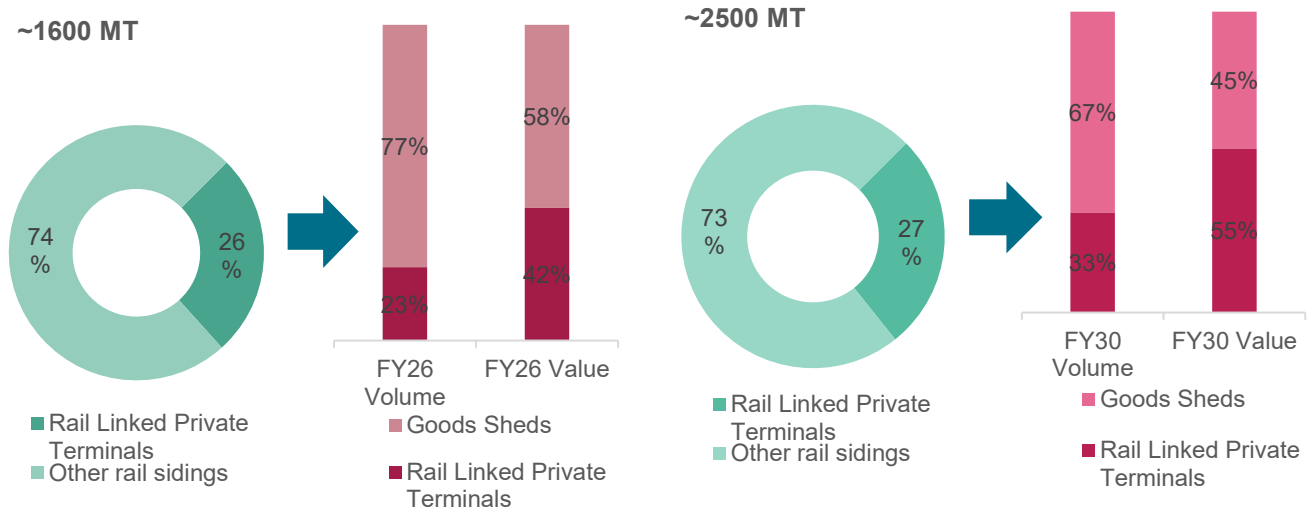
Services offered by rail linked private terminals include:
Commodity handling from/to train
Warehousing

value-added services such as bagging, unitising, palletisation, etc. industrial plots and sheds for medium and small-scale enterprises, etc. On average, such services contribute less than 5% to overall revenue.

Last mile transportation
Commercial rail freight terminal market review & outlook

CRISIL Intelligence estimates that commercial freight terminals (including goods sheds and rail linked private terminals) handled ~26% of non-containerised rail traffic in India. Within commercial freight traffic, the estimated volume share of rail linked private terminals was ~21%. Volumes handled at rail linked private terminals have improved significantly in the past few years, as notified terminals have increased. The share of rail linked private terminals in commercial rail freight terminals has almost doubled from 13% to ~21%, over the last 5 years.

Commercial rail freight terminals include rail linked private terminals and goods sheds



Source: Indian Railways, Company reports, Crisil Intelligence

Rail linked terminals will experience the highest growth rate, increasing from Rs 70-80 billion to Rs 140-150 billion, with a CAGR of around 12-14%. This growth suggests strong underlying factors such as strategic investments, market demand, and supportive policies driving the expansion. The upward trend reflects a robust and sustained increase in capacity and performance over the next five years.

Container Train Operators (CTO) Market

Rail containerised EXIM traffic increased at 6% CAGR between fiscals 2019 and 2025.

Domestic containers clocked 15% CAGR between fiscals 2019 and 2025.

Active CTOs and operational rakes

CTO	Operational container rakes	Licence category	Remarks/source	Routes/stations served
CONCOR	388	I	As per official website of CONCOR, it operates 388+ rakes and manages 66 terminals	They operate a vast PAN India network of 66 Inland Container Depots (63 terminals and 3 strategic tie-ups)
Adani Logistics	68	I	ALL operates 68 container rakes, 9 GPWIS rakes, 3 AFTO and 7 Agri rakes. It also operates 5,000+ containers	Patli, Tumb, Kilaraipur, Nagpur, Kishangarh, Malur, Taloja, Kanech, Mundra, Loni and Valvada
DP World	100	I	They operate a substantial fleet of over 100 owned containers and Special Freight Train Operator Scheme (SFTO) rakes. Specifically, their group companies, Container Railroad Services Private Limited and DPW Rail, cumulatively operate	ICD Pali, Mundra, CWCNSL Navi Mumbai, Pipavav, Bhagat ki Kothi (Rajasthan), ICD Gothangaon (Surat), Reliance (Kanalus), Navkar Siding Navi Mumbai

CTO	Operational container rakes	Licence category	Remarks/source	Routes/stations served
			around 49 rakes (as of September 2023 data)	
Pristine Logistics	43	I	As per the company's website, Pristine runs 37 BLC/BLCM rakes, including 28-30 owned rakes and 13-15 leased rakes. It has 2,624 domestic end open and side open containers (for tile and white cement), and 415 dwarf 40 feet containers for the transportation of light weight cargo (polyesters and polymers). It also operates 4 ICDs & 1 PFT.	EXIM: NCR/Ludhiana to Mundra/Pipavav, Kanpur to JNPT Domestic: JK White Katni to Patna/Kanpur/Punjab/ Kolkata Reliance Kanalus-NCR (dwarf containers); Patna to TISM, Rourkela & Barbil; Morbi-Siliguri; Mundra-Ludhiana
Gateway Rail	31	I	The company operates 31 rakes, of which 21 are owned. It also operates 398 road-trailers and 5 owned rail terminals	Gurgaon and Ludhiana to Mundra, JNPT (Nhava Sheva) and Pipavav
Hind Terminals	34	I	The company is a part of the UAE-based Sharaf Group of Companies, which operates in diversified sectors. Besides Dronagiri Node of CWC, HTPL has ICDs located in Palwal and Kila Raipur (Ludhiana)	HTPL now operates its own Container Freight Stations (CFSs) at Nhava Sheva (JNPT), Mundra, Hazira and Chennai. It has its own Multi-Modal Rail Linked Logistics Park at Palwal near Delhi and at Kila Raipur near Ludhiana and a Rail Linked facility at Dhanakya near Jaipur. It also has it presence across all major ports in India.
JM Baxi	25	III	JM Baxi's group company International Cargo Terminals and Rail Infrastructure Pvt. Ltd manage CTO services	JNPT, Pipavav, Mundra, Chennai/ Ennore, Vizag and Kochi ports, their hinterland and domestic services across India

Source: Indian Railways, company websites and reports, rating rationales, industry, CRISIL Intelligence

The CTO market posted 12% CAGR between fiscals 2020 and 2025 and is projected to grow at a much higher rate of 14% CAGR over fiscal 2025-30.

Container Freight Station and Inland Container Depot Market

Overview of container freight station/ inland container depot

Container freight station (CFS) and inland container depot (ICD) are common user facilities with public authority status, equipped with fixed installations. These offer a wide range of services, including custom clearance, handling and temporary storage of import/export laden and empty containers.

Distinction between CFS and ICD

Characteristics	CFS (Container Freight Station)	ICD (Inland Container Depot)
Location	Near gateway port (off-dock facility)	In the hinterland (dry port)
Customs Status	Appendage to a parent customs station at a port	Independent customs station
Movement of Goods	Local movement within the same customs station	Movement from one customs station to another
Regulations	Covered by local procedure and bonds/bank guarantees	Covered by Goods Imported (Condition of Transshipment) Regulations, 1995

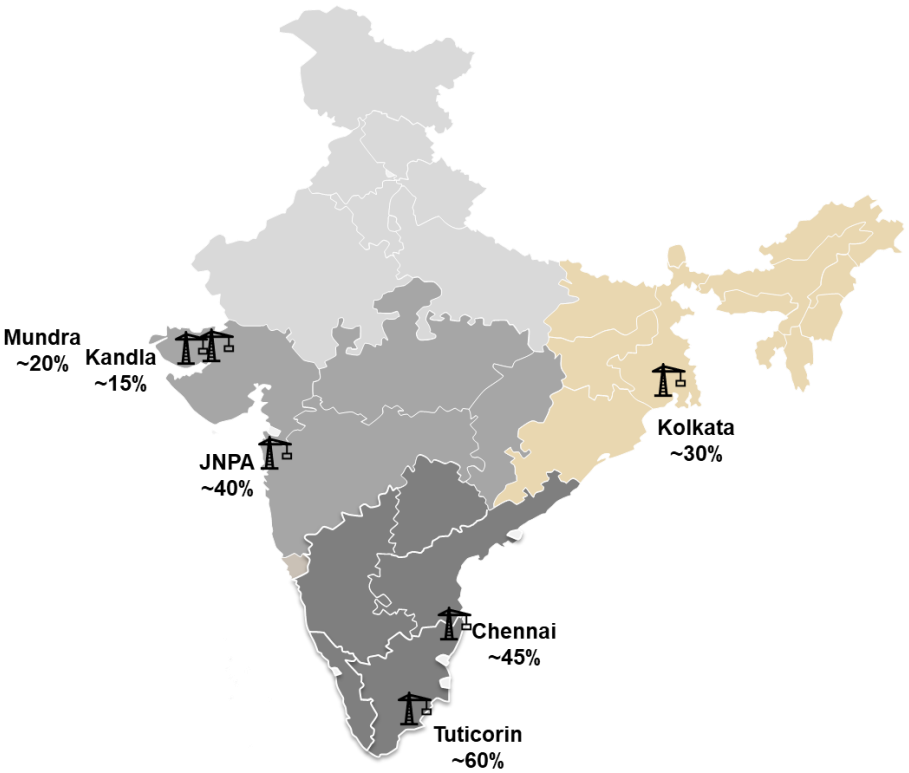
Container handling and transportation is the principal source of revenue for CFS/ICD players.

Overview of key CFS/ICD across regions

Key locations of CFS/ICD

There are ~250 operational CFSs/ICDs in the country; CFSs account for more than two-thirds of the share.

Traffic share handled by CFSs across key Indian ports (% of port traffic, excluding transhipment)



Source: Customs, DGCIS, Company reports, Crisil Intelligence

- NCR is the largest ICD cluster in North India in terms of volumes handled by ICDs in the cluster. Apart from Delhi, the districts that are considered as part of NCR are Gurgaon, Faridabad, Rewari, Palwal, Panipat and Sonepat of Haryana and Ghaziabad and Greater Noida in Uttar Pradesh. Key players operating in the cluster are Adani Logistics, CONCOR, CWC, Gateway Rail and Hind Terminals, among others
- The Punjab/Ludhiana cluster is also among the largest clusters in North India in terms of volumes handled by ICDs in the cluster. Key players in the cluster are CONCOR, Gateway Rail, Pristine Logistics, Adani Logistics (operations of Inlogistics Kanech were acquired by Adani Logistics), and Hind Terminals
- All the terminals in the West UP/Uttarakhand cluster, except the Kashipur ICD, are operated by CONCOR. Kashipur ICD is operated by a JV of India Glycols and Apollo Logisolutions
- In Rajasthan, three ICDs are present in the Jodhpur cluster; others are located in Kota, Jaipur and Kathuwas
- In the rest of UP cluster, CONCOR and Pristine's ICD are the key terminals in UP and account for the majority of trade from the region
- In North Bengal/Bihar, Siliguri ICD in North Bengal and Bihta ICD, near Patna, have been recently commissioned by Pristine Logistics

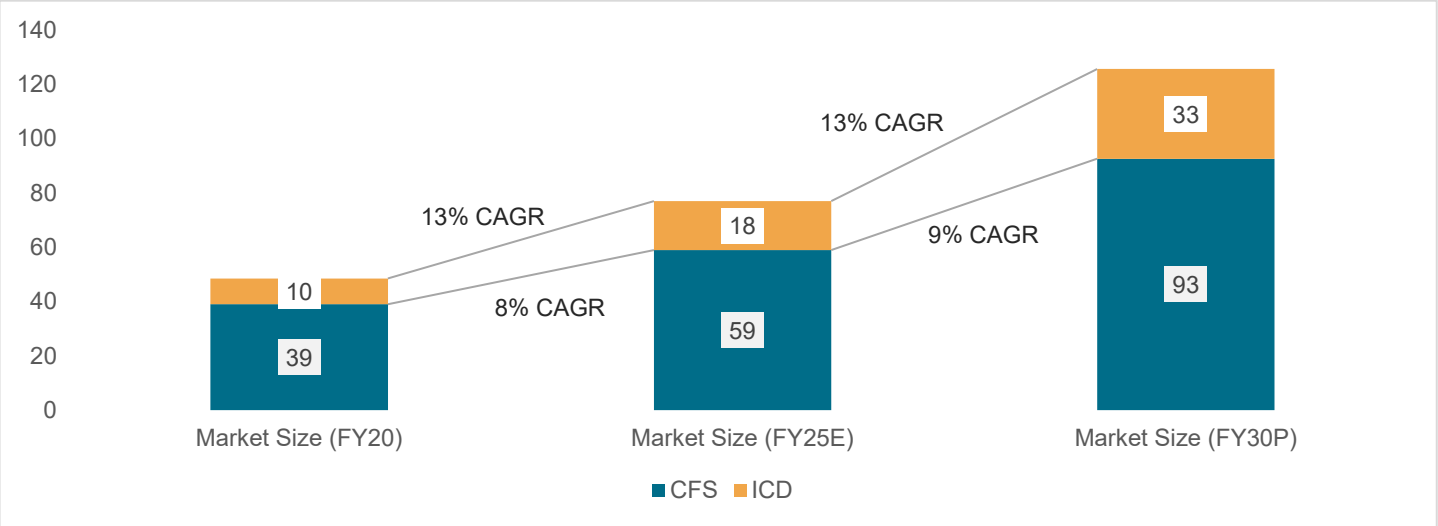
CFS/ICD market size

CFS/ICD players derive majority of their revenues from container handling and transportation, and the remaining from ground rent and auctions. The CFS/ICD industry's market size is Rs 77 billion as of fiscal 2025. The industry grew at 8% CAGR over fiscal 2020 to fiscal 2025, in line with an increase in container traffic and is expected to reach to Rs 120-130 billion by fiscal 2030, growing at 9-10% CAGR over the period.

The CFS market was on a declining trend due to the government's focus on DPD. However, the share of DPD is expected to stabilise at 55-60% of imports vis-à-vis the government's set target of 70%, as more than half of the DPD containers are resent to CFS either because of non-clearance within 48 hours or voluntarily by importers for storage and onward transportation to the hinterland.

The ICD market has been relatively upbeat. Against a declining trend observed across the CFS market, the ICD market recorded average growth of 13% in the past few fiscals. Most ICDs are located in the hinterland and generally have a rail connectivity. Thus, improvements in rail infrastructure bode well for ICDs. Growth of the ICD market remained positive during the pandemic in fiscal 2021 also since the rail-based container movement remained buoyant during the year.

CFS/ICD market size (Rs billion) FY25-30P



Source: Industry, Crisil Intelligence

Agri Warehousing Market

Agriculture warehousing in India is growing steadily with a mix of government-run, cooperative and private storage facilities. Indian government has placed a significant emphasis on improving the sector through various key initiatives like National Agriculture Market (e-NAM),

Overview and Market Assessment of Agri warehousing market in India

The industry witnessed a robust growth of 5-7% CAGR between fiscal 2020 and fiscal 2025. The growth has been supported by various factors including government initiatives, increased agriculture production, rising demand for cold storage, private sector investments, technological advancements and expansion of logistics networks, enhancing its capacity to manage and store agriculture produce more effectively.

Over fiscal 2026 to 2029, we expect agricultural warehousing demand to clock 2-5% compound annual growth rate (CAGR), reaching around 0.78-0.80 billion sq. ft from 0.77-0.79 billion sq. ft, backed by expectations of normal monsoons and sufficient reservoir levels.

Overview of PPP Models in Agriculture Silo Construction

Key PPP Models Used in Silo Construction: Comparative Table

Model	Ownership During Concession	Ownership Post-Concession	Revenue Mechanism	Land Arrangement	Major Risk Allocation
DBFOO	Private (Owns & Operates)	Private (retains ownership)	Fixed storage charges (capacity-linked), variable handling fees paid by FCI (reverse bidding for lowest charge); commercial returns from optimized operations	Acquired by Private Investor	Construction, finance, operation, market, and land-acquisition risk on private; demand/payment risk on FCI (mitigated via minimum guarantees)

Model	Ownership During Concession	Ownership Post-Concession	Revenue Mechanism	Land Arrangement	Major Risk Allocation
DBFOT/BOOT	Private (Owns & Operates)	Public (transfers to FCI)	Fixed storage charges, handling fees from FCI; usually a Viability Gap Funding (VGF) mechanism may supplement returns	Provided by FCI/Public Authority	Construction, finance, and operation risk on private; land/procurement risk on FCI; asset reverts to FCI post concession
Hub & Spoke (Mixed)	Combines both above depending on site	Varies by node (spoke often DBFOO; hub often DBFOT)	Combination, with capacity-linked fixed charges for each silo and network-level integration	Hub land by FCI; spoke land typically by private	Follows standard model per site, but risks amplified due to network/interconnection dependencies

Source: Industry, Crisil Intelligence

Liquid Bulk Storage Market

These terminals primarily serve movement & storage of edible oils, bulk chemicals, speciality chemicals and POL products. Given the scaling up of the related manufacturing and refining capacities, the prospects of these facilities is strong.

AVTL, Ganesh Benzoplast, and IMC are key multi-location players having liquid tank farms across ports in the country. Indo Nippon, ATS, are GCPL are a few other players having presence at single locations. Among key upcoming liquid storage terminals, AVTL's JNPA terminal will be located at the largest major port in terms of container traffic. Provided below are locations of key players:

Port	Hinterland catered to	Key players	Third-party capacity (million cbm)
Kandla	Gujarat, Rajasthan, NCR, Punjab, Haryana, Himachal, Madhya Pradesh	AVTL, Indo Nippon Chemicals, IMC, Ahir Salt	1.15
Pipavav	Gujarat, Rajasthan, NCR, Punjab, Haryana, Himachal, Madhya Pradesh	AVTL, IMC, Gulf Petrochem	0.45
JNPA	Maharashtra, Hyderabad, Silvassa, Gujarat	GBL, IMC, AVTL (Upcoming)*	0.44
Dahej	Gujarat, Rajasthan, NCR, Punjab, Haryana, Himachal, Madhya Pradesh	GCPL	0.39
Haldia	West Bengal, Bihar, Northeast and Nepal	AVTL, IFB Agro, IMC	0.38
Mumbai	Maharashtra, Hyderabad, Silvassa, Gujarat	ALL	0.30
Ennore	Tamil Nadu, Karnataka, Andhra Pradesh	IMC	0.25
New Mangalore	Karnataka	AVTL, IMC, ATS	0.21
Vizag	Andhra Pradesh, Telangana, Karnataka, Odisha, Chhattigarh	IMC, HPCL, EIPPL	0.15
Cochin	Kerala	AVTL, IMC, GBL	0.08
Chennai	Tamil Nadu, Karnataka, Andhra Pradesh	IMC	0.06
Kolkata	West Bengal, Bihar, Northeast and Nepal	IMC	0.05
Mormugao	Maharashtra, Hyderabad, Karnataka	GBL, IMC	0.05
Kakinada	Andhra Pradesh, Telangana, Karnataka, Odisha, Chhattigarh	IMC	0.02

Multimodal logistics parks

Multi Modal Logistics Parks (MMLPs) represent a cornerstone in India's contemporary infrastructure development agenda. Conceptualized as part of an integrated policy initiative under the Ministry of Road Transport and Highways (MoRTH), these parks aim to overhaul India's high cost, fragmented, and inefficient logistics sector.

India's MMLPs are built fundamentally on long-tenure Public Private Partnership (PPP) models, tailored to optimize commercial risk allocation, project financing, and operational standards.

The MMLP program, as of October 2025, has progressed well beyond conceptualization, with six MMLPs formally awarded and several more at the bidding or advanced feasibility stage. 35 total locations have Cabinet approval, with detailed status varying from operational to pre-feasibility (see next section for table and further analysis). Announced and publicized MMLP locations cover India's main industrial, freight, and port-centric clusters, including Delhi-NCR, Mumbai, Gujarat (Kandla, Rajkot, Pipavav), South/North Punjab, Ambala, Jaipur, Hyderabad, Kolkata, Bhopal, Kota, Sundergarh, Solan, Raipur, Sangrur, Panaji, Valsad, Cochin, among others.

The first five awarded projects are intended to be operational by 2025-27, with full project rollout for other locations to follow in a phased, demand-responsive manner.

For most awarded parks, implementation has commenced or advanced beyond the site acquisition stages. Chennai, Bengaluru, and Nagpur are especially prominent as visible "lighthouse" projects. According to recent Parliamentary replies, ministry reports, and press releases, as of Oct 2025 over ₹3,661 crore (approx. USD 440 million) has been committed across five principal projects either under construction or close to operationalization.

Estimated Investment for MMLPs development

The scale of India's MMLP ambition is vast. The government projects an overall outlay of ₹46,000 crore (approx. USD 5.5 billion) for all 35 planned parks. For the 15 prioritized sites, the estimated requirement is ₹22,000 crore (approx. USD 2.6 billion). Per project, the minimum investment is substantial, generally ranging from ₹600 crore for smaller parks to upwards of ₹1,700 crore at mega hubs.

Gati Shakti Multi-Modal Cargo Terminals

The Gati Shakti Cargo Terminal (GCT) initiative under PM Gati Shakti National Master Plan seeks to overhaul India's logistics network with an ambitious drive for multimodal connectivity. GCTs are critical to the strategy of enhancing logistics efficiency and reducing transportation costs, thereby boosting India's global competitiveness. The Ministry of Railways and the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) are principal agencies for GCT development, which spans policy innovation, corridor-based planning, public-private partnerships (PPP), and the introduction of competitive bidding models.

