

International Centre For
Sustainability



Ex Oriente Lux

From Capital Gap to Capital Magnet: De-Risking Infrastructure Investment in India

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About the International Centre for Sustainability (ICfS)

The ICfS is a London-based independent Research and Advisory organisation committed to fostering deeper alliances between the United Kingdom, the United States, India, and other global stakeholders.

For us this means to strengthen people to people ties on the basis of a shared vision and shared values, to deliver better governance through institutionalisation of combined best ideas of governance and economic architecture. We want to forge a partnerial ecosystem for a collective sustainable future to protect all sentient beings on our planet, underpinned by a robust ability to defend our collective and mutual interests.

We work with government officials, political leaders, policy influencers, and businesses to build trust, cooperation, and market architecture.

We do this as a platform that brings together experts to provide the latest research and insights for our clients and members. We work with them to turn their vision into reality.



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Executive Summary

India is poised to play a pivotal role in the global infrastructure landscape. With an estimated requirement of over \$2.5 trillion in capital by 2030 to meet its urbanisation, decarbonisation, and economic development goals, the question for global investors is not *"Why India?"* but rather, *"How can we invest in India reliably, at scale and with confidence?"*

This white paper offers a strategic and actionable roadmap.


At its core, our argument is clear: India is not a frontier risk, rather it is a frontier of structured opportunity. Realising this potential necessitates a recalibration in engagement strategies by both investors and Indian institutions.

Despite strong political intent and increasing public investment, capital mobilisation is hindered by five systemic constraints:

1. Fragmented project preparation
2. Prolonged dispute resolution
3. Regulatory opacity
4. Weak contract enforcement
5. Uneven returns across sectors and States

Investment committees often apply a uniform country-level risk premium to India, overlooking the internal diversity and varying maturity levels across its regions and sectors. To address this, the International Centre for Sustainability (ICfS) proposes a nuanced risk assessment framework grounded in data and institutional alignment.

This white paper provides:

- A. A diagnostic of current capital dislocation, supported by case studies and investor insights;
 - B. A stakeholder-specific playbook with tailored reforms for central ministries, state governments, regulators, international funds, and investment committees;
 - C. Two conceptual tools to reshape investor thinking:
 - The Three Centuries Model: a framework for understanding the coexistence of 19th, 20th, and 21st-century investment environments within India
 - The Infrastructure ESG+ India Index: an upcoming ICfS initiative to enhance due diligence by evaluating governance, contract compliance, and social license, extending beyond traditional ESG metrics
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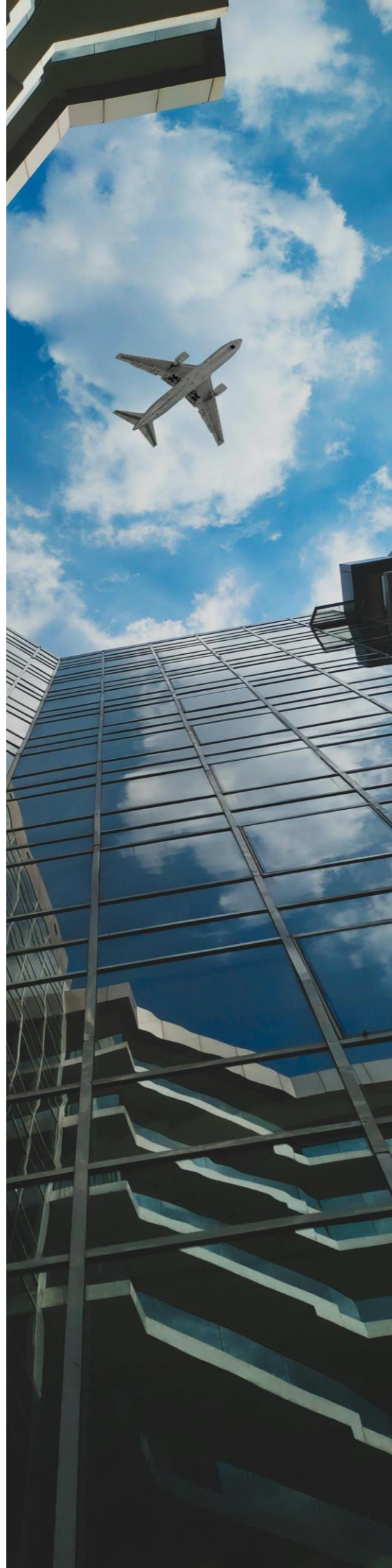
Our recommendations are ambitious yet practical, including:

- Scaling the National Investment and Infrastructure Fund (NIIF) into a multi-thematic sovereign platform
- Establishing state-level infrastructure facilitation cells to streamline investor engagement
- Launching a credit enhancement facility to unlock private capital for Tier-2 and Tier-3 infrastructure projects
- Introducing fiscal risk dashboards to improve transparency and creditworthiness at the subnational level
- Establish a dedicated currency risk mitigation facility to enable long-term foreign capital participation in infrastructure by protecting investors from INR depreciation over multi-decade project horizons

This paper invites policymakers, investors and development partners to converge around a shared vision: the emergence of a credible, investable and globally integrated Indian infrastructure ecosystem.

At the ICfS, based in London and dedicated to bridging global finance with India's sustainable growth trajectory, we are committed to advancing this agenda through research, strategy, and collaboration.

India is ready to build. The world is watching. The capital is available. Let us now build it right.





Introduction


As the world undergoes tectonic shifts in energy systems, demographic trends, and geopolitical alignments, infrastructure has re-emerged not only as a lever of economic growth, but as a litmus test for state capacity, regulatory predictability and national ambition. Nowhere is this truer or more consequential than in India.

India, a constitutional democracy of 1.4 billion people and the world's fifth-largest economy, stands at the threshold of a long-anticipated infrastructure revolution. The Government of India has committed over \$1.4 trillion between 2020 and 2025 under the National Infrastructure Pipeline (NIP), with ambitions to scale this toward \$2.5 trillion by 2030.⁽¹⁾ Yet capital inflows from global infrastructure funds remain limited in scale, episodic in timing, and cautious in structure.

This paper begins with a fundamental proposition: India is not a frontier risk; it is a frontier of long-term opportunity. But to realise this potential, both India and the global investment community must shift how they engage with each other, and with risk itself.

According to the World Bank, India must spend nearly 10% of its GDP annually on infrastructure to meet its development and sustainability goals, yet it currently invests only around 6.5%, leaving an annual gap of \$200–250 billion⁽²⁾. Simultaneously, over \$100 trillion in global assets under management (AUM) is searching for yield, much of it held by pension funds, sovereign wealth funds and insurers with long-dated liabilities⁽³⁾.





Here lies the global paradox: India is the only large-scale economy in the world with the demographic depth, institutional evolution, and capital absorption capacity to productively deploy this global surplus. Yet its pipeline remains underprepared, and its policy frameworks under-communicated.

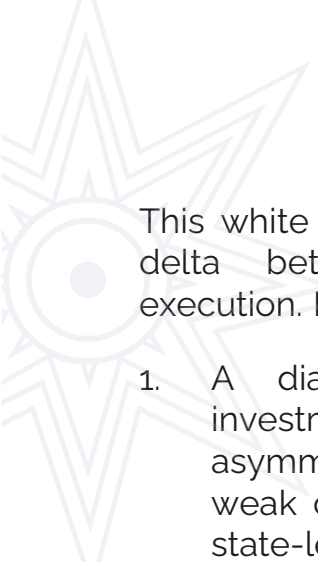
Meanwhile, across OECD countries, that same global capital is increasingly being forced into low-yield, overvalued asset classes fuelling asset bubbles in real estate, tech, and private credit markets. As noted by the IMF and the Bank of International Settlements, these distortions jeopardise the long-term solvency of pension systems and institutional portfolios that depend on steady, inflation-linked returns ⁽⁴⁾⁽⁵⁾. A well-regulated Indian infrastructure sector, if properly de-risked offers precisely the kind of long-term cash flows that global allocators seek.

The International Centre for Sustainability (ICfS) argues that India's opportunity is not just national, but global.

And the implications go far beyond GDP: if India cannot absorb this liquidity, the global capital system will remain distorted, risking asset bubbles at home and infrastructure underdevelopment abroad.

India's macroeconomic fundamentals remain sound: public capital expenditure is rising, core inflation is stable, and the rupee has demonstrated increased resilience. According to Morgan Stanley, India is forecast to contribute 20% of global growth over the next five years driven by capex cycles, digital infrastructure and geopolitical supply chain realignments ⁽⁶⁾.