Planned GCT Projects to Be Awarded

As of early October 2025, the Ministry of Finance has confirmed the identification of 434 infrastructure projects under PM Gati Shakti, of which a large proportion pertains to multimodal logistics upgrades and new GCTs. Of these, 192 are in Energy/Mineral/Cement Corridors, 200 are in High Traffic Density Corridors, and 42 are in Port Connectivity Corridors. 156 have ready detailed project reports (DPRs), 68 are sanctioned, and another 88 are being appraised at high-level inter-ministerial meetings.

The government's medium-term vision includes the construction of at least 200 new GCTs along the Eastern and Western Dedicated Freight Corridors (EDFC and WDFC).

Awarded GCT Projects

National Roll-Out and Commissioning Status

By August 2025, Indian Railways has announced the commissioning of 112 Gati Shakti Cargo Terminals, a figure surpassing the policy's target of 100 by the end of FY25.

Table 1: Expected outcome of various government policies on transportation & warehousing

Policy	B2B Road Transportation	Rail Transportation	Warehousing
National Logistics Policy (NLP)	Aims to reduce logistics costs and improve efficiency. It promotes technology adoption (e.g., FASTag), better planning, and an integrated digital system to streamline movement, thereby reducing transit times and improving vehicle utilization.	Encourages modal shift to rail by improving infrastructure, simplifying processes, and promoting a predictable rail freight system. It aims to increase rail's share in freight transport.	Promotes the development of modern, organized, and technology-driven warehouses. The policy's focus on an integrated logistics ecosystem helps in better planning of warehouse locations and improving first and last-mile connectivity.
Gati Shakti Scheme	This is a master plan for multi-modal connectivity. It will help in better planning and execution of road projects, ensuring that roads are integrated with other modes of transport. This reduces bottlenecks and improves last-mile connectivity.	Significant focus on expanding and upgrading the rail network. The scheme integrates new rail lines and freight corridors with other infrastructure projects, making rail a more viable and efficient option for long-distance transport.	Accelerates the development of integrated logistics parks and multi-modal terminals. This helps in strategic placement of warehouses near transport hubs, improving connectivity and reducing costs.
Bharatmala Pariyojana	Focuses on constructing and upgrading national highways, including economic corridors and expressways. This directly improves road transportation efficiency, reduces travel time, and enhances safety, making long-haul B2B logistics more reliable.	While primarily a road project, it is designed to complement other transport modes. The improved road network provides better first and last-mile connectivity to rail and port terminals.	The development of new highways and economic corridors opens new locations for warehousing and logistics hubs, particularly along these key routes, encouraging decentralized and more efficient storage networks.
National Rail Policy (NRP)	The policy's focus on increasing the share of rail freight puts pressure on road transporters to become more competitive. However, it also creates new opportunities for road transport in first and last-mile delivery, as rail is primarily for long-distance hauls.	Aims to modernize the Indian rail network, increase its freight capacity, and improve its speed and reliability. It focuses on developing dedicated freight corridors and increasing the share of non-bulk cargo, making rail more attractive for a wider range of goods.	Promotes the development of railway-owned warehouses and logistics parks at rail terminals. It encourages better integration of rail freight with warehouse operations, reducing handling time and costs.

Policy	B2B Road Transportation	Rail Transportation	Warehousing
Gati Shakti Multi-Modal Cargo Terminal (GCT) Policy	These terminals are designed to improve the interface between road and rail. B2B road transport benefits from a seamless and efficient transfer of goods at these terminals, reducing waiting times and improving truck turnaround time.	Aims to create new terminals and upgrade existing ones to handle a variety of cargo efficiently. This policy is a key component of the Gati Shakti master plan, facilitating the easy movement of goods between road and rail.	GCTs are essentially large-scale logistics parks. They integrate warehousing with transport infrastructure, allowing for storage, value-added services, and efficient transfer of goods. This is a game-changer for modern warehousing.
Multimodal Logistics Parks (MMLPs)	MMLPs serve as major freight aggregation and distribution hubs. They reduce traffic congestion on city roads and streamline the movement of goods, as trucks can drop off/pick up cargo at a single location for onward multimodal transport.	Rail infrastructure is a core component of MMLPs, with dedicated rail lines and sidings. The parks enable seamless and cost-effective transfer of cargo from trucks to trains and vice-versa, promoting rail as a primary transport mode.	MMLPs are a new-age warehousing solution. They offer state-of-the-art storage facilities, cold storage, customs clearance, and value-added services under one roof. They are designed to be a one-stop-shop for all logistics needs.
GST and e-Way Bill	GST: Simplifies the tax structure, eliminates state-wise taxes, and reduces the number of checkpoints. This reduces transit time and improves truck utilization. e-Way Bill: A digital permit for inter-state movement of goods. It has standardized the process, reduced harassment, and streamlined the movement of goods across states, further reducing transit time.	GST simplifies the tax structure on services, but its primary impact is on the road transport sector. However, the overall streamlining of logistics from GST and e-Way Bill also benefits rail by making the entire supply chain more efficient.	GST: Consolidates and streamlines the warehousing sector. Companies are moving from small, state-specific warehouses to large, centralized warehouses to serve multiple states, leading to economies of scale and better inventory management. e-Way Bill: The digital trail of goods movement improves inventory accuracy and compliance, linking seamlessly with warehouse management systems.
East–West Freight Corridor^	The East–West Freight Corridor will likely shift a portion of long-haul (>700–800 km) B2B cargo from road to rail, reducing highway congestion and improving delivery reliability for road operators. While line-haul volumes may moderate for bulk and containerized freight, road transport will remain dominant in first- and last-mile connectivity.	Rail will be the primary beneficiary, gaining modal share in long-distance freight through faster transit times, higher axle loads, better schedule reliability, and lower per-tonne costs. The corridor enhances capacity on an important industrial belt, enabling scale efficiencies, improved container movement, and greater predictability for B2B supply	The corridor will reshape warehousing demand toward multimodal logistics parks, rail-linked distribution hubs, and inland container depots along the East–West axis. Faster and more reliable line-haul

Policy	B2B Road Transportation	Rail Transportation	Warehousing
	Over time, trucking companies may pivot toward hub-to-spoke, feeder, and time-sensitive cargo, with improved asset utilization and slightly better turnaround times due to decongested corridors.	chains. Over the medium term, this strengthens rail's competitiveness versus road, especially for bulk commodities, industrial inputs, FMCG distribution, and EXIM-linked cargo.	movement reduces the need for buffer inventory, encouraging hub-and-spoke models, cross-docking facilities, and regional consolidation centers near rail nodes. Grade-A warehouse demand may increase around corridor junctions, while traditional storage-heavy facilities could gradually shift toward faster inventory turnover and integrated rail-road operations.
Container manufacturing assistance scheme (CMAS)^	The Container Manufacturing Assistance Scheme will increase the availability and diversity of standardized containers, enabling more freight to be containerized and reducing reliance on loose truckload movements. For road carriers, this improves load consolidation, reduces damage and pilferage, and enhances truck utilization through easier stacking and handling. While it won't directly shift freight volumes away from road, container adoption makes road transport more efficient for intermodal and last-mile deliveries.	Rail benefits significantly as increased container availability feeds directly into greater containerized traffic on rail corridors. With more standardized boxes in circulation, railways can achieve higher rake utilization, smoother terminal handling, and improved scheduling, making rail more competitive for long-haul freight. This also supports the growth of containerized block rakes, reducing dwell time at yards and encouraging a modal shift from bulk to intermodal rail freight where appropriate.	Warehouses can reduce handling costs, improve inventory security, and accelerate throughput by managing containerized units instead of loose pallets. Additionally, increased container usage encourages growth of multimodal logistics parks and cross-dock facilities where containers can be efficiently transferred between road and rail.

Source: Crisil Intelligence

^Union Budget 2026

5 Metro Rails Infrastructure in India

India's metro rail journey began in the early 2000s with the development of initial corridors in the suburban areas of Delhi. Since then, it has evolved into one of the most significant urban infrastructure transformations in the country. From a cautious entry into mass rapid transit, India has progressed to establishing a robust and rapidly expanding metro network that now operates across more than 20 cities.

5.1 Outlook

India’s metro rail sector is on the threshold of significant expansion, driven by rapid urbanisation, rising population density, and the growing need for efficient, sustainable, and low-emission urban mobility solutions. The country’s operational metro network spanned 1,013 km across 23 cities by May 2025, a remarkable increase from just 248 km across five cities in 2014, marking one of the fastest expansions globally. The network is projected to exceed 1,120 km by FY2026 and further expand to 27 cities by 2030, underscoring metro rail’s critical role in shaping India’s next phase of urban transformation.

Metro ridership has witnessed an exponential surge, increasing from 2.8 million daily passengers in FY2014 to over 7 million by FY2025 highlighting growing commuter preference for reliable and sustainable mass transit options. This rapid adoption reflects the success of India’s evolving urban transport ecosystem, supported by policies that prioritise accessibility, safety, and inclusivity.

The government’s policy push, through the National Urban Transport Policy, Metro Rail Policy 2017, and dedicated funding mechanisms, has created a strong foundation for continued growth. The average annual budgetary outlay for metro rail during FY2025-30 is projected at ₹3-3.5 trillion, over six times higher than the FY2013-14 allocation, reflecting the government’s sustained commitment to urban mobility infrastructure.

Continued expansion through public-private partnerships (PPP), multilateral funding, and bilateral collaborations will ensure the steady flow of capital required for network development and modernisation.

Overall, the metro rail sector is expected to attract investments of ₹2.8-3 trillion by FY2030, supported by a combination of government spending, private participation, and international financing.

6 Ropeways

6.1 Overview

Ropeways, also referred to as aerial cable cars or gondolas, have undergone a transformation from being primarily tourist-oriented attractions to becoming reliable components of modern transport systems. Globally, their use has expanded in both urban and rural settings, where they provide efficient solutions for mobility challenges posed by steep terrain, congestion, or fragile ecological environments. Several cities in Latin America such as Medellín in Colombia, La Paz-El Alto in Bolivia, and Mexico City have successfully integrated ropeways into existing public transport networks. These systems connect peripheral hillside communities and densely populated informal settlements to city centers, thereby reducing travel times and providing affordable access for marginalized groups. These projects demonstrate not only cost-effectiveness but also social inclusion benefits, as ropeways deliver last-mile connectivity and reduce geographic barriers to opportunity.

In India, ropeways are now being scaled under the National Ropeways Development Programme, Parvatmala, announced in the Union Budget 2022-23. The programme is spearheaded by the Ministry of Road Transport and Highways (MoRTH) and supported by agencies such as the National Highways Authority of India (NHAI) and NHLML (National Highways Logistics Management Limited) as implementing agency. Its core aim is to expand ropeway connectivity across hilly and difficult-terrain states, using a public-private partnership (PPP) framework. At present, over 25 ropeways are operational in India, spread across 13 states and largely concentrated in Uttarakhand, Jammu and Kashmir and Gujarat. Several flagship projects under Parvatmala have already secured approvals. These include the Sonprayag-Kedarnath ropeway (12.9 km, estimated cost ₹24,300 million) and the Govindghat-Hemkund Sahib ropeway (12.4 km, estimated cost ₹22,240 million). Both are expected to significantly reduce travel time for pilgrims while easing pressure on fragile mountain roads and trekking trails. The Varanasi urban ropeway is also planned as a 3S system, making it the first major urban deployment of this technology in India. To ensure technical consistency and operational safety across this rapidly expanding sector, the Government of India has set up an Empowered Committee on Ropeways Evaluation, Certification and Safety (EC-Rope-TECS) under MoRTH. The committee is tasked with establishing uniform standards, certification protocols, and safety oversight for all new projects. Such regulatory initiatives are essential to align Indian projects with global best practices, where ropeway safety, reliability, and long-term maintenance form the foundation of public trust.

When viewed against the international landscape, India's ropeway sector is at an early but promising stage. Countries such as Colombia and Bolivia already operate large urban ropeway networks carrying tens of thousands of passengers daily, while European nations use ropeways extensively for mountain tourism and city connectivity. India, by contrast, is still building its first wave of large-scale projects. However, the country benefits from a strong policy push, a broad pipeline of projects, and explicit government support for PPP-based financing models.

Ropeway projects in India are being developed under Public-Private Partnership (PPP) frameworks, which distribute responsibilities for financing, construction, operation, and revenue management between the government and private concessionaires. Official documents under the Parvatmala Pariyojana confirm that the two primary models adopted are the Hybrid Annuity Model (HAM) and the Design-Build-Finance-Operate-Transfer (DBFOT) framework. In addition, some state-level projects are being taken up through the more traditional Build-Operate-Transfer (BOT) approach.

6.2 Key contours of operating/running ropeway projects in India

Model Concession Agreement (MCA) and RFP/RFQ for passenger ropeways

The draft Model Concession Agreement for passenger ropeways projects to be implemented under private-participation concession arrangements was published by NITI Aayog in 2019 to guide central ministries, state government, their agencies and local authorities in structuring PPP projects for passenger ropeways.

Risk Sharing between Government and Private Players

MCA publish by NITI Aayog in CY2019 for ropeway projects in India outlines a balanced framework for risk sharing between the government (Authority) and the private concessionaire to ensure efficient project implementation and long-term sustainability. It clearly defines the allocation of construction, financing, operational, and external risks through detailed contractual provisions. While the concessionaire assumes primary responsibility for project execution, financing, operation, and maintenance, the Authority supports through facilitation of land, clearances, regulatory approvals, and defined relief mechanisms.

Risk sharing comparison

Risk Category	Responsibility of Government / Authority	Responsibility of Private Concessionaire
Construction Risk	Provides land and right-of-way; issues necessary clearances and approvals as per agreement.	Bears full responsibility for design, engineering, procurement, and construction; liable for cost overruns unless due to Authority default or Change in Law.
Financing Risk	May support through Viability Gap Funding (if applicable) or revenue-shortfall loan mechanism.	Responsible for arranging full project financing, managing interest and repayment risks.
Operational & Maintenance Risk	Oversight and monitoring role may intervene in case of persistent default.	Full responsibility for operation, maintenance, and performance standards; bears O&M cost and performance risk.
Revenue / Demand Risk	Issues Fee Notification and allows user fee collection as per MCA.	Bears traffic/revenue fluctuation risk; collects and manages user fees through escrow; subject to periodic fee revisions as per MCA. No traffic risk under HAM model
Force Majeure Events (Article 35)	Shares part of relief/compensation depending on event type; may extend concession period or grant relief.	Entitled to relief as per clause but must mitigate impact and continue operations where possible.

Risk Category	Responsibility of Government / Authority	Responsibility of Private Concessionaire
Change in Law	Provides compensation/relief to maintain NPV where applicable; defines limits on cash compensation.	May bear minor regulatory changes within defined thresholds; entitled to partial relief if materially affected.
Insurance & Security Risk	Responsible for external security (terrorism, civil commotion, etc.); may approve pass-through of 80% premium increases.	Must ensure all project assets; handle internal security; maintain coverage and provide proof to Authority.
Delay / Performance Risk	Pays damages if delay in fulfilling Authority Conditions Precedent.	Liable for damages if delay in achieving its Conditions Precedent or project milestones.

Source: Crisil Intelligence

6.3 Government initiatives/ policy measures

National Ropeways Development Programme

Parvatmala, officially known as the National Ropeways Development Programme, was announced in the Union Budget 2022-23 by the Government of India. Parvatmala is designed to provide last-mile connectivity, boost tourism, improve access for local communities, and offer an environment-friendly mobility solution that reduces land use in ecologically sensitive zones. For implementation, the government has adopted the Public-Private Partnership (PPP) route, particularly the Design-Build-Finance-Operate-Transfer (DBFOT) model, in which private players take charge of design, financing, and operations. The National Highways Logistics Management Limited (NHLML), a subsidiary of NHAI, has been entrusted with project development and management. In select projects, especially in the North-East, the government has also announced viability gap funding through central schemes such as PM-DevINE and NEC to make ropeway projects commercially feasible.

MoRTH initially projected the award of eight ropeway projects covering about 60 km in 2022-23, with states like Uttarakhand, Himachal Pradesh, Jammu & Kashmir, and the North-East identified as priority areas. NHAI and NHLML have articulated an even more ambitious vision, citing a pipeline of over 250 projects spanning nearly 1,200 km to be developed in the next five years.

PM-DevINE Scheme

Prime Minister's Development Initiative for North-Eastern Region (PM-DevINE), is a Central Sector scheme, fully funded by the Government of India, launched in the Union Budget 2022-23, with the specific aim of addressing development gaps in the North-Eastern Region (NER). The scheme was approved by the Union Cabinet on 12 October 2022. The total approved outlay for PM-DevINE is ₹66 billion for the period 2022-23 to 2025-26 (i.e. the remaining years of the 15th Finance Commission).

6.4 Outlook

India's ropeway sector is poised for transformative expansion, propelled by the government's flagship Parvatmala Pariyojana, which targets an investment of ₹1.25 trillion across more than 250 ropeway projects spanning more than

1200 km by 2030. This ambitious initiative not only aims to revolutionize connectivity in hilly and underserved regions, but also opens substantial avenues for private sector participation, with investment potential under robust public-private partnership (PPP) frameworks and enhanced government support. As the sector transitions towards world-class and sustainable infrastructure, it offers a compelling landscape for both domestic and global investors seeking long-term growth opportunities in alternative mobility solutions.

7 Airport Infrastructure in India

India has become the third-largest domestic aviation market in the world. The Indian Aviation sector has witnessed rapid growth driven by rising passenger demand, regional connectivity focus, and infrastructure modernization. Beyond core airport infrastructure, there is significant opportunity in ancillary services such as ground handling, car parking, retail spaces, and other airport-linked facilities, especially in PPP-operated airports

7.1 Airport Infrastructure and connectivity in India

India's airport infrastructure is experiencing significant expansion and modernization, with a focus on both boosting connectivity and enhancing the passenger experience. The country has seen a substantial increase in operational airports, from 74 in 2014 to 163 as of February 2026, and plans to further increase this number to 350-400 by 2047. Out of these 163 airports, 118 are domestic, 33 are international and 12 are custom airports. This growth is driven by a surge in air passenger traffic, government initiatives like the Regional Connectivity Scheme (RCS-UDAN), and a push for sustainability and technological advancements.

India is expected to overtake China and the United States as the world's third-largest air passenger market in the next ten years, by 2030, according to the International Air Transport Association (IATA). Further, the rising demand in the sector has pushed the number of airplanes operating in the sector. The number of airplanes is expected to reach 1,100 planes by 2027.

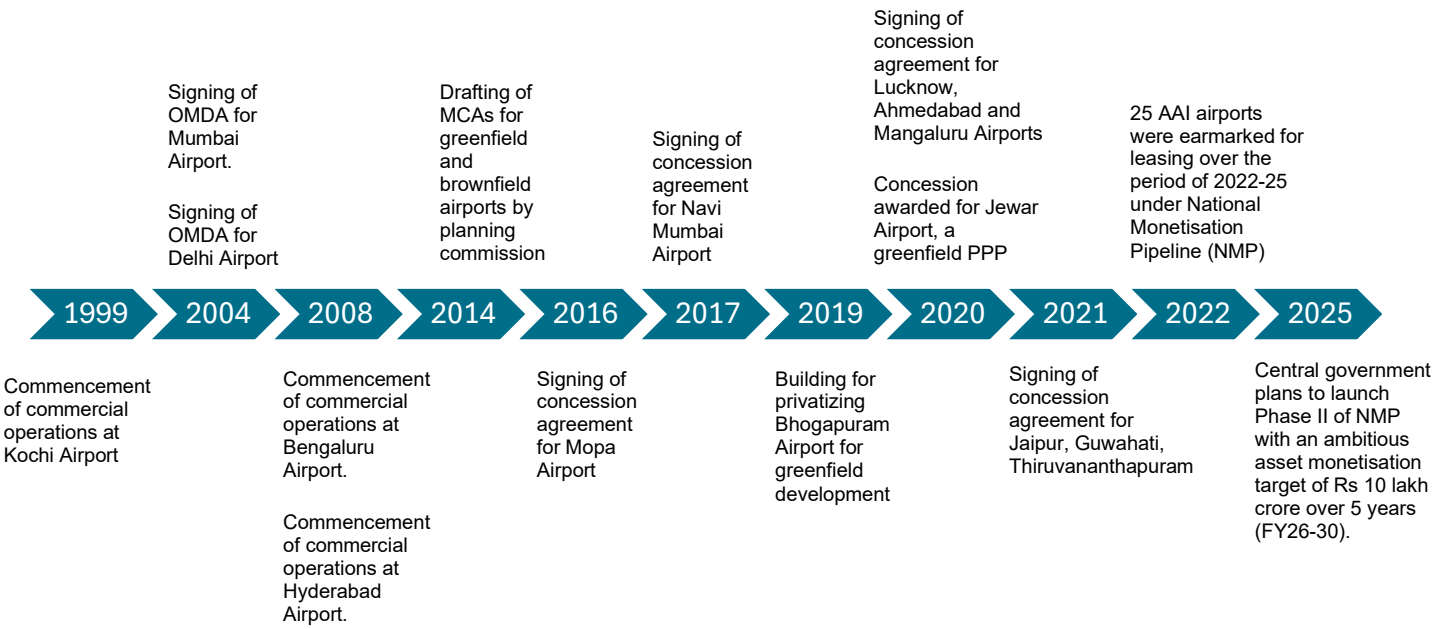
7.2 Public private partnership in airports in India

Globally airports have transformed from government-controlled public infrastructure facilities to competitive service providers over the past few decades. This was largely driven by increasing privatisation, which brought in several benefits such as improved efficiency, greater levels of customer satisfaction, access to private capital, spreading of ownership, rapid build-out of augmentation infrastructure, greater transparency in operations and more skilled workforces.

Overview of PPP in airports in India

Six international airports have been completed under the PPP framework. The sector is projected to attract investments amounting to US$ 25 billion by 2027, driven by the increasing participation of the private sector through PPP initiatives. The number of airports operating under the PPP model has risen significantly, from five in 2014 to fourteen in 2025, further to which Ministry of Civil Aviation has proposed the operationalization of an additional 26 airports under PPP framework over next five years (FY26-FY30) as part of NMP 2.0. Furthermore, the Ministry of Civil Aviation has formulated modalities for the privatization of 25 airports under the National Monetization Pipeline (NMP) for the period 2022-2025.