Yet friction remains. This paper interrogates the bottlenecks: technical, regulatory, and reputational, that still constrain the mobilisation of global infrastructure capital. Drawing on the lessons of Japanese, Korean, and Middle Eastern fund engagements in India, it offers a pragmatic roadmap to reform, de-risk, and scale.



This white paper aims to bridge the delta between opportunity and execution. It presents:

1. A diagnosis of India's key investment barriers: policy asymmetry, procedural delays, weak contract enforcement and state-level institutional variability;
2. A new mental model for underwriting India risk: our Three Centuries Model, which differentiates between the co-existing investment realities of India's 19th-, 20th, and 21st-century regions;
3. An actionable stakeholder-specific playbook for governments, regulators, investors, and investment committees alike.

If India is to fulfil its ambition of becoming the beating heart of the global South, it must also become the anchor destination for the world's surplus capital. And if investors are to meet their long-term return obligations, especially to retirees and policyholders in the West, they must look toward India not as an exception, but as the next centre of gravity.

This paper is a step toward that convergence.

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1. Problem Definition: The Infrastructure Capital Paradox

India's infrastructure ambitions are large, urgent, and globally consequential. Yet despite its compelling growth trajectory, stable macroeconomic fundamentals, and increasing political continuity, India continues to underperform in attracting long-term, risk-tolerant global infrastructure capital.

This paradox of abundant global liquidity on one side, and chronic under-investment on the other, demands a closer examination. The following five structural blockages define the contours of the challenge.

1.1. The Investment Gap: Structural and Persistent

India's National Infrastructure Pipeline (NIP) projected \$1.4 trillion in investment between 2020–2025 across energy, urban, transport, and digital infrastructure. As of 2024, only about 55–60% of this commitment has been realised or is under active implementation ⁽¹⁾.

The World Bank and Asian Development Bank estimate that India needs to invest nearly 10% of its GDP annually to meet its infrastructure goals and keep pace with urbanisation, energy transition, and climate resilience needs. In practice, India spends only 6.5%, with public sector funds contributing nearly 75% of this—leaving a shortfall of \$200–250 billion annually ⁽²⁾ ⁽³⁾.

1.2. Private Sector Hesitation: Risk Without Return?

While foreign direct investment (FDI) inflows into India touched \$71 billion in FY22, infrastructure as a sector attracted less than 15% of this total, and the lion's share went into telecoms and renewables rather than transport or urban development ⁽⁴⁾. Private infrastructure investment, which stood at 37% of total infrastructure funding in 2010, has fallen to below 25% in 2023 ⁽⁵⁾.

Several global infrastructure funds, including those from Japan, Canada, and the UAE have found execution risk, slow arbitration, and tariff uncertainty as key deterrents to long-term deployment. For example:

"India is an attractive long-term story, but until issues around land acquisition, enforceability of contracts, and revenue visibility are sorted, global funds will be cautious."

— Senior Executive, Japan Bank for International Cooperation (JBIC), 2023 Interview ⁽⁶⁾

1.3. Regulatory Friction and State-Level Weakness

Despite India's improvements in the Ease of Doing Business rankings (climbing from 142 in 2014 to 63 in 2020), infrastructure-specific bottlenecks persist. These include:



- Delays in environmental and forest clearances (average delay: 18–24 months).
- Dispute resolution timelines extending beyond 4–5 years in arbitration.
- Weak enforcement of contracts, particularly at the state level.
- Opaque revenue-sharing models in Public-Private Partnerships (PPPs), often renegotiated post-facto.

Only 7% of identified infrastructure projects in the NIP pipeline are under true PPP models as of 2024⁽⁷⁾.

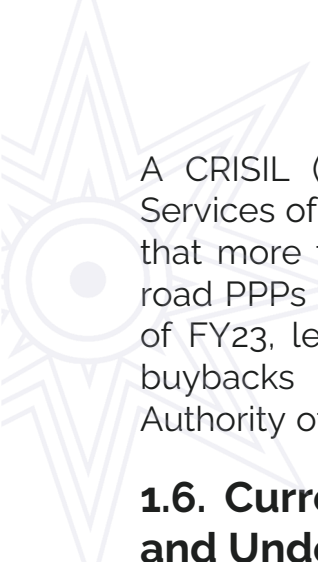
1.4. Institutional Underdevelopment: Few Vehicles, Limited Scale

India lacks a robust ecosystem of domestic long-term institutional investors in infrastructure. Insurance companies and pension funds together account for just 0.5% of infrastructure investment compared to over 15% in OECD economies ⁽⁸⁾. The National Investment and Infrastructure Fund (NIIF), India's sovereign-anchored infrastructure fund, manages just \$4.9 billion. This is tiny relative to India's needs.

"India needs more than just capital—it needs patient, strategic capital that understands gestation and complexity. But the platforms to receive that capital are underdeveloped."
— Vikram Mehta, Brookings India Fellow ⁽⁹⁾

1.5. Returns: Uneven, Sector-Dependent

While returns from renewable energy, telecom towers and logistics infrastructure have generally exceeded benchmarks, returns from roads, airports, and rail-linked PPPs have underwhelmed. Investor exits have often been delayed or below target IRRs due to project delays, litigation, and changing regulatory regimes.



A CRISIL (Credit Rating Information Services of India Limited) study found that more than 35% of private sector road PPPs faced viability concerns as of FY23, leading to restructurings or buybacks by the National Highway Authority of India (NHAI) ⁽¹⁰⁾.

1.6. Currency Risk: Persistent and Under-addressed

Currency volatility remains a significant deterrent for foreign capital in Indian infrastructure. Despite India receiving over \$13 billion in infrastructure-related FDI in FY23, a large portion remains concentrated in sectors with foreign currency revenue streams or short payback periods, such as renewable energy and digital infrastructure. For long-gestation projects like roads, urban utilities, or rail freight corridors, where revenues are INR-denominated exposure to rupee depreciation creates unacceptable long-term risk.

The INR has depreciated against the USD by an average of 3.9% annually over the past 20 years, eroding dollar returns despite strong operational performance. A 2021 World Bank report noted that lack of effective currency hedging mechanisms adds 5–7% to project costs, undermining India's competitiveness in attracting patient foreign capital for infrastructure (World Bank, 2021) ⁽¹¹⁾.

Summary

India's infrastructure finance ecosystem is caught in a capital paradox: the capital exists globally; the demand exists domestically; yet the system that should link them remains misaligned. If India is to transition from underfunded ambition to investable opportunity, it must address structural issues around project readiness, regulatory certainty and risk allocation, without undermining its sovereign priorities.

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2. Case Studies

In this section we share three case studies that demonstrate some of the problems highlighted in the previous section, which demonstrate why cost of money is high for India.

2.1. Mumbai Trans Harbour Link (MTHL)

Project Overview:

The Mumbai Trans Harbour Link (MTHL), officially named the Atal Bihari Vajpayee Sewri–Nhava Sheva Atal Setu, commenced construction on 24 April 2018 and was completed in December 2023. It was inaugurated and opened to the public on 12 January 2024 by Prime Minister Narendra Modi.

Spanning 21.8 kilometres, with 16.5 kilometres over the sea, the MTHL is India's longest sea bridge, connecting South Mumbai to Navi Mumbai. The project was primarily funded by the Japan International Cooperation Agency (JICA), which financed approximately 85% of the total cost through a concessional loan. The bridge is designed to accommodate around 70,000 vehicles daily, significantly reducing travel time between Mumbai and Navi Mumbai from 2 hours to approximately 20 minutes.

Environmental and Forest Clearance Delays:

The MTHL project faced substantial delays due to challenges in obtaining environmental and forest clearances:

- **Mangrove Destruction Concerns:** The project required the diversion of approximately 38 hectares of mangrove forests. Environmentalists raised concerns about the potential destruction of these ecologically sensitive areas, leading to prolonged discussions and assessments.

- **Wildlife Impact Assessments:** The area is home to various migratory bird species, including flamingos. The potential impact on these species necessitated comprehensive wildlife impact assessments, further delaying the clearance process.
- **Regulatory Hurdles:** The project had to navigate through multiple regulatory bodies, including the Ministry of Environment, Forest and Climate Change (MoEFCC) and the Maharashtra Coastal Zone Management Authority (MCZMA). Coordinating between these agencies added complexity and time to the clearance process.