Timeline of airport PPP Projects in India



Source: Crisil Intelligence

Currently, 11 of the 16 operational PPP airports fall in the non-metro category, with ongoing capital expenditure forming the largest share of private investments.

7.3 Key government initiatives

PPP model in Airports

The Government of India has developed a clear PPP framework and schemes for airports to facilitate private sector participation, with the aim of modernizing aviation infrastructure, mobilizing private capital, and improving operational efficiency.

Under these schemes, the government has adopted multiple PPP models, including Build-Operate-Transfer (BOT) concessions, Operation and Maintenance (O&M) contracts, joint ventures, and asset monetization structures, depending on the type and scale of airport project.

Investments boost through National monetisation Pipeline (NMP)

The National Monetisation Pipeline (NMP), launched by the Government of India in 2021, has emerged as a transformative framework for accelerating private investment in the airport sector. By identifying operational brownfield airports owned by the Airports Authority of India (AAI) for long-term leasing under public private partnership (PPP) models, the NMP provides clarity, scale, and predictability to private investors.

TMV target for award of airport projects (in ₹ million)

Asset Class	Target					
	FY26	FY27	FY28	FY29	FY30	Total
26 AAI Airports	-	62,830	25,870	11,340	49,460	1,49,500
Divestment of AAI holdings in subsidiaries/JVs	-	28,000	29,500	29,000	39,000	1,25,500
Total	-	**90,830**	**55,370**	**40,340**	**88,460**	**2,75,000**

Source: NITI Aayog, Crisil Intelligence

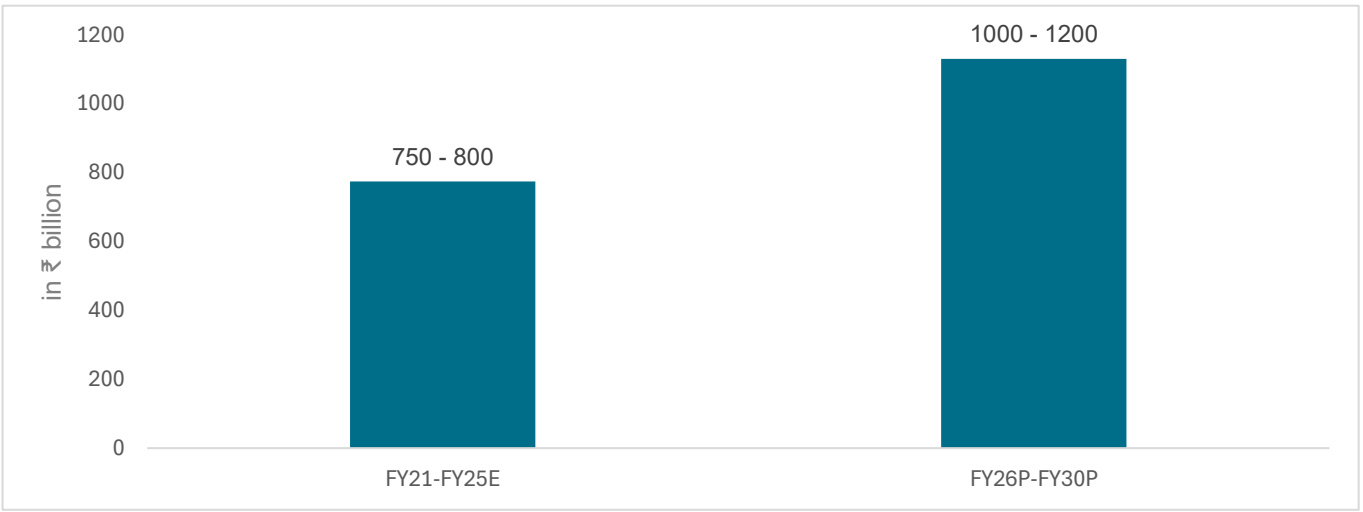
7.4 Outlook

Crisil Intelligence projects passenger traffic to expand 7-10% on-year to 425-450 million in fiscal 2026.

Passenger traffic is expected to reach 600-630 million by fiscal 2030

As per National Airports Development Plan 2047, approximately 200 new greenfield airports would be required, bringing the total number of airports to around 350 by 2047, based on the estimated annual passenger traffic of 3000 to 3500 million.

Airport capex projected to cross ₹1 trillion over fiscals 2026-30



Source: Crisil Intelligence

8 Infrastructure Trusts in India

8.1 Introduction to InvITs: Unlocking India’s infrastructure potential

Infrastructure investment trusts (InvITs) are pooled-investment vehicles registered with the Securities and Exchange Board of India (SEBI) under the SEBI (Infrastructure Investment Trusts) Regulations, 2014.

These trusts raise funds by issuing units to investors and invest the proceeds primarily in infrastructure assets, either directly or through special purpose vehicles (SPVs) or holding companies (holdcos).

The income generated from the underlying assets is regularly distributed to unitholders.

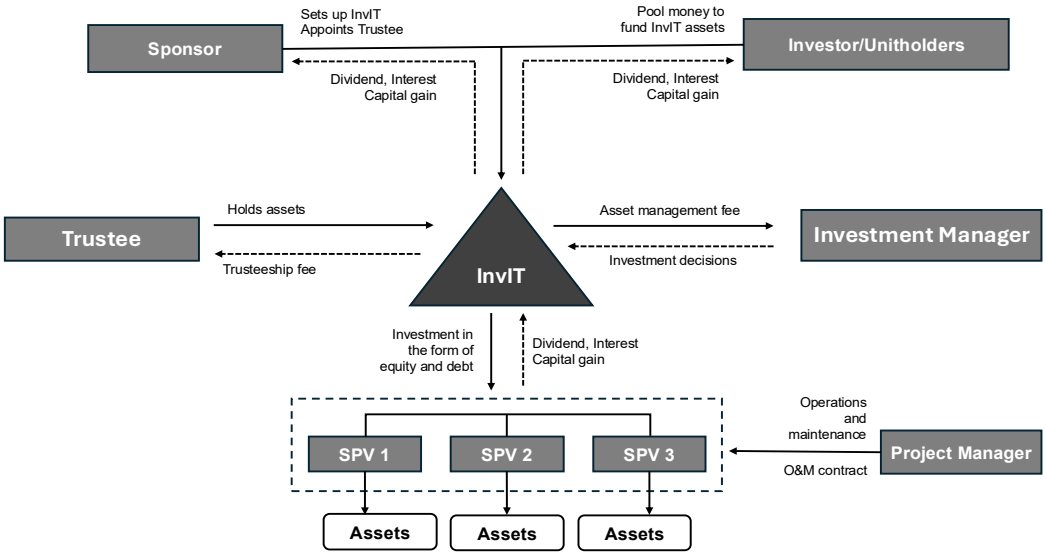
Under SEBI regulations, these trusts own assets from sub-sectors listed in the Harmonised Master List of Infrastructure Sub-sectors, notified by the Ministry of Finance. The country's infrastructure assets comprise a range of sectors, including transportation (such as roads, highways, warehouses, etc.), energy (including power generation, transmission, storage, energy product pipelines etc), and storage facilities, among others These assets contribute to the overall growth and development of the country's infrastructure.

InvITs can attract foreign direct investment without prior government approval, which gives them a wider investor base and, thereby, facilitates financing of large-scale infrastructure projects.

InvITs have become a crucial component of the domestic financial sector. By offering investors a platform to participate in infrastructure development and directing the funds towards strong, income-producing infrastructure assets, these trusts have emerged as a viable alternative to traditional financing methods. Not surprisingly, retail participation and investment from international investors have grown over the years.

8.2 Structure of domestic InvITs

InvITs have a tiered structure. A sponsor sets up the trust, which, in turn, invests in eligible infrastructure projects either directly or via special purpose vehicles (SPVs).



Source: Crisil Intelligence

8.3 Importance of InvITs in infrastructure financing in India

Priority of Infrastructure Development: Infrastructure development has consistently been a high-priority area for the Indian government, resulting in increased public investments and large-scale projects that need substantial capital.

Role of Government Policy and InvITs: The government's strong focus on infrastructure and adoption of innovative mechanisms like InvITs has ensured continuous investment in roads, highways, railways, and urban projects, which supports long-term economic growth and job creation.

InvITs as Capital Recycling Tools: InvITs act as powerful capital recycling mechanisms, allowing infrastructure developers to monetize operational assets and free up capital for new projects, while enabling developers to retain operational control.

Enhancing Project Viability and Reducing Risks: The use of InvITs helps to improve project viability through consistent funding, and reduces the risks related to project delays and cost overruns. They also drive operational excellence by linking performance-based distributions with professional oversight.

Attracting Diverse Investment and Risk Diversification: InvITs have attracted both domestic and international investors by offering diversified risk through pooled assets. These trusts allow exposure to multiple projects without direct ownership, spreading risk across sectors.

8.4 How regulations have evolved

InvITs in India operate within the regulatory framework established by the SEBI in 2014. The regulations have evolved significantly over the past decade, driven by market growth, practical learnings, and demand for enhanced governance and investor protection.

Early regulations (2014-2017)

The SEBI introduced InvITs formally in September 2014. The SEBI (Infrastructure Investment Trusts) Regulations, 2014, formed the basic framework for registration, structure and operation. Early amendments to the framework focused on practicalities, IPO and listing provisions, private placements, sponsor requirements, and enabling foreign and institutional investment. Tax incentives and exchange control relaxations soon followed, paving the way for the registration and listing of InvITs in 2016 and 2017.

Market deepening and structural flexibility (2018-2020)

In 2018, the SEBI refined IPO/ private placement processes of InvITs, introduced provisions to facilitate strategic investor participation and streamlined investment portfolio and leverage norms. The leverage limit was raised from 49% to 70%, subject to strict credit rating conditions and demonstrated distribution track, significantly augmenting borrowings for acquisition and expansion. Further, the amendments enabled rights issues and conversions between listed and unlisted InvITs, and broadened lending access for InvITs. Corporate governance prescriptions, especially for those with large outstanding debt securities, were progressively applied. They were mostly borrowed from the governance norms for listed companies.

Prescriptive governance and innovation (2021-2023)

With growing retail and institutional participation, the SEBI laid down more stringent governance rules, including Board composition standards, committee structures, induction of independent directors and stewardship responsibilities. Disclosure requirements, audit protocols and stewardship codes were formalised for greater transparency.

Notably, in 2022, the framework for unlisted InvITs was discontinued, triggering listings of the existing ones and narrowing the regulatory focus to publicly listed structures. Also, timelines for listing and conversion of InvITs from one structure to another were aligned and reduced, and rules for follow-on offerings were further clarified.

Recent reforms (2024-2025)

More recent amendments focused on sponsor lock-in flexibility, streamlining of conversion procedures from private to public InvITs, reduction of lock-ins, and simplified disclosure norms to facilitate smoother transitions and encourage broader market participation. These changes also reinforce director nomination protocols and trustee roles, and set out distinct rules for issuance and management of subordinate units to further institutionalise governance in the market. In December 2025, SEBI further required that if an InvIT's total borrowings and deferred payments exceed 49%, it must conduct quarterly asset valuations (for June, September, and December quarters) and submit these reports to the stock exchange along with quarterly financial results.

Since their introduction in 2014, almost every year SEBI has either issued a circular or notification refining InvIT regulations to tighten standards of investor safeguards, disclosures, leverage, conversion, or governance.

8.5 Features of domestic InvITs

1.	**Taxation and pass-through benefits**	Indian InvITs operate as pass-through entities, offering significant tax benefits to investors and infrastructure companies. The trust level is exempt from income tax, dividend distribution tax, and capital gains tax on asset sales, allowing for enhanced returns and reduced tax burdens.
2.	**Regular distribution of income**	SEBI regulations require InvITs to distribute at least 90% of net distributable cash flows to unitholders, providing a predictable income stream. Publicly listed InvITs must make payouts at least every six months, ensuring a regular semi-annual cash flow to investors.
3.	**Centralised control**	InvITs function with four key constituents, each playing a distinct role. The sponsor initiates the InvIT and transfers initial assets, while the trustee, an independent SEBI-registered entity, oversees the assets on behalf of unitholders. The investment manager handles day-to-day operations and investment decisions, and the project manager, appointed by the trustee, is responsible for on-site management and maintenance of infrastructure projects. This structure is designed to ensure the efficient management and operation of InvITs, with a focus on generating cash flows from the underlying assets.
4.	**Favoured over other investment vehicles**	Compared to SPV or Holdco IPOs, InvITs offer more predictable yields via regulated minimum 90% cash distribution and reduced risk through multi-project diversification. They also provide structured governance and broader investor access. Compared to SPV IPOs, InvITs offer more predictable yields via regulated minimum 90% cash distribution and reduced risk through multi-project diversification.
5.	**Liquidity and marketability of InvITs**	InvITs offer high liquidity as they are traded on stock exchanges, unlike direct investments. Accessibility is improved through SEBI's reduced minimum subscription (Rs 10k-15k) and the ability to pledge units as collateral. InvITs offer high liquidity as they are traded on stock exchanges, unlike direct investments. Accessibility is improved through SEBI's reduced minimum subscription (Rs 10k-15k) and the ability to pledge units as collateral.
6.	**Low Cost of Debt**	An Infrastructure Investment Trust (InvIT) achieves a low cost of debt and an improved credit rating by pooling assets with predictable cash flows and adhering to regulations that limit leverage. For the infrastructure company that sets up the InvIT, this structure allows them to refinance existing, higher-cost debt, which significantly reduces their overall debt burden.
7.	**Transparency and governance**	SEBI enforces governance with requirements like minimum 50% independent Board members, quarterly Board meetings, detailed disclosures, specialized committees, mandatory disclosure of financials, regular independent audits, and related-party transaction reporting.
8.	**Diversification and risk management**	InvITs invest across projects, asset classes, geographies, and counterparties, providing significant diversification and risk reduction. SEBI requires at least 80% investment in operational assets; up to 10% in under-construction/other revenue-generating assets.

9.	**Valuation and reporting requirements**	InvITs must conduct regular half-yearly asset valuation. However, if borrowings exceed 49% of the asset value, quarterly valuation is compulsory. Only independent registered valuers must be engaged to do asset valuation. InvITs are also mandated to regularly publish their annual reports and quarterly financial statements with regular disclosures on asset performance and cash flows along with disclosures of key performance indicators (KPIs), such as revenue, profitability and cash flows. The aim is to provide investors a comprehensive understanding of the InvIT's performance.
10.	**Corporate tax optimisation through shareholder loan (SHL)**	InvITs often fund SPVs with both equity and debt, using shareholder loans (SHLs). Interest paid by SPVs on SHLs to the InvIT is tax-deductible at the SPV level.

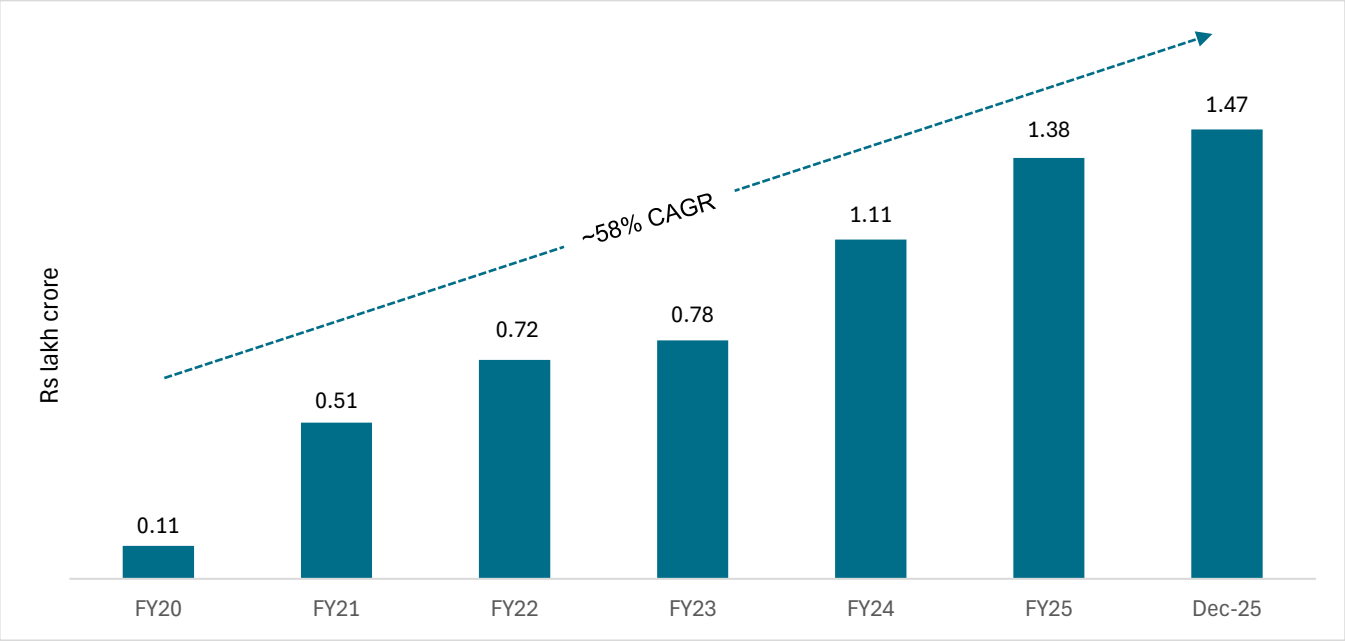
Source: Crisil Intelligence

8.6 Fund mobilisation over fiscals 2020-2025

India has seen remarkable growth in the number of InvITs and their fund mobilisation over the years underscoring the strong investor uptake for this product. Between fiscals 2020 and 2026 (till December 2025), total unit funds mobilised from the market (excludes Sponsor contribution) by these investment vehicles grew from Rs 0.11 lakh crore to Rs 1.47 lakh crore.

The steady influx of funds and increasing investor confidence are testaments to the potential of InvITs as an attractive investment avenue.

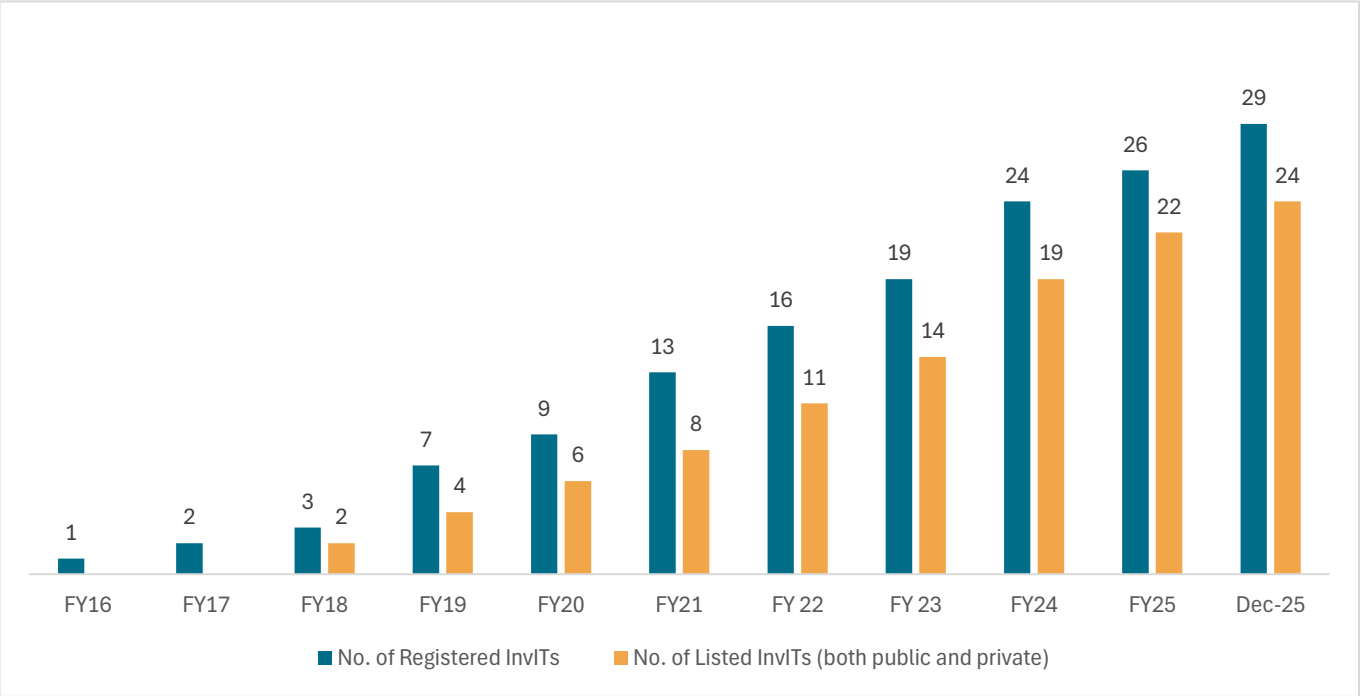
Cumulative funds mobilised by InvITs over fiscals 2020-2026 (Till December 2025)



Source: SEBI, Crisil intelligence

As of 31st December, 2025, the number of registered InvITs in India stood at 29, of which 24 are listed on the exchange. Of these 24 InvITs, six are listed publicly.

Cumulative No of InvITs registered and listed through the years with SEBI



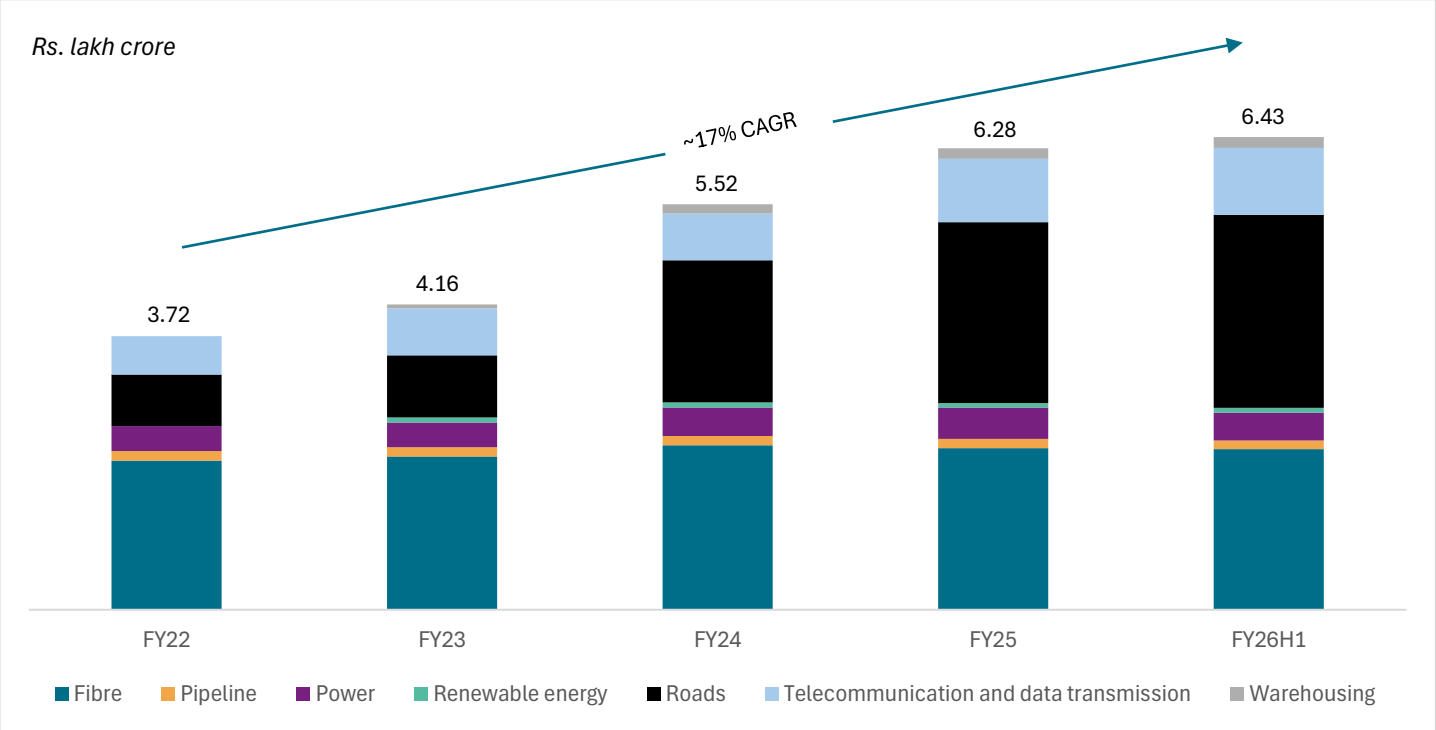
Source: SEBI, Crisil Intelligence

8.7 Overview of asset classes and sector-wise composition under InvITs in India

InvITs can invest in assets which fall under any of the sub-sectors included in the Harmonised Master List of Infrastructure Sub-sectors, notified by the Ministry of Finance from time to time. However, currently InvITs manage assets in sectors such as roads, warehousing, pipeline, fibre, renewable energy, telecommunication, data transmission, and power.

Since their inception, InvITs have seen consistent expansion, with Assets Under Management (AUM) growing from Rs 3.72 lakh crore in fiscal 2022 to approximately Rs 6.43 lakh crore as of the first half of fiscal 2026, growing at a compound annual growth rate (CAGR) of ~17% between the same period. Within this overall growth, the road sector has emerged as the most significant growth driver. The AUM for road InvITs has increased to Rs 2.63 lakh crore in the first half of fiscal 2026, from Rs 0.70 lakh crore in fiscal 2022, clocking a CAGR of approximately 46%. The AUM considered is the sum of enterprise value (EV), excluding other financial assets, as disclosed in the annual report and valuation report.

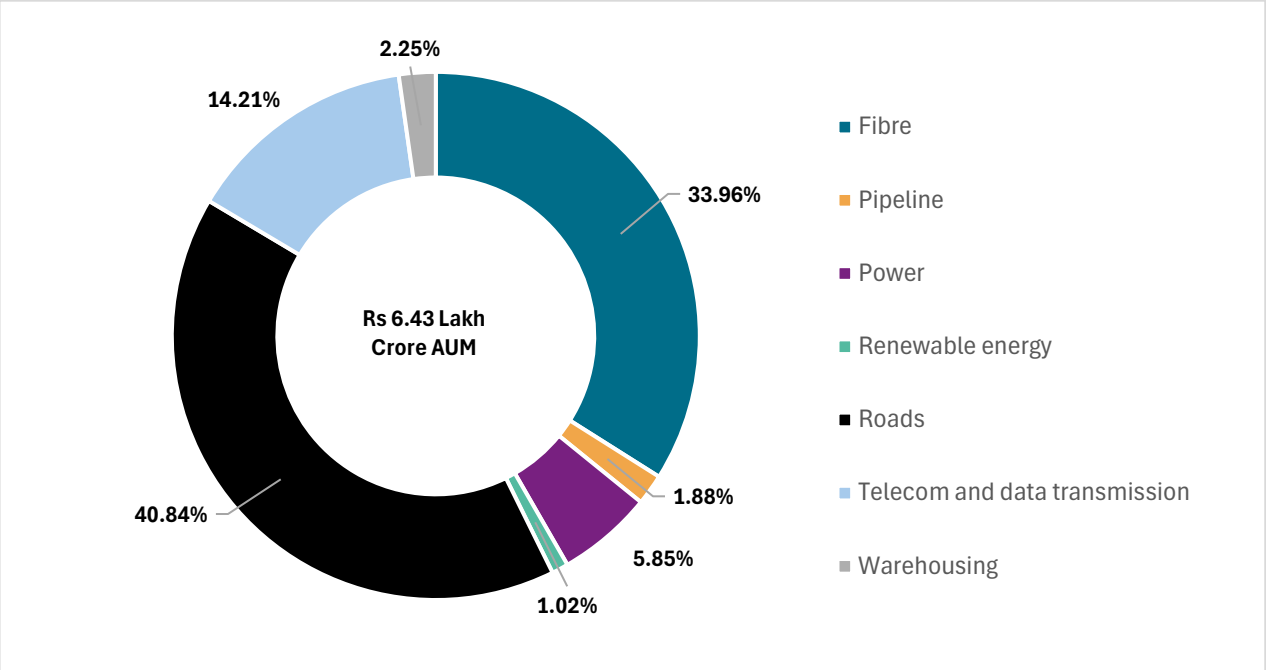
Sector-wise split of InvIT AUM



Source: Annual report, valuation report, Crisil Intelligence

As of the first half of fiscal 2026, the InvIT portfolio remained concentrated in core infrastructure sectors. The road sector accounted for ~41% of total AUM, followed by the fibre sector (~34%) and telecommunications sector (~14%). Other segments, including power, warehousing, pipeline and renewable energy assets, comprised a smaller share of the portfolio. As of first half of fiscal 2026, there are sixteen registered InvITs in the road sector, followed by three in power sector and three in warehousing sector. Other sectors like fibre, pipeline, renewable energy, telecom and data transmission etc. have only one registered InvIT each.

InvIT portfolio AUM composition (as of the first half of fiscal 2026)



Source: Annual report, valuation report, Crisil Intelligence

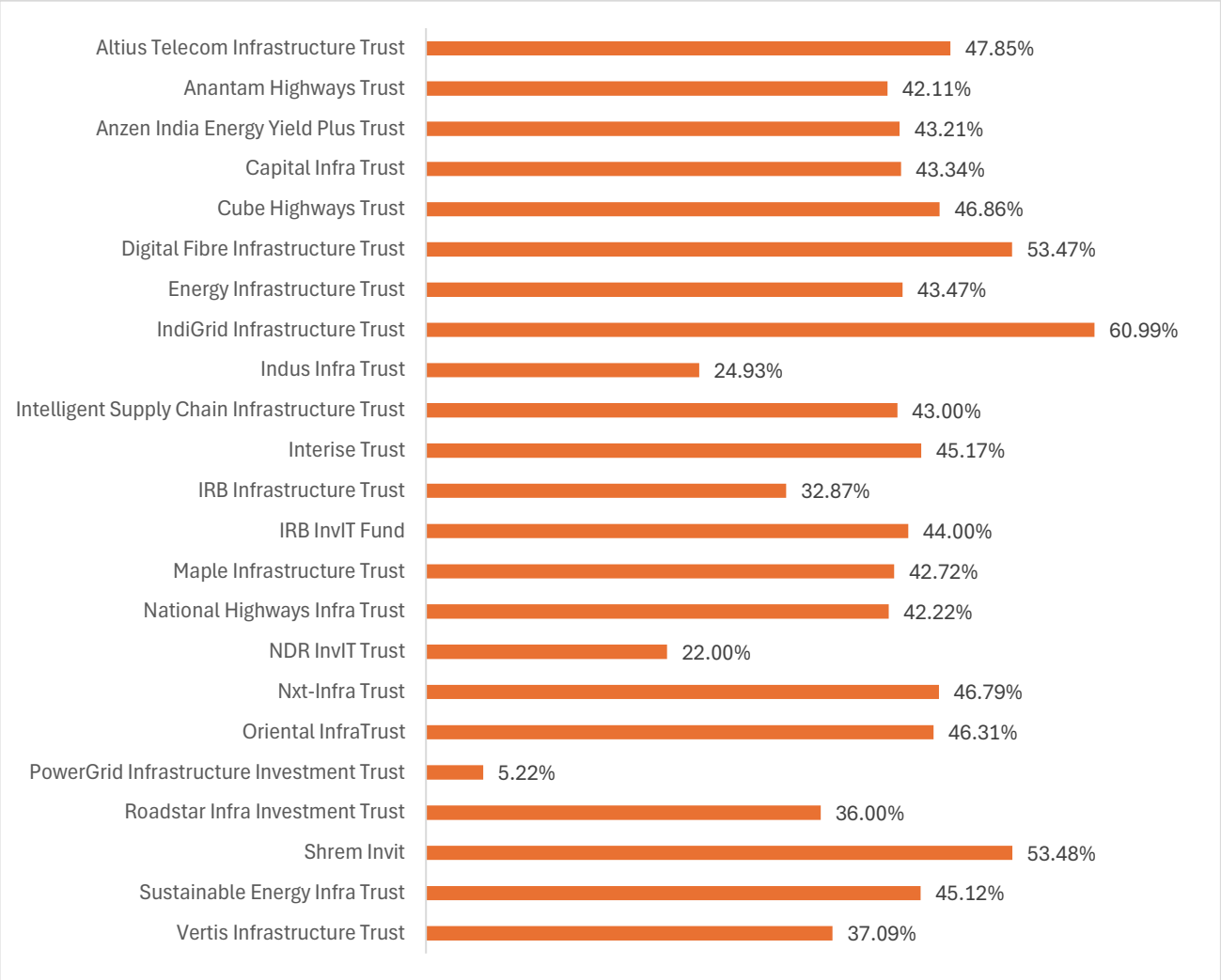
8.8 Leverage

InvITs are allowed to use prescribed levels of leverage or borrowed funds. Regulation 20(2) of the SEBI (Infrastructure Investment Trusts) Regulations, 2014, governs the aggregate consolidated borrowings and deferred payments of an InvIT, including that of the holding company and the special purpose vehicles (SPVs), net of cash and cash equivalents. To provide InvITs with greater flexibility in acquiring new assets, SEBI raised the leverage limit for publicly listed InvITs from 49% to 70% of the asset's value in 2019. In case if an InvIT's debt exceeds 49% of its asset value, it must:

- Obtain a high credit rating ("AAA" or equivalent) from a registered agency
- Use the borrowed funds only for infrastructure projects
- Have a track record of at least 6 distributions on a continuous basis to unitholders.
- Obtain approval from its unitholders.

Net debt/EV ratio ranged from 5% to 61% as on December 31, 2025. For Road InvITs, the range was 25% to 53%. The net borrowings ratio is presented as per the disclosures by the respective InvITs in respect of "the Statement of Net Borrowings Ratio" as required by SEBI Master Circular no SEBI/HO/DDHS-PoD-2/P/CIR/2025/102 dated 11 July 2025.

InvITs: Net Borrowings Ratio (December 31, 2025)



Note: The net borrowings ratio is taken from the respective InvITs "Statement of Net Borrowings Ratio" as required by SEBI Master Circular no SEBI/HO/DDHS-PoD-2/P/CIR/2025/102 dated 11 July 2025.

8.9 InvIT returns

InvIT returns are primarily based on the performance and cash flows generated by underlying infrastructure assets, but they are influenced by several key factors.

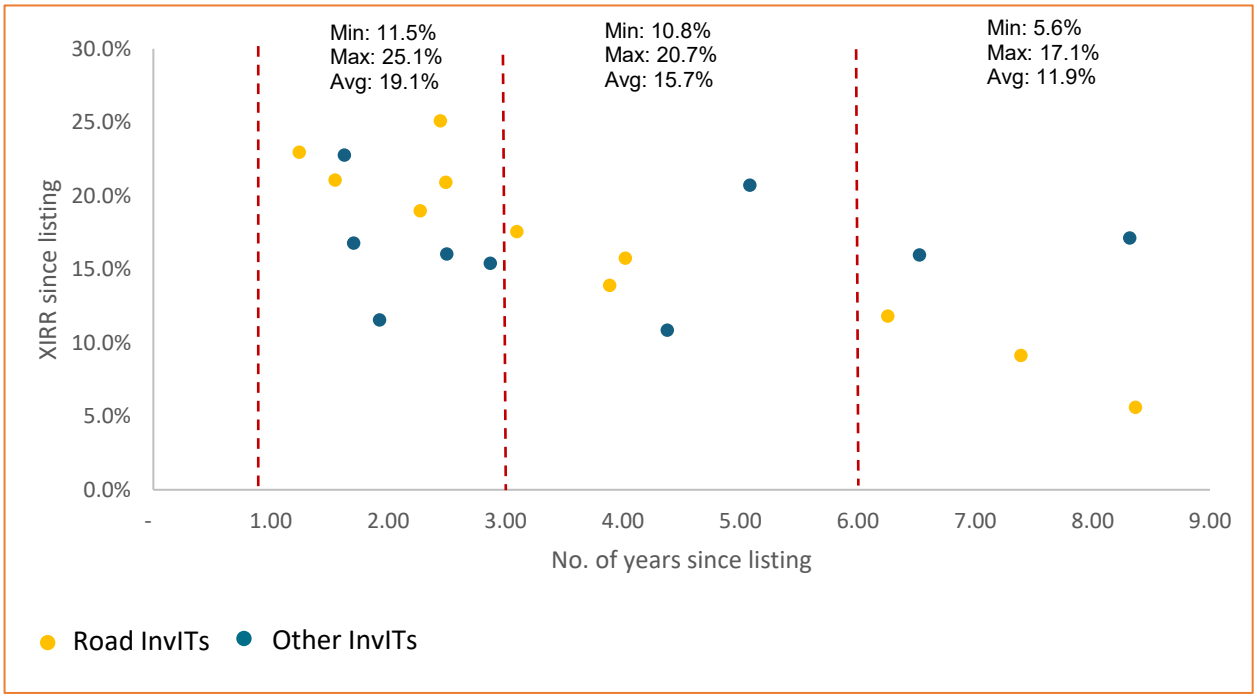
- **Project revenue and asset quality:** The primary source of returns is the net cash flow generated by underlying assets (toll roads, HAM projects and annuity assets) and other income-generating infrastructure assets. Revenue stability is dependent on the quality, scale and operational performance of these assets, as well as factors such as tariffs and project contract terms.
- **Utilisation and demand in respect of the underlying assets:** Efficient management of operating expenses, maintenance, and capital expenditure requirements can improve the net distributable cash flow available for distribution to unitholders.
- **Regulatory and tax environment:** Changes in regulation or tax policies, such as amendments to distribution tax or tariff structures, can materially alter the after-tax returns to unitholders. Tax regime of the SPV also has an impact.

- **Interest rate movements:** Changes in interest rates can impact InvIT returns, as they can affect the cost of debt.
- **Leverage and capital structure:** The extent of debt at the trust and asset level may have a bearing on the stability of returns, risk profile and the distribution quantum.
- **Sponsor and asset pipeline:** The reputation, experience, and track record of the sponsor or manager of the InvIT can impact InvIT returns, as they can affect the quality of the underlying assets and the management of the InvIT. The potential for future asset additions (via Right of First Offer arrangements) is an important consideration and would have bearing on value accretion for the unitholders.
- **Legal and macroeconomic risks:** Delays in project execution, changes in government policy (such as tariff resets) and broader economic cycles can affect returns.

To calculate the returns delivered by InvITs since their listing date, XIRR has been used as a metric. The XIRR is calculated by considering the listing price and distribution per unit made till the valuation date and NAV as on the last valuation date in case of private listed InvITs (based on data available till September 30, 2025). The distribution per unit made till the valuation date and the trading price on NSE have been considered in case of publicly listed InvITs.

InvITs tend to deliver a higher XIRR in the initial years primarily due to the timing and structure of cash distributions and investors at early stages may benefit more in terms of returns as incremental asset acquisitions kick-in and InvITs become eligible for contracting higher leverage. InvITs which have completed less than one year since listing have been excluded from this analysis. There are 5 InvITs which have been in existence for more than six years since their date of listing. They have given an XIRR in the range of 5.6% to 17.1%.

InvIT XIRR (%)



Source: Valuation reports, annual reports and stock exchange filings

**XIRR calculation based on NAV and distributions till September 30, 2025, based on record date. In the case of public listed InvITs, the traded price as on September 30, 2025, has been considered.*

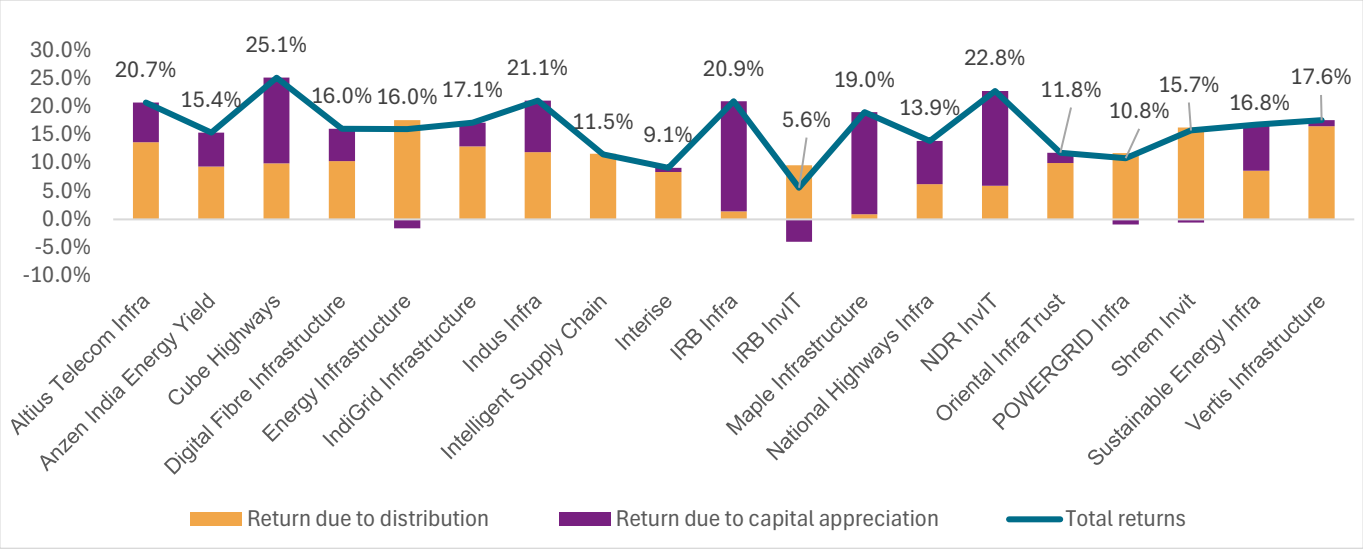
InvIT return analysis in terms of returns due to price movement and distribution

In case of InvITs, the returns are a combination of price movement and distribution yields.

To calculate the returns delivered by InvITs since their listing date, XIRR has been used as a metric. The XIRR is calculated by considering the listing price and distribution per unit made till the valuation date and NAV as on the last valuation date in case of private listed InvITs (based on data available tillSeptember 30, 2025). The trading price on NSE has been considered in case of publicly listed InvITs. Similarly, XIRR has been calculated for distributions and the differential is attributed to price change.

We see from the chart below that returns due to distribution range from 0.9% to 17.6%, while returns due to price appreciation ranges from -4.0% to 19.5%. Average returns due to distribution is approximately 10.2% while average return due to price change is 6.0%

Returns due to distribution and capital appreciation



Source: Annual report, official website of InvITs, stock exchange, Crisil Intelligence

XIRR calculation is based on NAV and distributions till September 30, 2025. In the case of public listed InvITs, the traded price has been considered. Invits which have completed less than 1 year have not been considered (Roadstar, Capital Infra and Nxt-Infra)

8.10 Complementarity of road sector with other sectors

Road transport is a fundamental pillar of the transport ecosystem, complementing and integrating seamlessly with other transport modes such as rail, air, waterways, and urban transit systems. This integration enables the efficient movement of people and goods, fostering economic growth, regional development, and social inclusion.

Multimodal Integration and Synergy

Road transport provides the essential physical links between various transport hubs, such as airports, railway stations, metro terminals, ropeway stations, and seaports, handling the critical “last mile” connectivity. This helps bridge operational gaps, ensuring that passengers and cargo transported via rail, air, or water reach their final destinations efficiently.