Consequences of Delays:

- **Cost Overruns:** The project was originally scheduled for completion in September 2022, but faced delays of approximately 15 months, ultimately concluding in December 2023. These delays, were conveniently attributed to COVID-19 disruptions and associated supply chain issues, resulted in a significant cost escalation. However, there is also ample evidence to suggest that the project was mired with regulatory delays and a lack of joint up systems between departments to grant clearances. The project's initial budget of \$1.71 billion (₹14,262 crore) increased by \$263 million (₹2,192 crore, 15.4%), bringing the total cost to \$1.97 billion (₹16,454 crore). This case illustrates how even well-funded, high-priority projects in India remain vulnerable to execution risks and underscores the importance of resilient project planning and streamlined regulatory processes.

- **Investor Confidence:** Prolonged delays and regulatory uncertainties impacted investor confidence, making it challenging to secure timely funding and partnerships.
- **Public Discontent:** The delays led to public dissatisfaction due to prolonged traffic congestion and unmet expectations for improved infrastructure.

Mitigation Measures:

Environmental Management Plans: To address environmental concerns, comprehensive management plans can be developed, including mangrove restoration initiatives and wildlife conservation strategies.

Stakeholder Engagement: Continuous dialogue with environmental groups, local communities and regulatory bodies would help in addressing concerns and expediting the clearance process.

Adaptive Project Planning: The project could have incorporated adaptive planning to accommodate environmental considerations, such as redesigning certain sections to minimise ecological impact.

The MTHL project exemplifies the complexities and challenges associated with environmental and forest clearances in India. While environmental protection is paramount, balancing it with infrastructure development requires streamlined processes, early stakeholder engagement and adaptive planning to mitigate delays and associated costs.



2.2 National Highways Authority of India (NHAI) vs. Yedeshi Aurangabad Tollway Limited (YATL)

This project involved the development of a highway under the 'Build-Operate-Transfer' (BOT) model, a common approach in India's infrastructure sector. Yedeshi Aurangabad Tollway Limited (YATL) was the concessionaire responsible for the project's execution. Disputes arose between NHAI and YATL concerning project delays and associated cost escalations.^{(1) (2)}

YATL was a special purpose vehicle (SPV) of IRB Infrastructure Trust and attracted significant foreign investment through its parent entity. Notably, two major international investors are involved:

1. **Government of Singapore Investment Corporation (GIC):** GIC, one of Singapore's sovereign wealth funds, is a key investor in IRB Infrastructure Trust. Their involvement underscores confidence in India's infrastructure sector and provides substantial financial backing to projects like YATL.
2. **Cintra (a subsidiary of Ferrovial, S.A.):** Cintra, part of the Spanish multinational Ferrovial, S.A., specialises in transportation infrastructure development. Their investment in IRB Infrastructure Trust brings international expertise and capital to the Indian infrastructure landscape.

These investments highlight the global interest in India's infrastructure projects and the potential for collaborative development.





Arbitration Proceedings:

YATL initiated arbitration proceedings to seek compensation for the delays, citing increased costs and loss of revenue. The arbitration tribunal awarded YATL a principal amount of ₹1,503.15 crores (\$180 million), along with interest and an extension of the concession period. NHAI challenged this award under Section 34 of the Arbitration and Conciliation Act, 1996, leading to further legal proceedings.

Duration and Delays:

The arbitration and subsequent legal challenges extended over several years, exemplifying the protracted nature of dispute resolution in India's infrastructure sector. Such delays can have significant financial implications for both the concessionaire and the public authority involved.

Implications:

- **Financial Strain:** Prolonged arbitration processes tie up substantial financial resources, impacting the cash flows and financial stability of the entities involved.
- **Project Delays:** Extended dispute resolution timelines can stall project completion, delaying the intended public benefits and economic returns.
- **Investor Confidence:** Lengthy and uncertain arbitration processes commonly deter foreign and domestic investors, affecting future infrastructure investments.

The NHAI vs. YATL case underscores the need for more efficient and time-bound dispute resolution mechanisms in India's infrastructure sector. Streamlining arbitration processes and reducing legal bottlenecks are essential to foster a more conducive environment for infrastructure development and investment.