Project management skills:

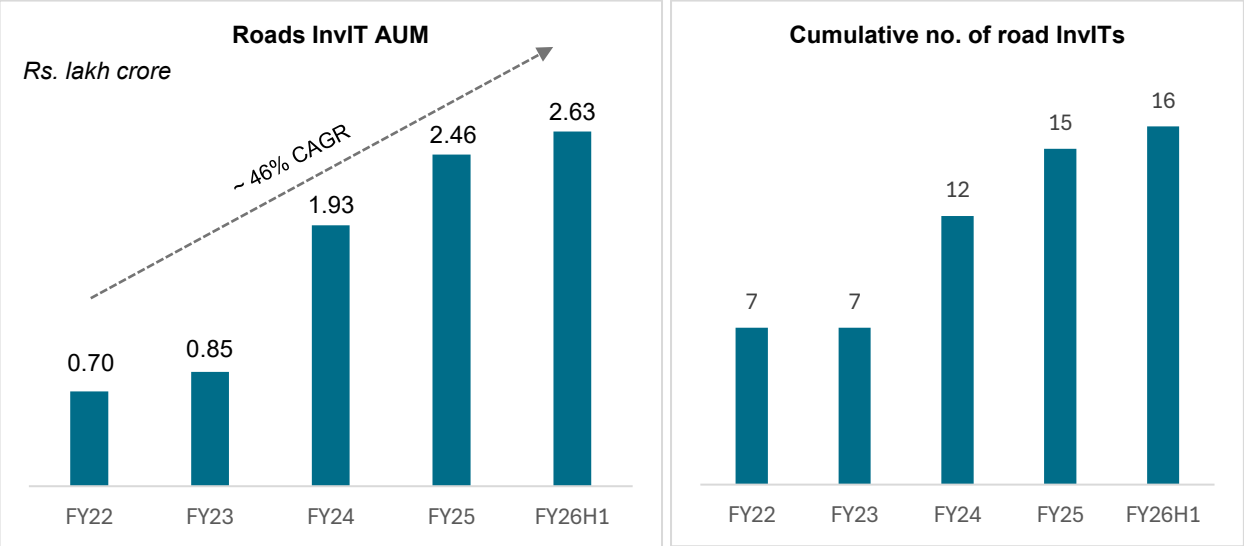
The expertise of project managers operating road assets complements other transport assets. Their skills in regulatory management, PPP concession frameworks, operations & maintenance, traffic forecasting, financial compliance and investor reporting, including use of asset monitoring & management technology tools, are equally critical in other transportation sub-sectors like airports, ropeways and metros. The strength of the operating process adopted can also be applied in these transport sector where user safety and asset reliability are of paramount importance not only in meeting the criteria laid down in relevant contracting frameworks but also in enhancing user experience.

8.11 Road InvITs

The road sector has been one of the most prominent segments for InvITs in India and emerged as the largest contributor to the InvIT landscape, with approximately 41% share of AUM as of the first half of fiscal 2026.

As of the first half of fiscal 2026, there are 27 InvITs registered with SEBI, of which 16 are road InvITs. The AUM for road InvITs increased to Rs 2.63 lakh crore in the first half of fiscal 2026, clocking a CAGR of ~46% from Rs 0.70 lakh crore in fiscal 2022.The number of road InvITs have more than doubled in the past three fiscal years.

Growth in road InvIT AUM and their number (fiscal 2021 to first half of fiscal 2026)



Source: Annual report, Valuation report, Crisil Intelligence; Data as of first half of fiscal 2026

The table below presents the list of road InvITs and their respective sponsors, along with their sponsor type and listing dates.

Road InvITs: Sponsor profile and listing details

InvIT Name	Sponsor name	Sponsor type	Date of listing
Anantam Highways Trust (Anantam)	Alpha Alternatives Fund Advisors LLP	Financial	16-Oct-2025
Athaang Infrastructure Trust (Athaan)	National Investment and Infrastructure Fund (NIIF)	Financial	Yet to be listed
Citius TransNet Investment Trust (transport sector focused, with	EPIC TransNet Infrastructure Private Limited, (earlier Watrak Infrastructure Private Limited)	Financial	Yet to be listed

InvIT Name	Sponsor name	Sponsor type	Date of listing
initial and ROFO assets comprising of road portfolio)			
Cube Highways Trust (Cube)	Cube Highways and Infrastructure Pte. Ltd and Group	Financial	19-Apr-2023
Interise Trust (Interise)	Interise Investment Managers Ltd (IIML) (self-sponsored)	Financial	9-May-2018
Maple Infrastructure Trust (Maple)	Maple Highways Pte. Ltd.	Financial	21-Jun-2023
Nxt - Infra Trust (Nxt-Infra)	Actis Highway Infra Ltd	Financial	2-Jul-2024
Roadstar Infra Investment Trust (Roadstar)	Roadstar Infra Private Ltd (RIPL)	Financial	11-Mar-2025
Vertis Infrastructure Trust (Vertis)	Galaxy Investments II Pte. Ltd	Financial	25-Aug-2022
Raajmarg Infra Investment Trust (RIIT)	National Highways Authority of India	Infra developer	Yet to be listed
Capital Infra Trust	Gawar Construction Ltd	Infra developer	14-Jan-2025
Indus Infra Trust	Aadharshila Infratech private Ltd	Infra developer	12-Mar-2024
IRB Infrastructure Trust	IRB Infrastructure Developers Ltd	Infra developer	8-Apr-2022
IRB InvIT Fund	IRB Infrastructure Developers Ltd	Infra developer	18-May-2017
National Highways Infra Trust	National Highways Authority of India	Infra developer	3-Nov-2021
Oriental Infra Trust	Oriental Tollways Private Ltd (OTPL)	Infra developer	27-Jun-2019
Shrem Invit	Shrem Infra Invest Private Ltd	Infra developer	22-Sep-2021

Source: Annual reports, valuation reports, NSE, BSE

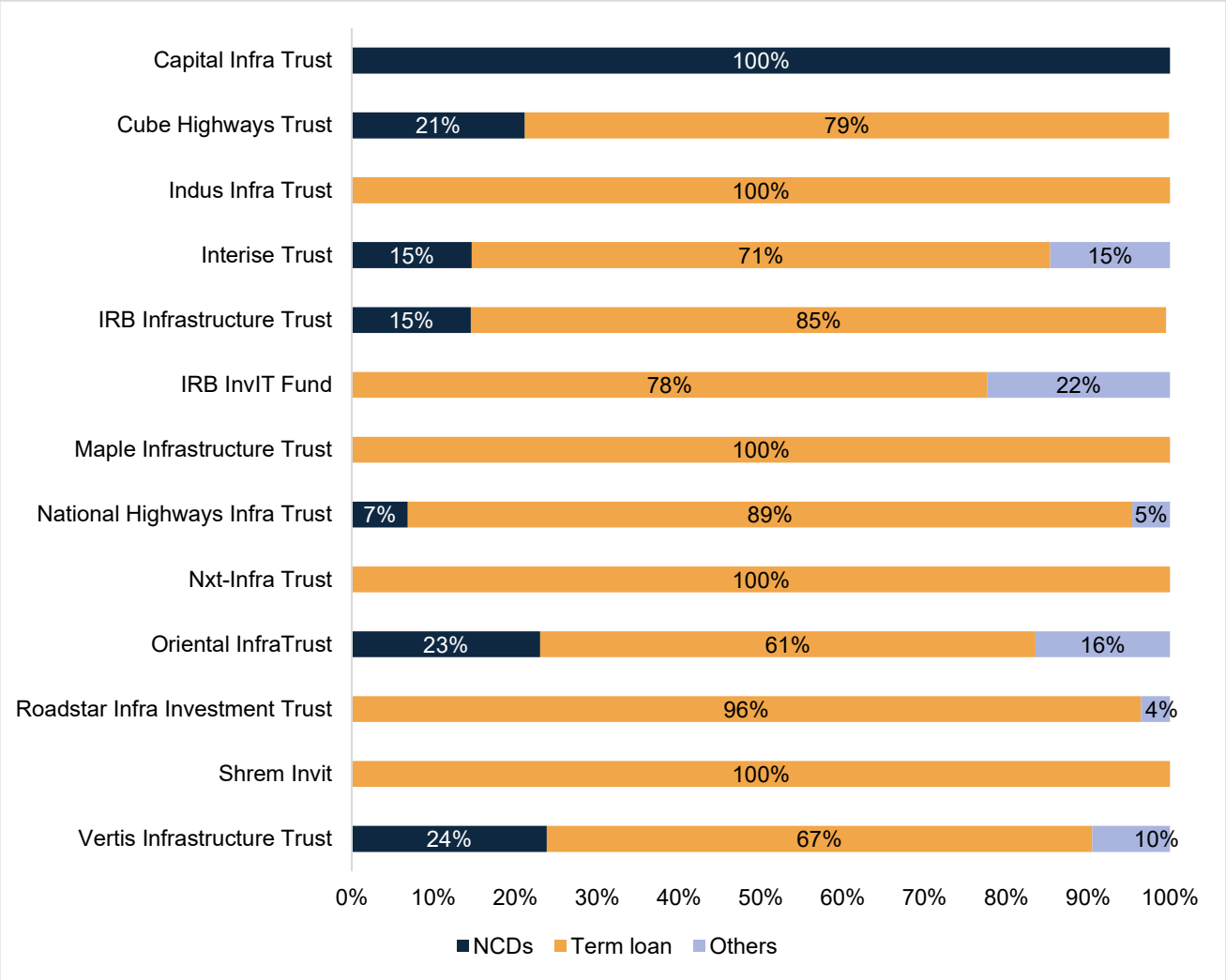
This table has total of 17 road InvITs as it includes the Citius InvIT which was registered with SEBI in August 2025 and Raajmarg Infra Investment Trust which was registered with SEBI in December 2025.

Borrowing Profile

The borrowing composition in the InvIT sector primarily consists of Non-Convertible Debentures (NCDs), term loans, and other borrowings. The category of other borrowings includes unsecured loans, commercial papers, other long-term borrowings, deferred premium obligations, and interest payable on premium deferrals.

The average borrowing distribution in the InvIT sector is predominantly weighted towards term loans, followed by non-convertible debentures and other borrowings. Capital Infra Trust has a distinct borrowing profile, relying solely on non-convertible debentures (NCDs). In contrast, Indus Infra Trust, Maple Infrastructure Trust, Nxt-Infra Trust, and Shrem InvIT utilize term loans for their entire borrowing needs.

Road InvITs: Borrowing profile



*Source: **Consolidated financial statements for fiscal 2025, Crisil Intelligence***

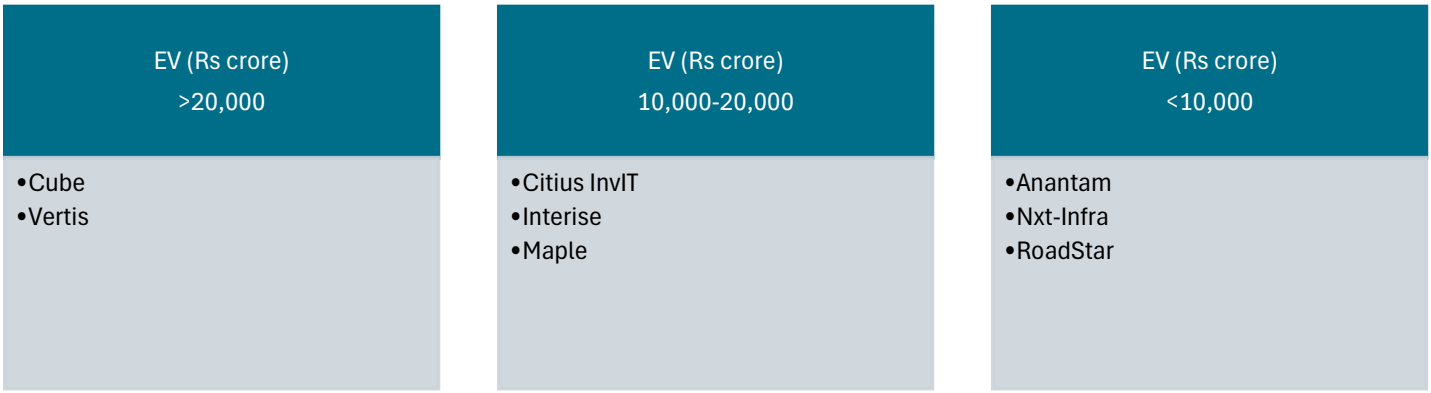
Sponsors of road InvITs can broadly be classified into two categories, infrastructure developers and financial sponsors. The sponsor type infrastructure developers are typically infrastructure development and construction companies, with core strength in asset development and execution capabilities. Financial sponsors are private equity funds, pension funds or infrastructure-focused asset managers. Their focus lies in acquiring quality assets and creating value through strong asset management strategies.

For this analysis, since Citius InvIT is financial sponsor backed InvIT, the peer set, and benchmarking have been limited to listed financial sponsor-backed InvITs. Citius is a transport sector focussed InvIT. Since the initial portfolio and proposed ROFO assets are road assets, the analysis in this section is done considering listed financial sponsor-backed road InvITs.

Landscape of financial sponsor-backed road InvITs basis Enterprise Value (EV)

The EV of financial sponsor backed road InvITs ranges from Rs 5,022 crore to Rs 35,558 crore. Citius (based on its initial portfolio) ranks fifth among the financial sponsor backed road InvITs with an EV of more than Rs 10,000 crore at the time of listing. The enterprise value considered for analysis in InvIT section is excluding financial assets.

EV of financial sponsor backed road InvITs



Note: The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

Asset additions in terms of ROFO or asset acquisition in Road InvITs

Infrastructure Investment Trusts (InvITs) are investment vehicles that allow individuals and institutions to make long-term investments in infrastructure projects. With a view to increase their AUM in processing enhancing unitholder value, InvITs are focussed on asset acquisitions, which typically happens by way of - (i) purchase of assets from the sponsor groups (generally under a Right of First Offer (ROFO) arrangement, thus giving InvIT a first right to buy the identified assets; or (ii) purchase from third parties by either entering into bilateral discussions or participating in an auction process i.e. third-party Share Purchase Agreements (SPAs)

SPA

A SPA is a contract between a buyer and a seller, where the buyer agrees to purchase shares of a company from the seller. In the context of InvITs, an SPA allows the InvIT to acquire an SPV by purchasing its shares from existing shareholders. The SPA typically includes terms such as the purchase price, payment terms and conditions for the acquisition.

ROFO

ROFO is a contractual agreement that grants a party the exclusive right to acquire an identified asset(s) or project(s) before it is offered to any other potential buyer. This agreement is typically negotiated between the sponsor of the InvIT and the InvIT itself, or between the sponsor and other investors. A ROFO is a provision that requires the seller of an asset to offer it to the holder of the ROFO before selling it to any other party. This means that if the seller decides to sell the asset, it must first offer it to the holder of the ROFO (InvIT, in this context), who then has the option

to purchase the asset by making an offer comprising price and / or specified terms. ROFO, especially in the earlier years of operation for an InvIT, provides a visibility to the growth runway by ensuring a steady flow of assets that meet its investment criteria to drive growth and returns for the InvIT's unitholders

Assets additions by way of ROFO/ SPA in case of financial sponsor-backed road InvITs:

- Citius: Its ROFO pipeline comprises 11 Hybrid Annuity Model HAM assets
- Similarly, some of its peers are also in the process of asset additions through bilateral acquisition agreements.

The report relies on public announcements and published data regarding these assets to analyse the impact of these acquisitions, a cutoff date of December 31, 2025 has been considered.

Assets additions by way of ROFO/ SPA in case of financial sponsor-backed road InvITs:

Citius InvIT (ROFO)	The ROFO pipeline comprises 11 Hybrid Annuity Model HAM assets from the fund schemes of EAAA India Alternatives Limited (EAAA). Ashoka Buildcon Ltd, and its material subsidiary Ashoka Concessions Ltd, signed agreements to sell their respective stakes aggregating to 100% in 11 road SPVs to Epic Concesiones 2 Private Ltd (EC2PL). EC2PL is owned by schemes of the Infrastructure Yield Trust managed by EAAA. EC2PL has already acquired 5 assets from ABL. A share purchase agreement is already in place between IYT and ABL for the balance 6 assets, which will be transacted subject to compliance of certain conditions precedent. With five Identified ROFO Assets that have been acquired by the EC2PL, total portfolio (i.e. Initial Portfolio Assets as well as these five Identified ROFO Assets) is anticipated to comprise 15 road assets across 12 different Indian states representing approximately 4,582.64 lane-kilometers (excluding service lane-kilometers). These five Identified ROFO Assets are operational, having an average operational history of 4.42 years and a residual life of 10.58 years as of December 31, 2025. In aggregate, the mix of the toll collection (net of revenue share) and HAM and annuity receipts without GST (including these operational ROFO Assets under the HAM framework, but excluding the operation and maintenance component of the payments under the respective contracts) for the Financial Year 2025 were 63.79% and 36.21%, respectively Out of the remaining six Identified ROFO Assets which are being acquired by the EC2PL, five are operational, having an average operational history of 2.84 years and a residual life of 12.17 years as of December 31, 2025. For the Financial Year 2025, the toll collection (net of revenue share) was 56.05%, while the HAM and annuity receipts without GST (including the operational ROFO Assets under the HAM framework, but excluding the operation and maintenance component of the payments under the respective contracts) constituting 43.95% of the combined cash revenue receipts of the Initial Portfolio Assets and all 10 operational Identified ROFO Assets.
Cube Highways (ROFO)	Cube Highways Trust has announced plans to acquire 100% equity shareholding and beneficial ownership of four "Proposed Portfolio Assets" from the "Sellers" (CH-V and CH-II). This Portfolio comprises three BOT Toll road assetsand one BOT Annuity.
Vertis Infrastructure Trust (SPA)	Vertis Infrastructure Trust has signed a SPA on Jan 15, 2024, for acquisition of 100% shareholding in one or more tranches and management control in 12 SPVs owned by sellers out of which 11 assets have been duly acquired and form a part of the portfolio. The remaining one SPV (HAM asset) will be transferred to the InvIT upon the satisfaction of certain agreed closing conditions.
Anantam Highways (ROFO)	Three ROFO Agreements (DBL, Alpha, and Pollachi) have been executed, granting the Trust the right of first offer to acquire assets from the sellers and their affiliates post-Issue. The agreements cover eleven assets from DBL, three assets from Build India Infrastructure Fund, and DPJ Pollachi HAM Project Private Limited from Terrefert Green Growth LLP and Alpha Alternatives Financial Services Private Limited. It is noted that DBL and Alpha jointly own

	three SPVs: Raipur-Visakhapatnam CG-2 Highways Limited, Mehgama Hansdiha Highways Limited, and Poondiyankupam Highway Limited. Hence, we have considered 12 distinct project SPVs. All of these assets are HAM in nature.

1) Source: Citius InvIT Executive version of ROFO agreement which shall be executed in due course

Cube Highways, Investor Presentation January 2026.

Vertis Infrastructure Trust- https://vertis.co.in/wp-content/uploads/2025/05/PNC-Stock-Exchange-Disclosure_21.05.2025.pdf

Anantam Highways Trust- https://www.sebi.gov.in/sebi_data/Anantam%20Highways%20Trust_foo.pdf Pg No 379

2)To calculate the operational history of the ROFO assets, we have assumed the PCOD date for these assets from (https://www.ashokabuildcon.com/files/investors/company-announcements/435_ABL_BSE_NSE_HAM_SPA_I_300925.pdf). For determining the concession end date of the assets, we have taken the lifespan of the HAM asset to be 15 years from the PCOD or FCOD date

3) To calculate the lane kilometers of ROFO assets (except for KL and TS3), we have considered (https://www.ashokabuildcon.com/files/investors/company-announcements/435_ABL_BSE_NSE_HAM_SPA_I_300925.pdf). In case of TS3, we have considered (https://www.ashokabuildcon.com/files/investors/company-announcements/329_ABL_BSE_NSE_PCOD_Banwara_bettadahalli.pdf). In case of KL, we have relied upon the information shared by the Citius Investment Manager.

Portfolio composition in terms of type of assets (HAM/ annuity/ toll)

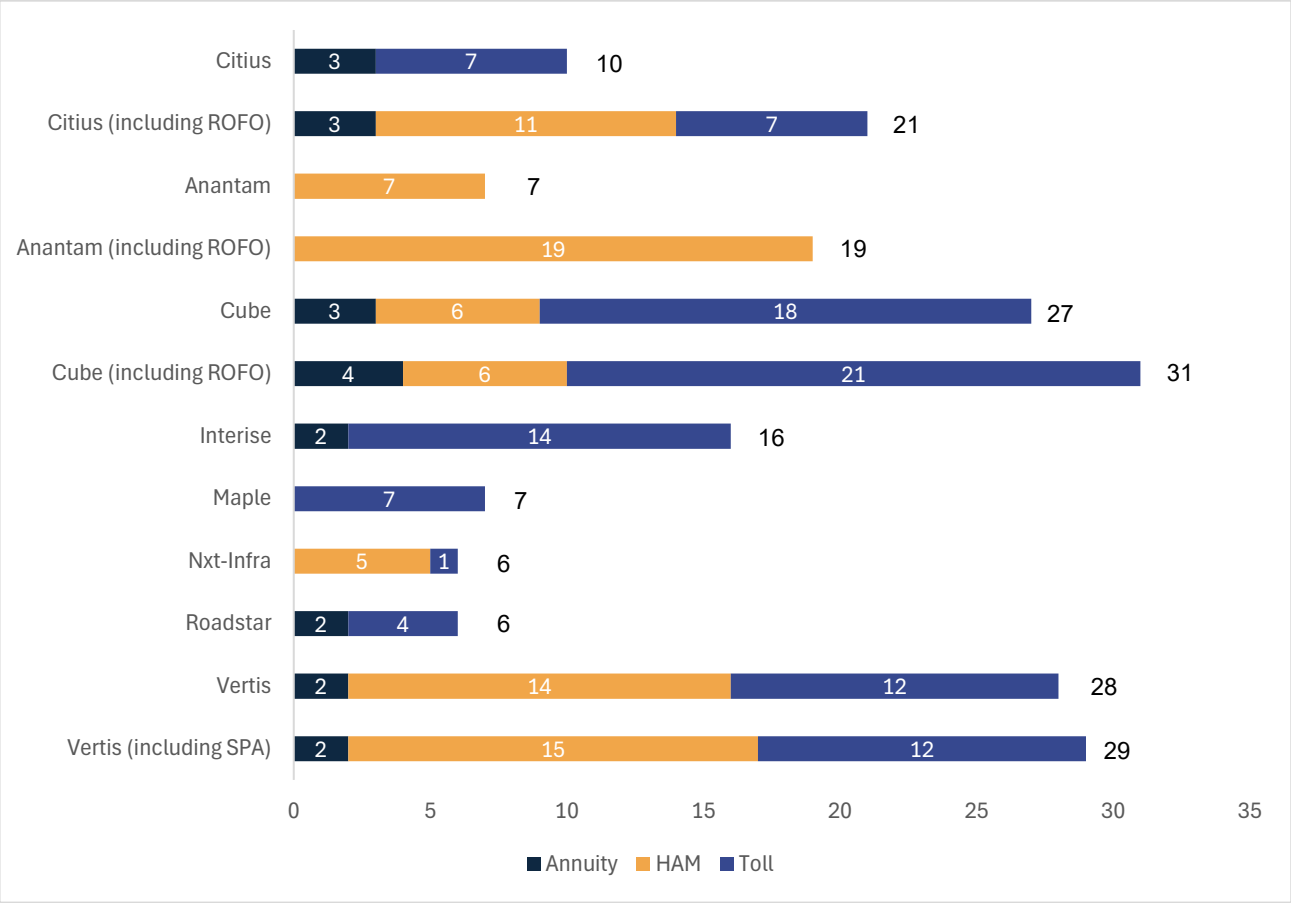
The portfolio of road assets held by financial sponsor-backed road InvITs is diverse, comprising 107 assets that include toll, HAM and annuity projects. At present, most of these assets are toll-based, with 63 assets making up ~59% of the total. HAM assets account for ~30% of the total, with 32 assets, while the remaining assets are pure annuity projects.

Importantly, toll-based road assets provide a degree of income stability and inflation protection, as most concessions have inflation-linked toll rate revisions or periodic toll hikes. Combined with steady traffic growth on key national corridors, this structure allows InvIT cash flows to naturally adjust for inflation, thereby-offering investors a built-in hedge and stable real returns over time.

The total number of assets is expected to increase to 135 with the addition of 28 new assets through ROFO or SPA agreements. This will slightly alter the breakup, with toll-based assets still dominating the portfolio, with~49% share of the total. Share of HAM assets is expected to increase to ~41% of the total, with 56 assets.

Citius InvIT has an initial portfolio comprising of 10 assets (seven toll-based projects and three annuity projects). With the expected addition of assets under the ROFO arrangement, its portfolio is expected to grow to 21 assets, resulting in a balanced Toll: Annuity asset mix. It can be seen that larger InvITs tend to balance their portfolio in terms of toll-annuity mix.

Portfolio split in terms of number of assets (including and excluding ROFO/SPA)



Note: The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.

For Anantam Highways, DBL and Alpha jointly own three SPVs: Raipur-Visakhapatnam CG-2 Highways Limited, Mehgama Hansdiha Highways Limited, and Poondiyankupam Highway Limited. Hence 12 ROFO assets.

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

Portfolio composition in terms of concessioning authority (MoRTH, NHAI and state authorities)

Number of assets

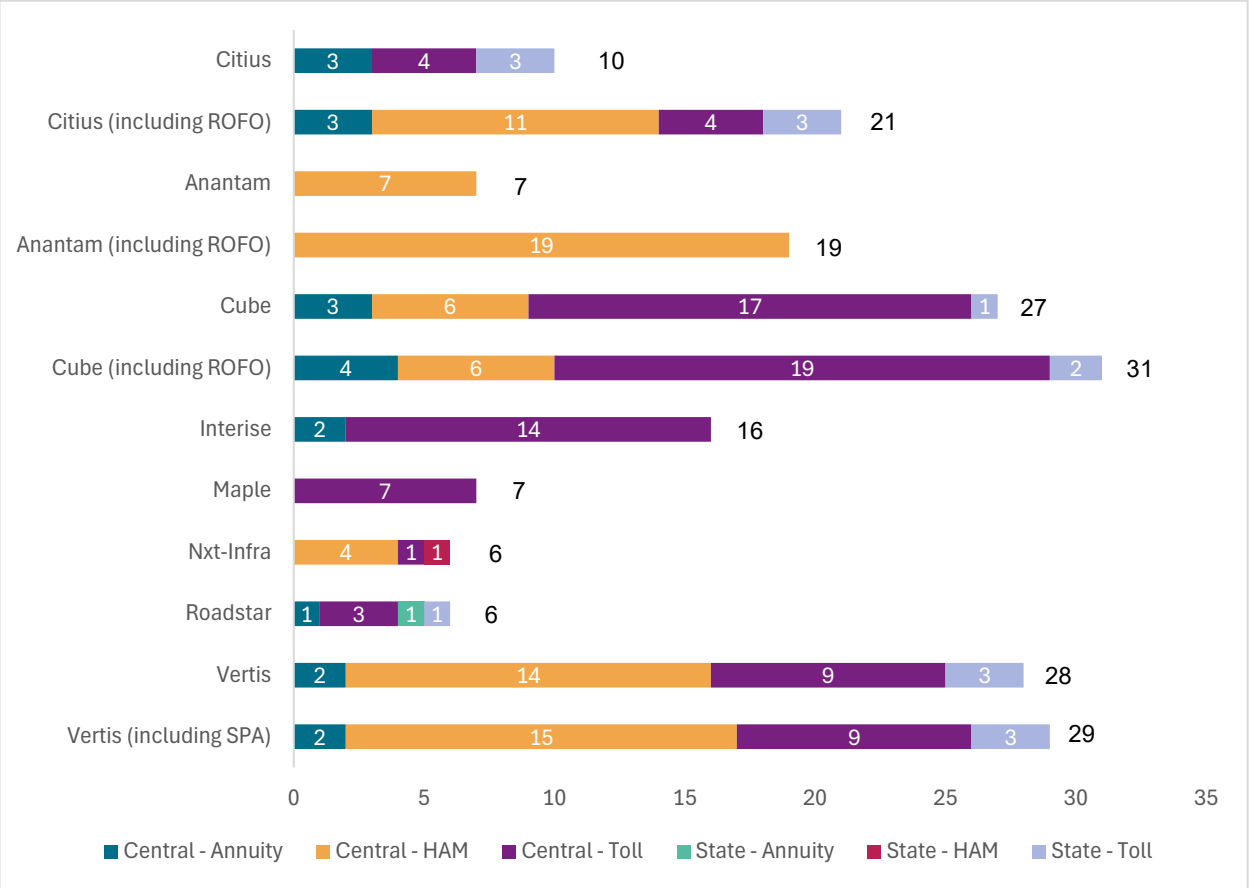
For financial sponsor backed road InvITs, the National Highways Authority of India (NHAI) is the primary concessioning authority. Out of 107 assets 97 4 are concessioned by central authorities (NHAI, MoRTH). Proposed acquisitions via ROFO and SPA routes by InvITs is expected to further increase the share of NHAI/central authority-concessioned assets. We note that 27 out of 28 assets under acquisition (including ROFO and SPA) are concessioned by the NHAI.

The chart below elaborates on the concessioning authorities for each InvIT, bifurcating further into toll, HAM and annuity. This provides a detailed view of the concessioning authorities for each InvIT.

The key counterparties for Citius' annuity assets are NHAI and the Ministry of Road Transport and Highways ("**MoRTH**"). For Citius' toll assets, key counterparties are NHAI, the Government of Odisha, and the Gujarat State

Road Development Corporation Limited ("**GSRDCL**"). The ROFO portfolio of Citius is entirely concessioned by the NHAI. Given the strong government backing and proven history, the counterparties present a low risk of default, offering assurance regarding the stability of the revenue under the concession agreements with these authorities.

Portfolio split for number of assets in terms of concessionaire authority – Central (MoRTH, NHAI) and State, including asset additions through ROFO and SPA



Note: The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.

For Anantam Highways, DBL and Alpha jointly own three SPVs: Raipur-Visakhapatnam CG-2 Highways Limited, Mehgama Hansdiha Highways Limited, and Poondiyankupam Highway Limited. Hence 12 ROFO assets.

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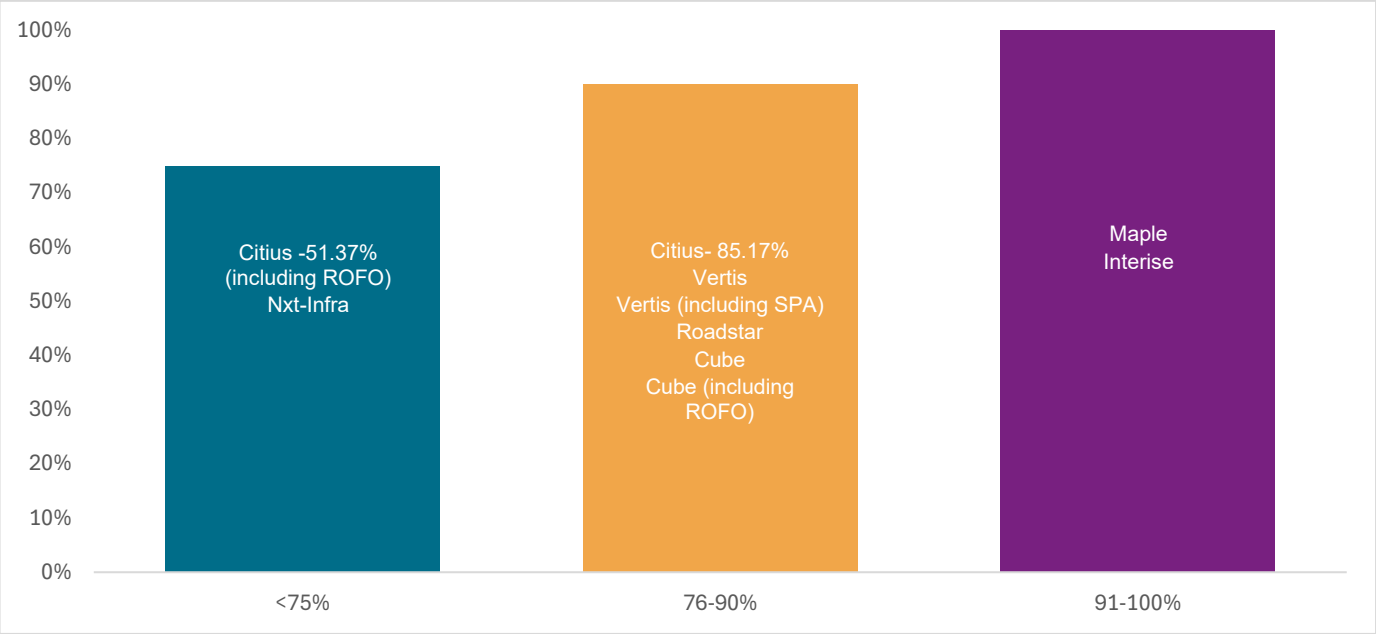
Income mix by asset type

The chart presents the FY25 revenue from operations for various InvITs and the share attributable to toll collections. A lower toll share indicates greater contribution from other sources, including HAM assets, annuity assets, construction income, and other operating revenue. Revenue profiles for certain InvITs are expected to evolve with proposed acquisitions; Citius InvIT's initial portfolio is largely toll-based (85.17%), and upon the acquisition of ROFO SPVs its revenue mix is expected to become more diversified, with the toll revenue share changing from 85.17% to 51.37% when the ROFO portfolio is considered. For revenue from operations, toll collections are shown in line with each InvIT's revenue from operations schedule.

For cash revenue for FY 25, Citius InvIT's initial portfolio comprises 82.30% from toll assets and 17.70% from annuity assets. Including ROFO assets, the adjusted FY25 cash revenue mix is expected to be 56.05% from toll and 43.95% from HAM and annuity receipts. For cash revenue calculations, annuity receipts from HAM (excluding O&M related receipts) and annuity assets are included, and toll collections are used for toll assets.

Toll Revenue as a percentage of revenue from operation as on FY 24-25 (including asset additions through ROFO and SPA)



1) Source: Annual report fiscal 2025, Annual reports for Citius SPVs shared by EAAA

2) Citius InvIT (including ROFO)

3) *Details regarding the cash income revenue mix for Citius InvIT were sourced from NSE Filings by Ashoka Buildcon.(Ref:https://nsearchives.nseindia.com/corporate/ASHOKA_08102025184208_439_ABL_BSE_NSE_ABL_ACL_CCDs_Acquisition_081025.pdf)*

4) *Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart*

Lane kilometre break-up of Road InvIT portfolio

Lane kilometres refer to the total length of roads or highways factoring in the number of lanes that are operated and maintained by the trust. Lane kilometres are an important metric because they represent the scope and scale of the trust's operations. A higher number of lane kilometres typically means the trust has a larger network of roads and

highways under its management. It is essential to assess the physical scale of an InvIT's portfolio to understand its operational size and revenue-generating capacity.

Citius' initial assets have a total length of 3,407 lane-kms. The ROFO assets have a potential of increasing the same to around 5,773 lane-kms.

Similarly, after Anantam, Cube and Vertis complete their proposed acquisitions, their total lane kilometres will also increase; Cube portfolio lane-kms could increase from 8,816 to 9,865 lane-kms, Anantam could rise from 1,091 to 3,776 lane-kms and Vertis could rise from 8,302 to 8,525 lane-kms

The following chart presents a comparative analysis of the total portfolio lane-kms for each InvIT in the peer group, along with potential additions through ROFO or SPA.

Lane kilometres (including ROFO and SPA)

Note: The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust: IL&FS website disclosure, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

Value diversification

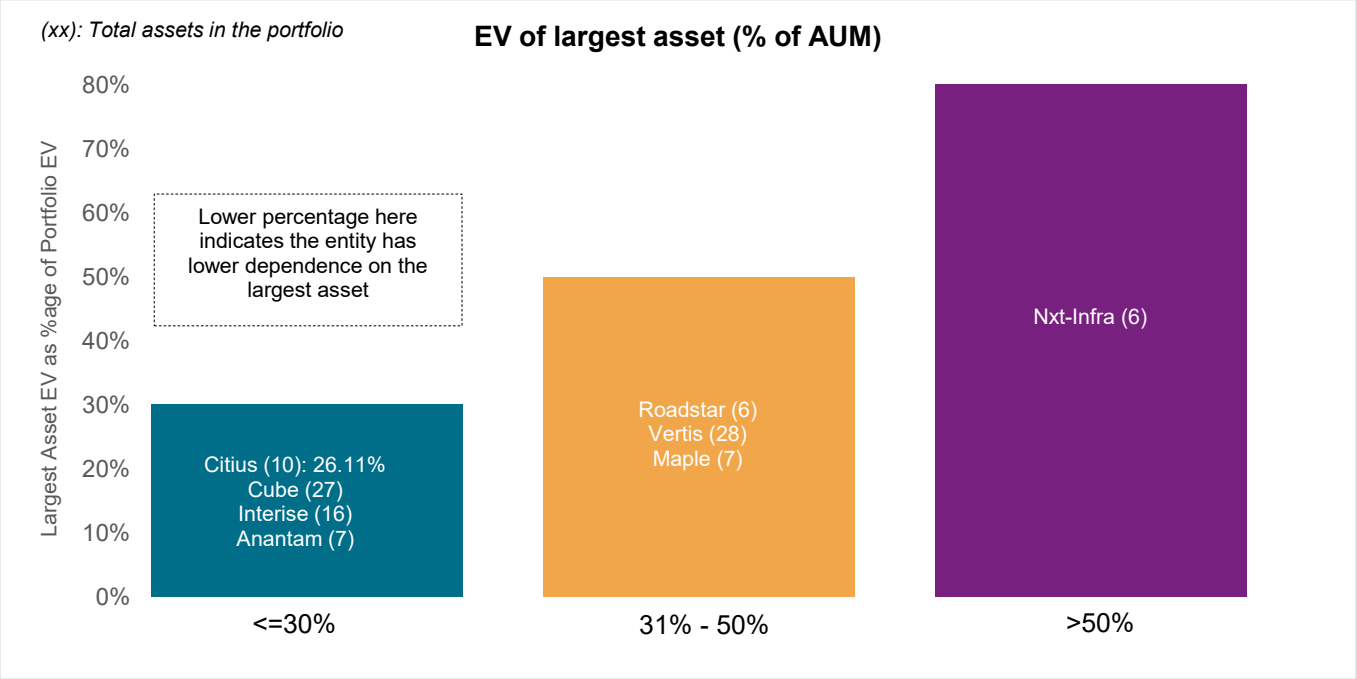
Evaluating the diversification of EV within an InvIT portfolio is essential for assessing its overall risk profile. To provide a quantitative measure of this characteristic, the peer universe has been analysed using the EV of the largest asset (% of total portfolio AUM) and the Herfindahl-Hirschman Index (HHI).

Largest asset as a percentage of portfolio EV

The metric expresses the EV of the single largest asset as share of its total portfolio EV, providing an immediate read on dominant-asset dependence. InvITs with a large portfolio (10 assets or more) tend to have a single large asset contributing to ~22-31% of the overall portfolio enterprise value. In case of Citius, the largest asset represents 26.11%

of the portfolio value indicating that their portfolio is comparatively less concentrated, thereby limiting the impact if any single asset were to underperform or face valuation changes.

EV of the largest asset as a percentage of AUM for overall portfolio



Note: The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

Herfindahl-Hirschman Index (HHI[1]) on EV for overall portfolio

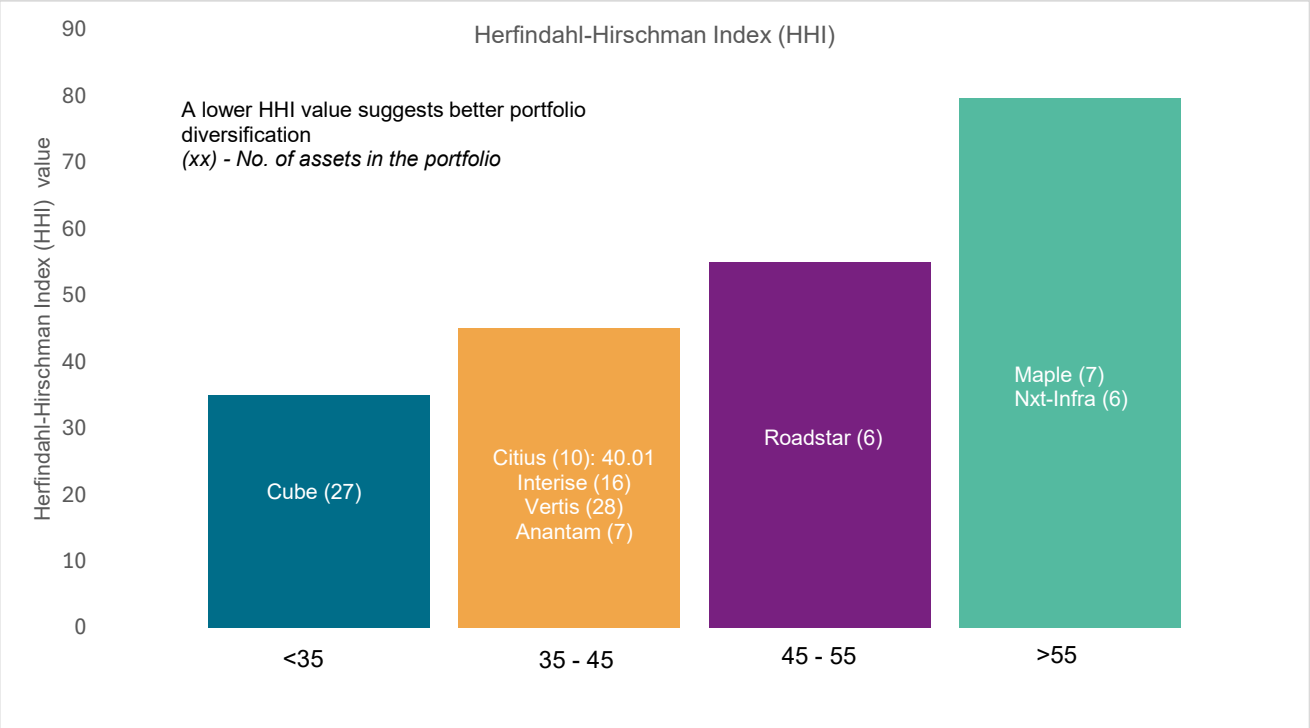
While analysing the value of the single largest asset provides a useful first look at concentration, to gain more comprehensive understanding, a holistic measure that accounts for both the number of assets and their relative EV weight is necessary.

The HHI takes into account both the number of assets and their relative EV weights, with a lower HHI score indicating a more diversified portfolio.

The Herfindahl-Hirschman Index ("HHI") score of the initial portfolio of Citius comprising of 10 assets is lower at 40.01 compared to some of the other road InvITs, as shown in the graph below.

[1] *Herfindahl-Hirschman Index (HHI) measures the overall concentration of the portfolio. A higher HHI score signifies higher concentration.*

Portfolio diversification: HHI for overall portfolio



Note: The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

State-wise dispersion of toll-based portfolio

The geographical distribution of assets is a key consideration in assessing the resilience and growth potential of road InvITs. State-wise dispersion helps evaluate exposure across regions with varying levels of economic activity, infrastructure development and fiscal strength.

The assessment of state-wise dispersion of EV and revenue exposure is relevant for toll-based assets, where revenues are directly linked to traffic volumes, which, in turn, correlate with regional economic activity and freight movement.