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2.3 Palarivattom Flyover Scam, Kerala

Project Overview:

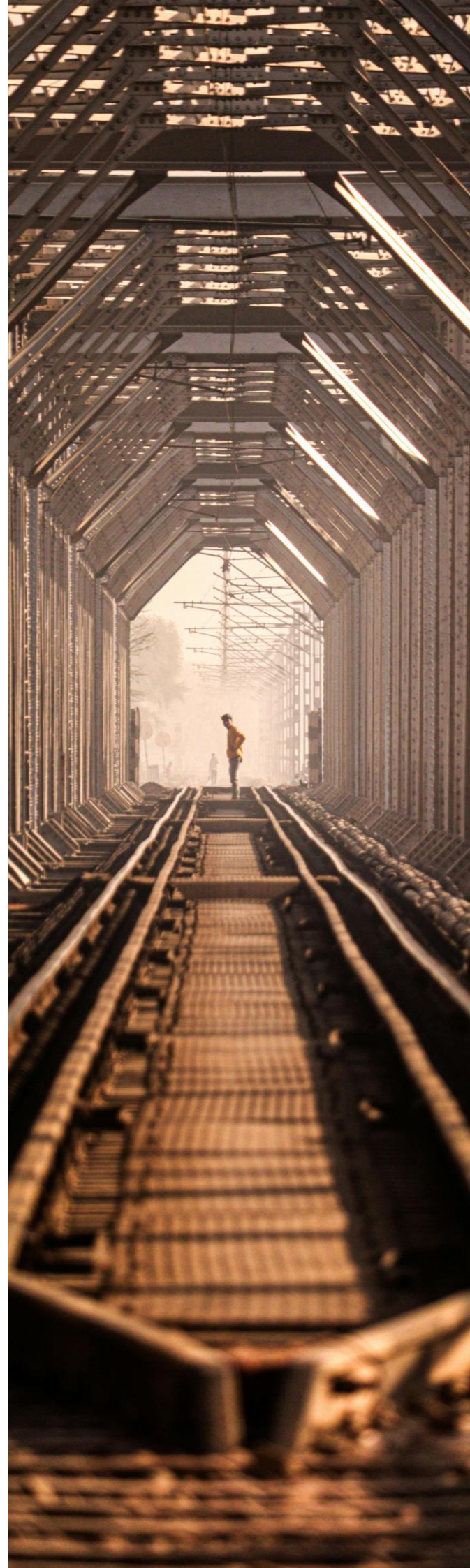
The Palarivattom Flyover, constructed in Kochi, Kerala, was inaugurated in October 2016 to alleviate traffic congestion on the National Highway 66 Bypass. However, within three years, significant structural damages were observed, leading to its closure in May 2019. Investigations revealed that the flyover was structurally unsound due to substandard construction practices and materials.

The project was executed by RDS Projects Ltd, an Indian infrastructure company. The consultancy services were provided by KITCO Ltd, also an Indian firm. This is an example of how even domestically funded projects can suffer from uncertainty and poor delivery.

Contractual and Enforcement Issues

The project was executed under the supervision of the Kerala Public Works Department (PWD). Despite clear contractual obligations regarding construction quality and adherence to safety standards, several lapses occurred:

- **Substandard Materials:** Tests conducted by the Kerala Highway Research Institute indicated that the concrete used did not meet the required strength specifications.
- **Lack of Oversight:** There was inadequate monitoring by the PWD officials, allowing contractors to deviate from stipulated norms.





- **Delayed Legal Action:** Even after the structural issues became evident, prompt legal action against the responsible parties was lacking, highlighting the state's weak enforcement mechanisms.

Consequences

- **Financial Loss:** The flyover, constructed at a cost of c.\$4.2 million (₹47 crore), had to be demolished and reconstructed, leading to additional expenditure. The new flyover cost an additional ₹28.20 crore bringing the total project to \$9 million (₹75.2 crore), and reopened in March 2021, almost 2 years late.
- **Public Inconvenience:** The closure of the flyover caused significant traffic disruptions, affecting daily commuters and local businesses.
- **Erosion of Trust:** Such incidents undermine public confidence in government infrastructure projects and deter potential investors wary of contractual uncertainties.

Implications

The Palarivattom Flyover case underscores the critical need for:

- **Robust Contract Enforcement:** Ensuring that contractual obligations are met and deviations are promptly addressed.
- **Transparent Oversight Mechanisms:** Implementing stringent monitoring processes to detect and rectify issues in real-time.
- **Accountability:** Holding all stakeholders, including contractors and supervising officials, accountable for lapses.