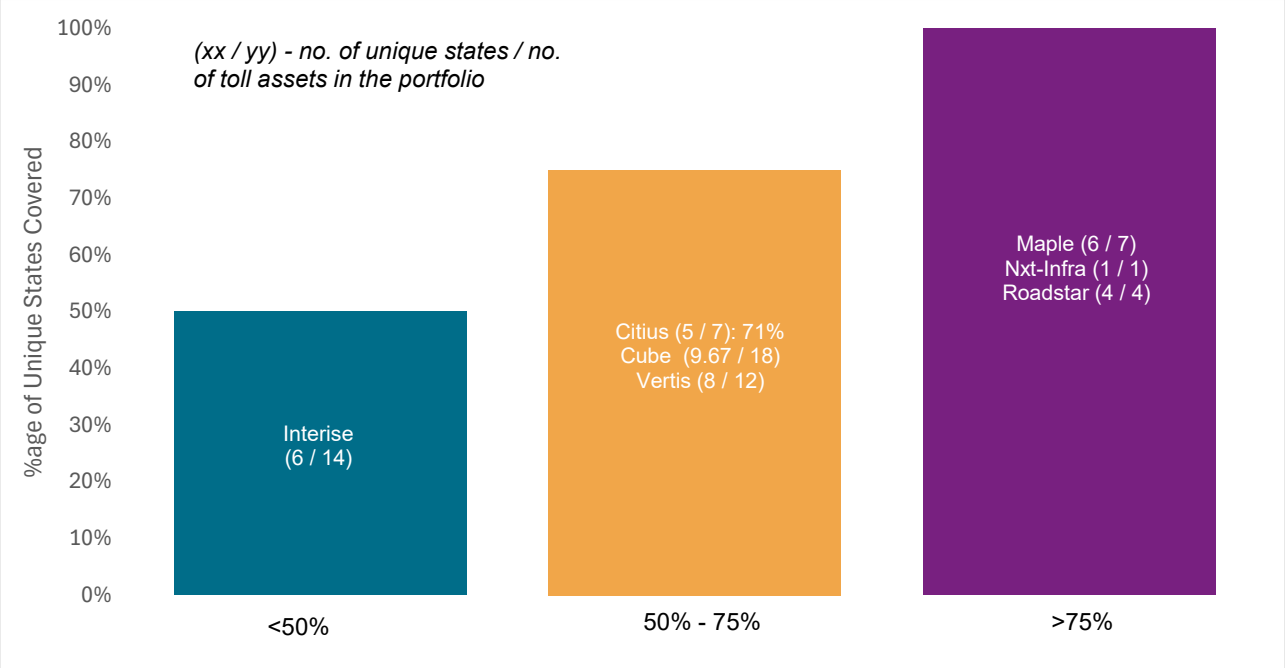
In instances where an asset spans across two or more states, the state-wise allocation of EV and revenue has been arrived basis the number of toll plazas located in each of the concerned states. For instance, in cases where a single SPV operates across two states with one toll plaza in each, the EV and revenue have been apportioned equally between the two states.

To understand how well an InvIT portfolio is spread out geographically, we look at the percentage of unique states where the toll assets are located compared to the total number of toll assets in the InvIT' portfolio. A higher percentage means that the assets are distributed across more states, which means a reduced concentration in any one state. In some cases, the number of unique states in an InvIT's toll-based portfolio might be shown as a decimal value. This happens when an asset spans across multiple states. The exposure for such assets is divided between the states based on the number of toll plazas situated in each state. For example, if an asset has two toll plazas in one state and one toll plaza in another state, the exposure of that asset to the respective state would have been considered

as 67% and 33%, respectively. When a state's presence comes only through such multi-state assets - and not through any other standalone asset, it results in a decimal value instead of a whole number.

With a score of 71%, Citius' portfolio exhibits strong geographic diversification with its initial portfolio of 7 toll assets relative to other larger peers.

Geographic diversification by percentage of unique states (only toll assets considered)



Note:

1) *Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart*
2) *The portfolio of Maple Infrastructure Trust includes the Ashoka toll assets acquired by Maple as available in Trust's disclosure.*

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

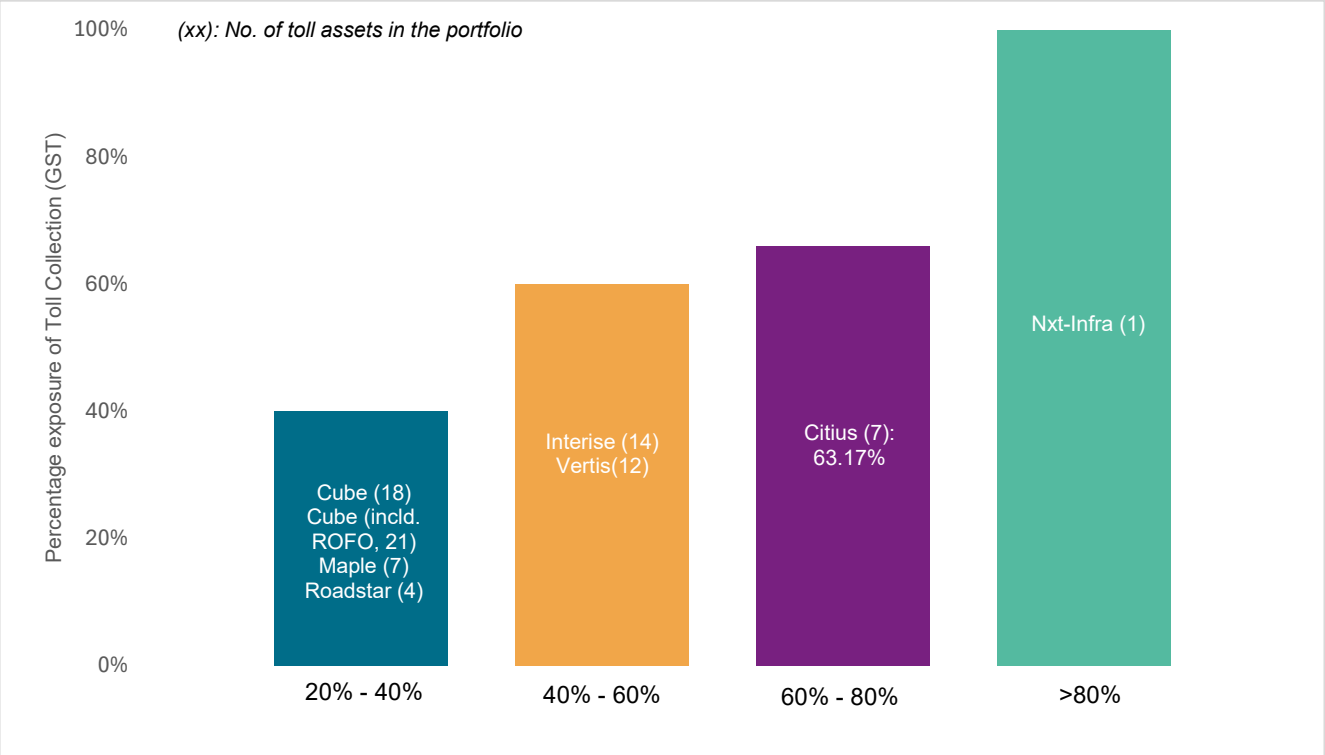
Toll Collection exposure in the top GST, NSDP per capita and GSDP states

Toll Collection exposure in the top five GST states

The same approach in relation to measuring the spread & diversification of EV across regions/states exhibiting varying levels of economic activity, has been applied to toll collection in this section.

63.17% of Citius' toll collection is from the assets located in the top five GST states which compares favourably to its peers as seen from the chart below. This suggests presence of the toll roads in regions with high economic activity, thereby indicating strong, stable and predictable long-term traffic as well as revenue growth prospects.

Percentage exposure of toll collection in the top five GST contributing states (only toll assets)



Note:

1) Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart

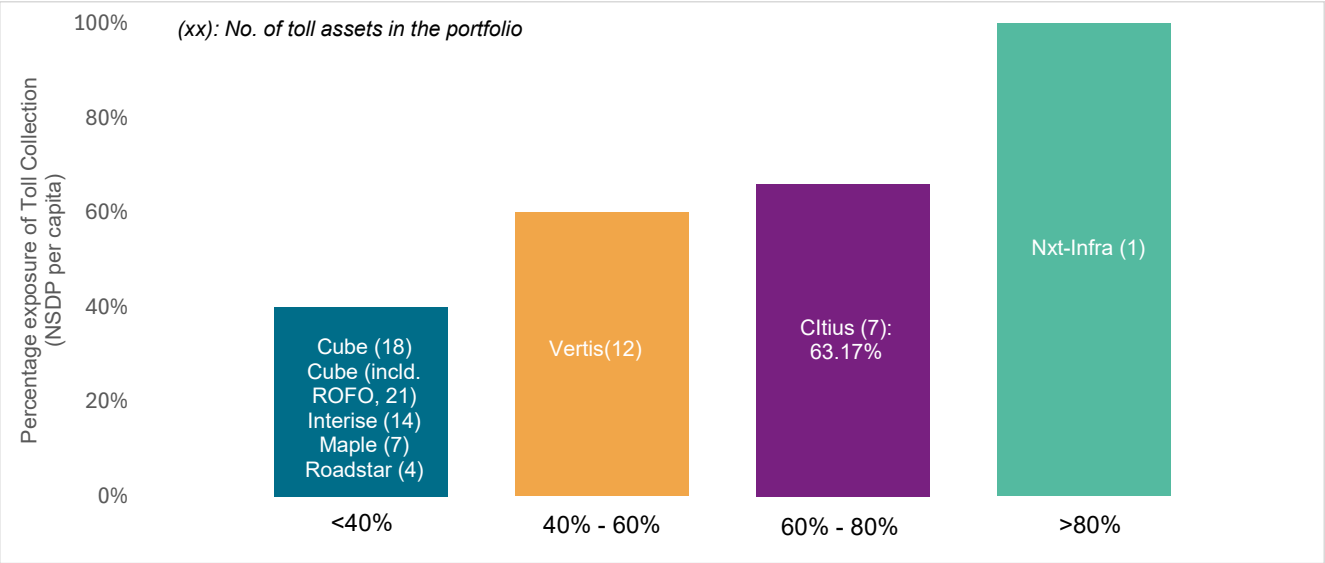
2) The portfolio of Maple Infrastructure Trust includes the Ashoka toll assets acquired by Maple as available in Trust's disclosure.

Source: Annual reports for fiscal 2025, Valuation Report

Toll collection exposure in the top five states by per capita NSDP

63.17% of Citius' toll collection is from the top five per capita NSDP states. This compares favourably to its peers suggesting presence of the toll roads in regions deriving benefits of buoyant disposable income and consumption.

Percentage exposure of toll collection in the top five per capita NSDP states (only toll assets)



Note:

1) Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart

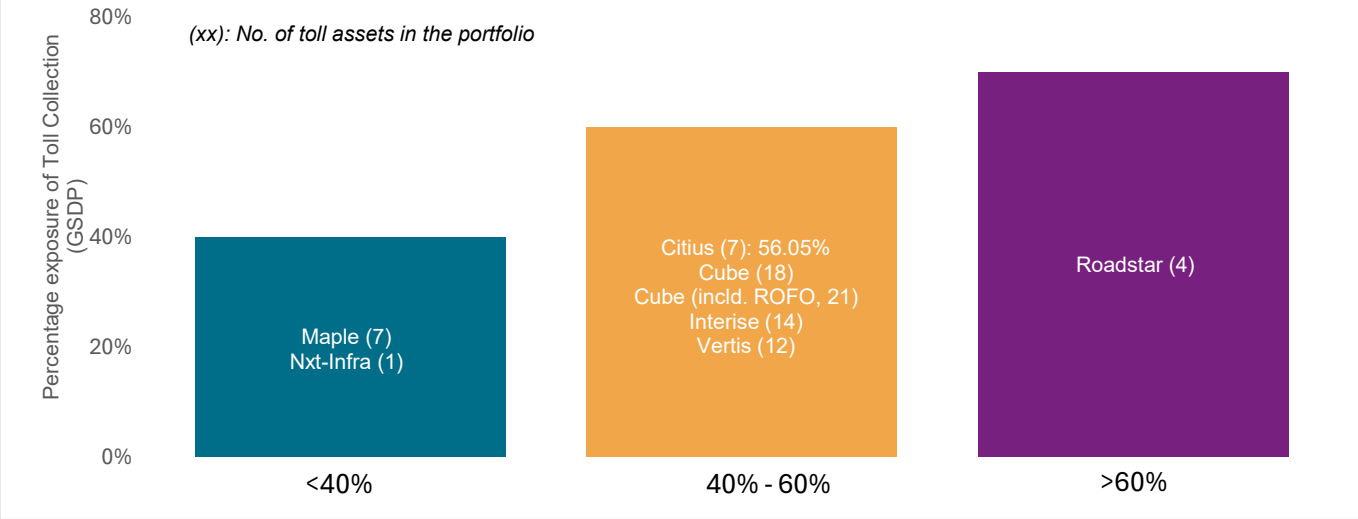
2) The portfolio of Maple Infrastructure Trust includes the Ashoka toll assets acquired by Maple as available in Trust's disclosure.

Source: Annual reports fiscal 2025, Valuation Report

Toll collection exposure to the top five GSDP states

Similarly, Citius derives 56.05% of its toll collection from Top 5 GSDP ranked states which compares favourably with its peers. This reiterates presence of the toll roads in regions with high economic activity, thereby translating into stable and predictable traffic & revenue growth prospects.

Percentage exposure of toll collection to the top five GSDP states (only toll assets)



Note:

1) Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart

2) The portfolio of Maple Infrastructure Trust includes the Ashoka toll assets acquired by Maple as available in Trust's disclosure.

Source: Annual reports fiscal 2025, Valuation Report

EV exposure in top GST, NSDP per capita and GSDP states

EV exposure in top **five GST states**

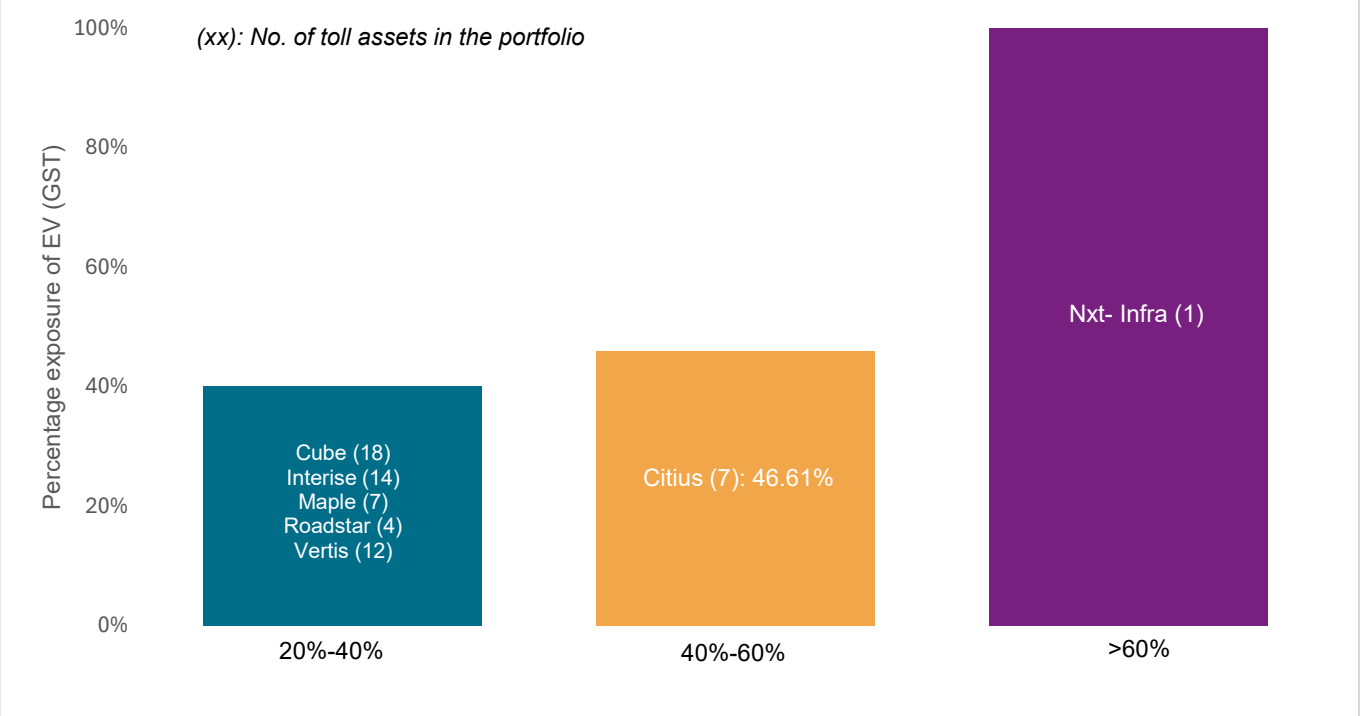
For the purpose of this analysis, the top five goods and services tax (GST) contributing states[2] have been identified based on total GST collections for fiscal 2025. These states represent the largest contributors to total GST collections and are broadly indicative of high economic activity which influence traffic volume and growth. Thus, the level of exposure to these states becomes an important parameter for portfolio diversification and can be a key aspect governing the stability & growth of tolling operations.

[2] *The top five GST contributing states identified are Maharashtra, Karnataka, Gujarat, Tamil Nadu and Haryana. These states accounted for about 54.1% of total GST collections in fiscal 2025.*

**Source: GST data – GoI (total GST collections taken for fiscal 2025), valuation data – respective annual and valuation reports*

46.61% of the toll assets by EV of Citius' initial portfolio assets is derived from the assets located in the top 5 GST contributing states. This suggests presence in regions with high economic activity, thereby indicating strong, stable and predictable long term traffic prospects.

Percentage exposure of EV in top five GST contributing states (only toll assets)



Note:

1. *Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart*
2. *The portfolio of Maple Infrastructure Trust includes the Ashoka assets acquired by Maple as available in Trust's disclosure.*

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

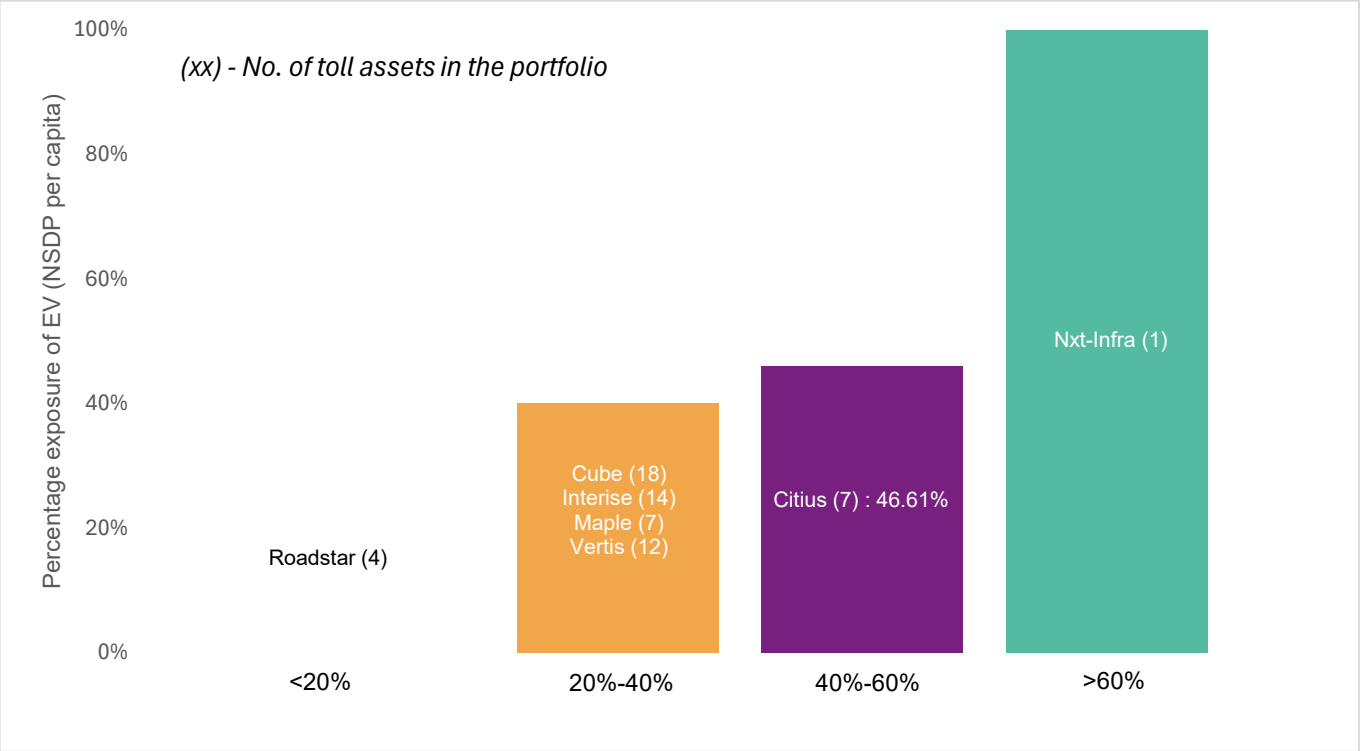
EV exposure to the top five NSDP per capita states

The distribution of the toll assets portfolio across the top five states by per capita NSDP[3] highlights exposure to states with stronger economic activity and high-income populations, which are factors that can intensify traffic volume and willingness to pay.

Citius InvIT has notable exposure, with 46.61% of its EV of toll assets linked to top 5 per capita NSDP states, underscoring a significant alignment of the portfolio with stronger economic catchments and revenue stability.

[3] *The top five NSDP per capita states are Delhi, Karnataka, Tamil Nadu, Gujarat and Haryana.*
The top five NSDP per capita states contribute to ~31.16% of total NSDP per capita.
**Source: Per capita NSDP data – MoSPI (fiscal 2025), Gujarat's NSDP per capita data (fiscal 2024), Government of Gujarat, valuation data - respective annual and valuation reports*

Percentage exposure of EV in the top five per capita NSDP states (only toll assets)



Note:

1. *Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart*
2. *The portfolio of Maple Infrastructure Trust includes the Ashoka toll assets acquired by Maple as available in Trust's disclosure.*

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

EV exposure in the top five GSDP states

The assessment of toll portfolio exposure to the top five states by GSDP[4] provides an insight into presence of the portfolio assets in states which are the largest contributors to the economic activity of the country.

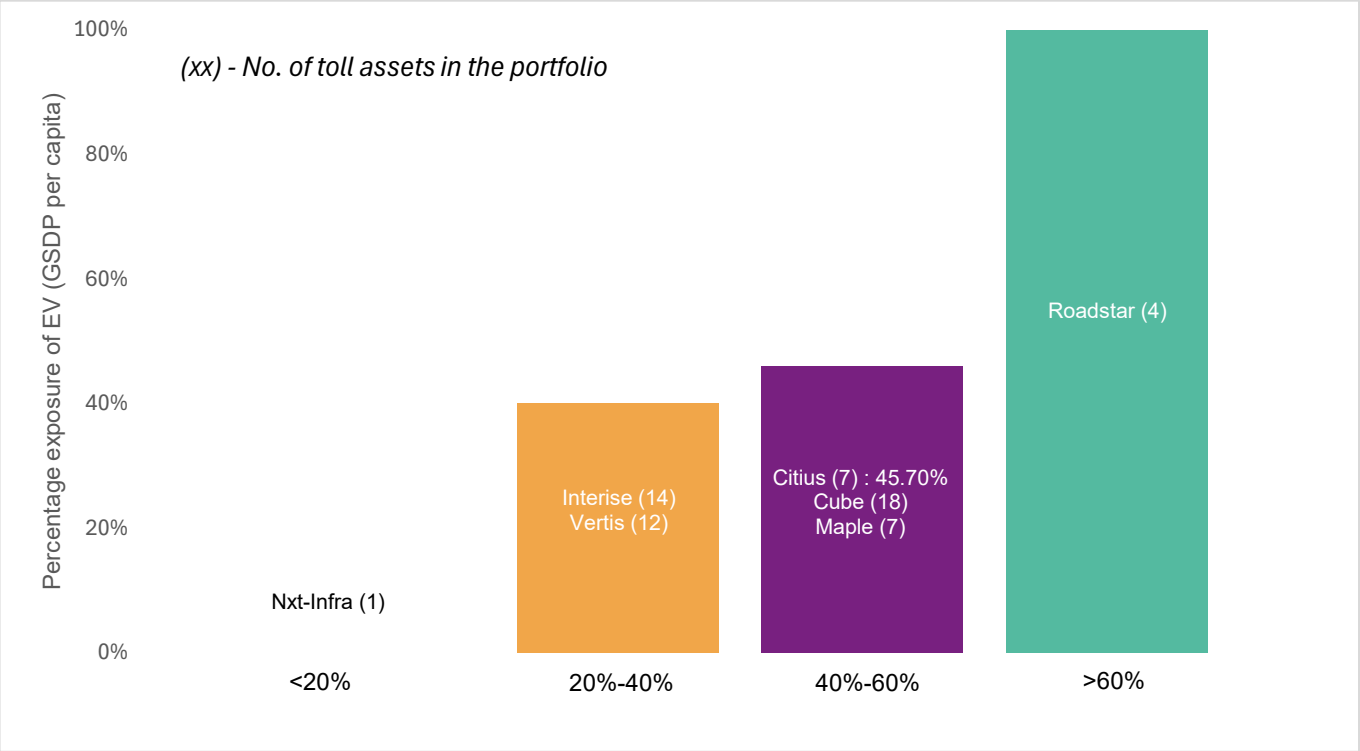
45.58% of the toll assets by EV of Citius' initial portfolio assets lies in the top 5 GSDP states. This suggests presence in regions with high economic activity, thereby indicating strong, stable and predictable long term traffic prospect. Citius' 45.70% toll based EV exposure to top 5 GSDP states compares favourably against its peers as seen from the graph below.

[4] The top five GSDP states are Maharashtra, Tamil Nadu, Gujarat, Uttar Pradesh and Karnataka. These states were selected basis the highest absolute GSDP number at constant prices (base year 2011-12).

The top five GSDP states contribute to ~49% of total GSDP at constant prices.

**Source: GSDP data – MoSPI (fiscal 2025), Gujarat's GSDP data (fiscal 2024)- Government of Gujarat, valuation data - respective annual and valuation reports*

Percentage exposure of EV in the top five GSDP states (only toll assets)



Note:

1. *Anantam Highways does not have any Toll Assets, hence not mentioned in the above chart*
2. *The portfolio of Maple Infrastructure Trust includes the Ashoka toll assets acquired by Maple as available in Trust's disclosure.*

Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Citius InvIT, Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Anantam Highways: June 2025), Annual reports, Crisil Intelligence

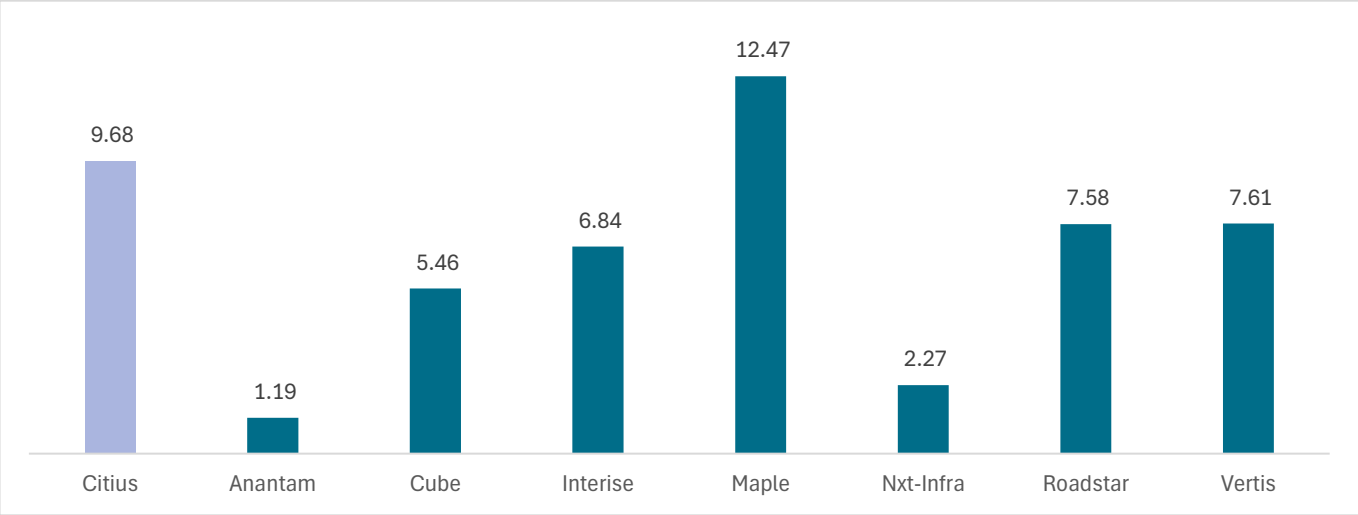
Operational history of the assets acquired by road InvITs

The metric of commercial operation date (COD) to acquisition by an InvIT measures the time period between the COD of an infrastructure asset and the date the InvIT acquires the asset.

The metric indicates the level of maturity of the asset. A longer COD to InvIT acquisition period suggests the asset is more mature, with a longer operating history, and potentially having established revenue streams and stabilised operations.

When compared with other road InvITs, whose roads on average had 1.19 to 12.47 years of operational history at the time of acquisition, Citius project SPVs are more mature at transfer, with an operating history of 9.68 years considering all the assets were acquired on December 31, 2025, as demonstrated in the chart below.

COD to acquisition by InvIT (in years)



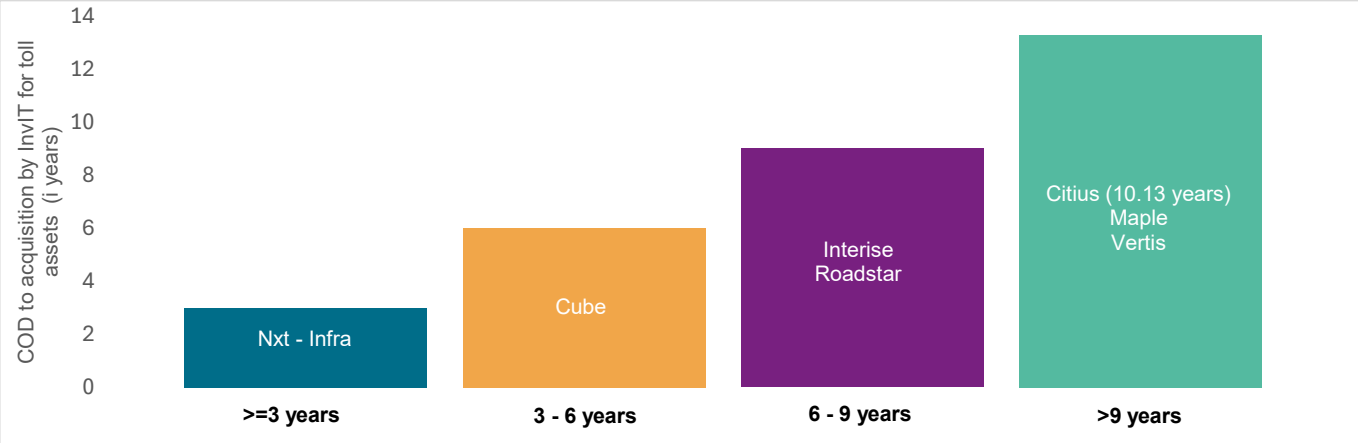
Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Citius InvIT: [December 2025]), Crisil Intelligence

Operational history of the toll assets acquired by road InvITs

In case of toll assets, the operational history becomes an even more critical metric. The length of time that toll assets have been in operation can provide insights into their performance and characteristics.

A high average operational history of toll assets (10.13 years in case of Citius, which is one of the highest) increases confidence in assessment of their potential for future growth basis established history of toll collections, maintenance and upkeep requirements of the assets as well as their safety related aspects.

COD to acquisition by InvIT for toll assets (in years)



Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Citius InvIT: [December 2025]), Crisil Intelligence

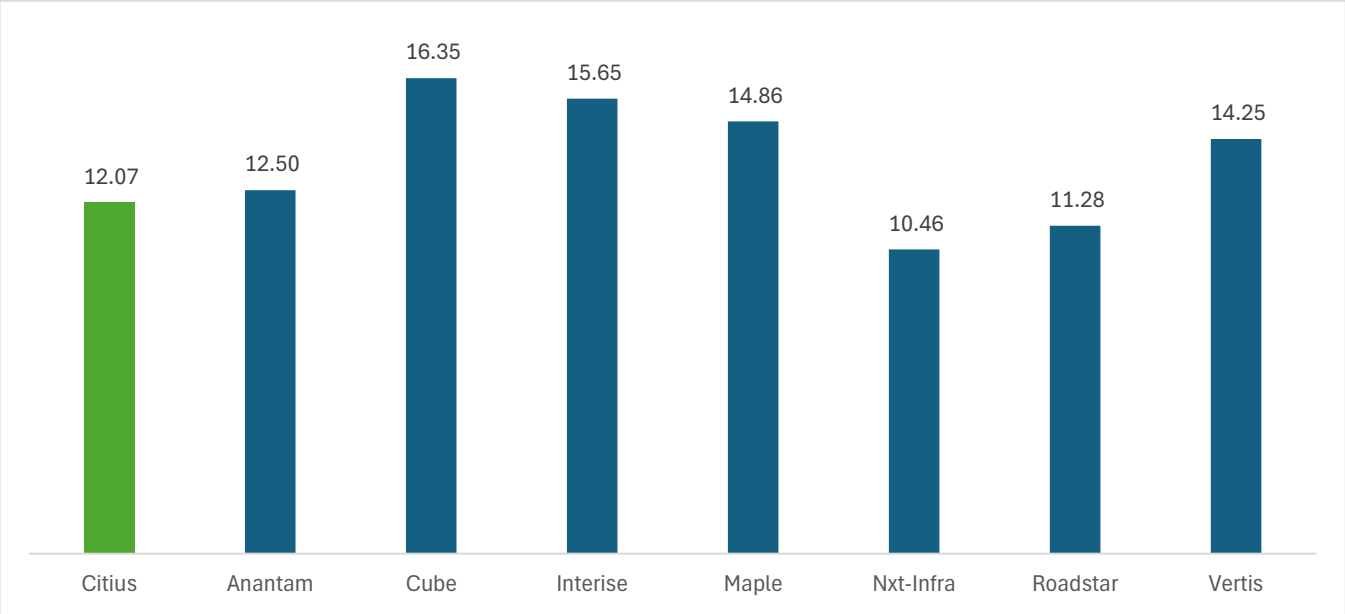
Residual concession period for assets

The expected residual concession period refers to the balance duration of the concession agreement for an asset from the cut-off date (December 31, 2025) for which concessionaire has the right to operate and maintain the asset and generate revenue.

The residual concession periods of the InvITs were weighted using their EV as of March 2025/December 2025 (basis availability of data) to arrive at the EV weighted residual life.

The EV-weighted residual life of the assets for all financial sponsor-backed road InvITs ranges from 10.46 to 16.35 years. All the road InvITs mentioned have a residual concession period of more than 10 years, which may be considered relatively long for road assets. Citius has a residual life (by EV weight) of 12.07years.

EV-weighted residual life (in years)



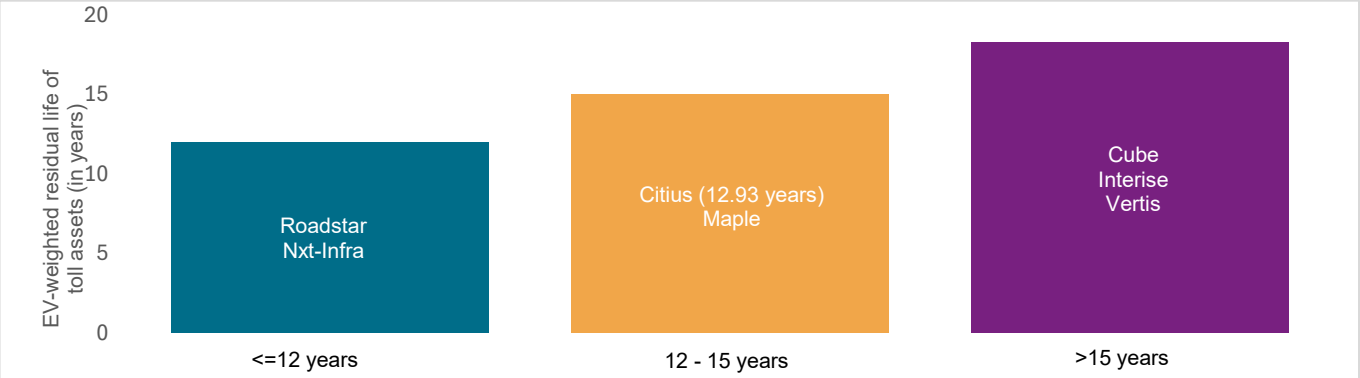
Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Citius InvIT: [December 2025]), Crisil Intelligence

Residual concession period for toll assets

The residual concession periods of the toll assets of the InvITs were weighted using their EV as of March 2025/December 2025 as weights.

All the road InvITs mentioned below have a EV weighted residual concession period for toll road assets of more than 10 years, which may be considered a relatively long period of time for toll road assets. Citius has a residual life (by EV weight) in case of toll assets of 12.93 years.

EV-weighted residual life of toll assets (in years)

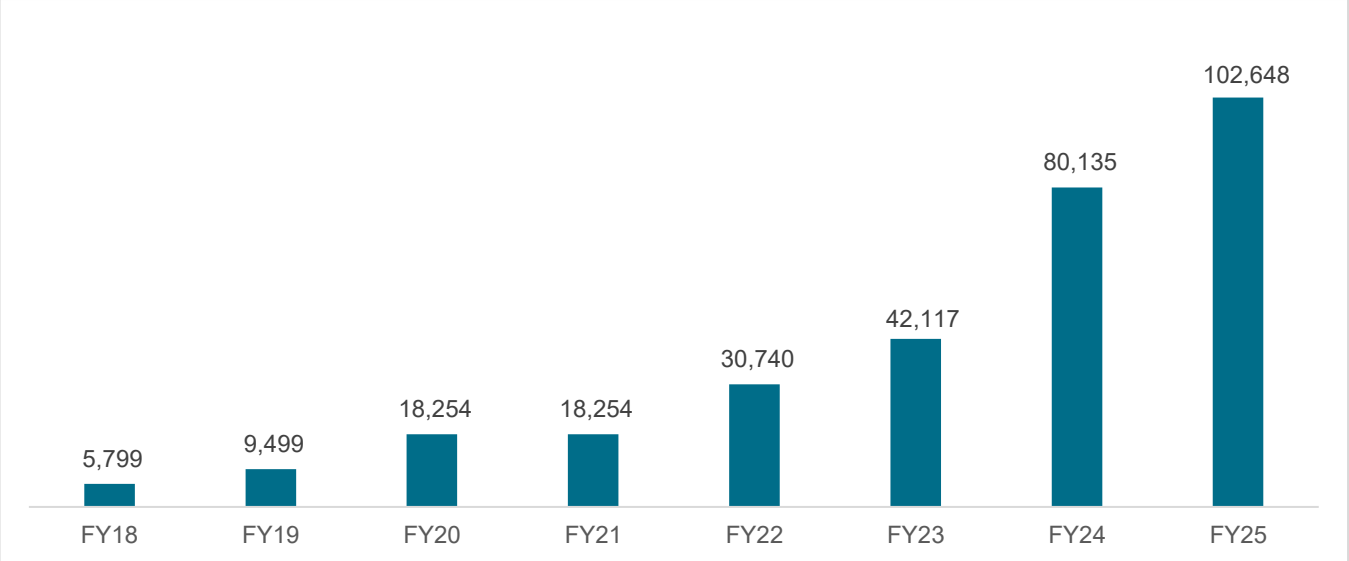


Source: Valuation reports for various InvITs (Interise Trust, Maple Infrastructure Trust, Nxt-Infra Trust: March 2025; Cube Highways Trust, Roadstar Infra Investment Trust, Vertis Infrastructure Trust: December 2025; Citius InvIT: [December 2025]), Crisil Intelligence

Cumulative Capital raised by road InvITs

As per the latest available data, road InvITs have collectively raised unit capital over Rs 1 lakh crore. More than 80% of the total capital raised by road InvITs has been mobilised over the past four years, with approximately 60% of the capital raised in the last two years. The chart below provides a summary of the capital raised by road InvITs over the years.

Cumulative Capital raised by road InvITs over the years (in Rs crore)



Sources: Annual report, Crisil Intelligence

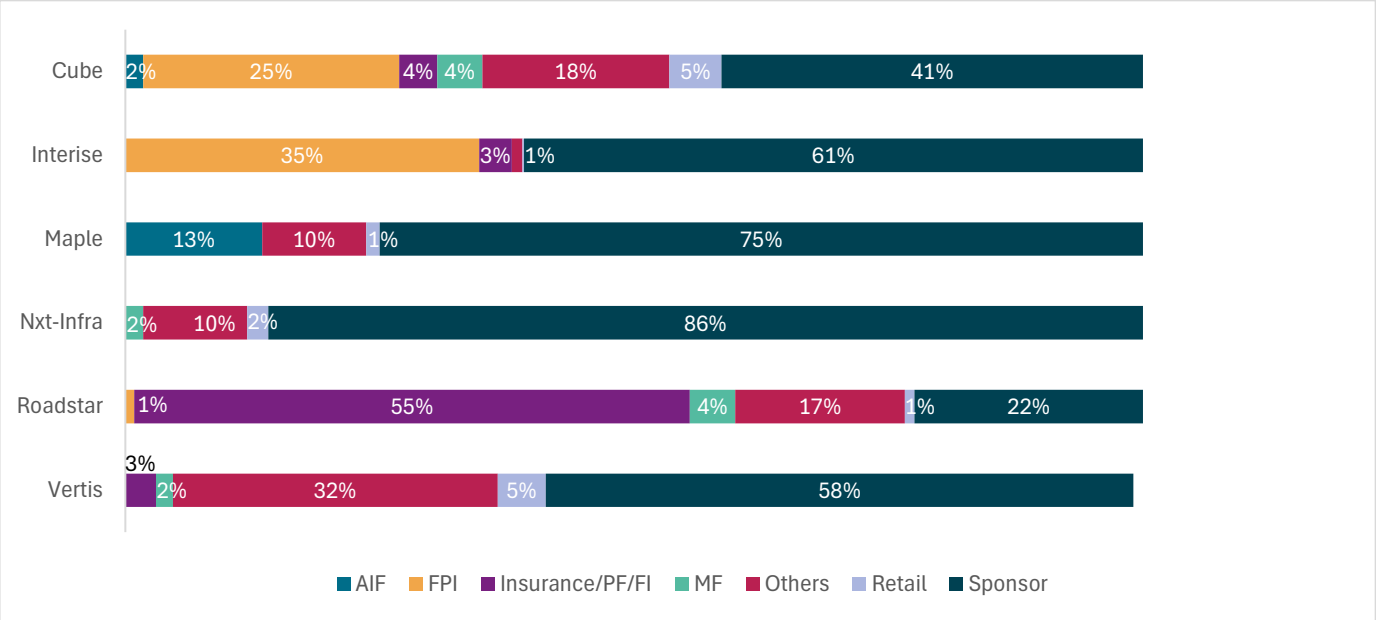
Ownership pattern

The ownership structure of financial sponsor-backed road InvITs indicates participation from a diverse set of investor classes, including alternative investment funds (AIFs), foreign portfolio investors (FPIs), insurance companies, provident funds (PF), pension funds, mutual funds (MFs), retail investors and sponsors.

InvITs have become an attractive option for investors looking for stable and long-term returns. This segment has significant foreign investment, indicating global confidence in India's infrastructure sector. However, individual

investors have been slow to participate in InvITs due to limited awareness and the high minimum investment requirement.

For majority of the peer group InvITs, the sponsor holds a significant majority share of the unitholding. A few Comparative unitholding pattern of peer InvITs (December 2025)



Source: Annual report, Valuation report, Unitholding pattern, Crisil intelligence

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