3. Solutions: From Capital Gap to Capital Magnet

Targeted Recommendations for Unlocking Infrastructure Investment in India

India's infrastructure financing challenge is not one of capital scarcity but of capital alignment. To translate global appetite into deployable capital, all actors from the public, private, domestic and international must adapt. The following stakeholder-specific playbook outlines concrete measures, supported by international best practices and investor logic.

3.1. Government of India (GoI): Architecting Macro Credibility

To attract long-term institutional capital, especially from pension funds, sovereign wealth funds and insurance companies, a credit enhancement mechanism is critical to mitigate perceived risk in India's infrastructure pipeline.

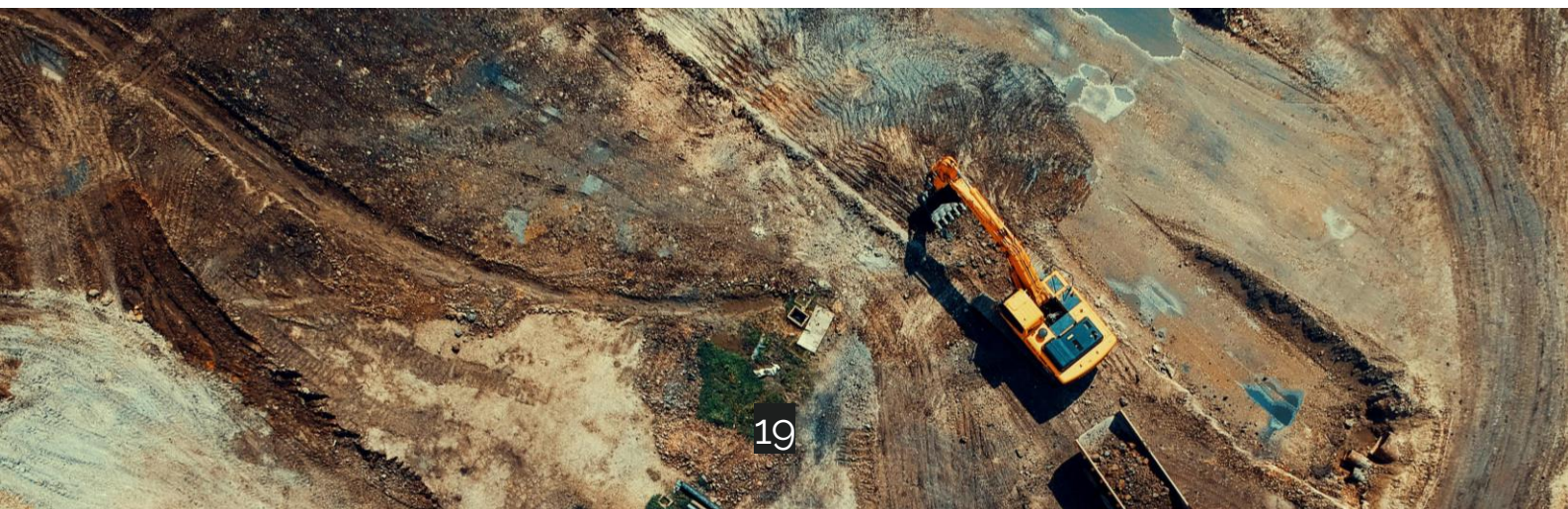
We recommend the creation of a sovereign-backed infrastructure credit enhancement facility, jointly supported by the Reserve Bank of India (RBI) and the Ministry of Finance (MoF).

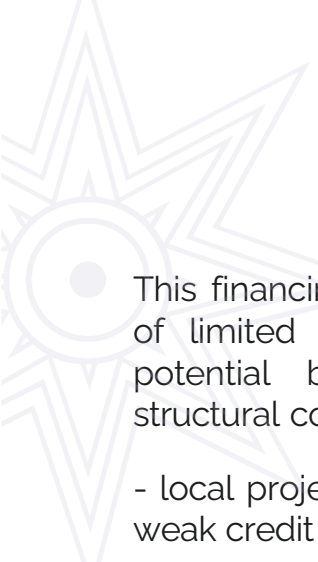
This facility would offer partial credit guarantees (PCGs) or first-loss coverage for select infrastructure projects, particularly in tier-2 and tier-3 cities, where the risk premium is currently prohibitive. These guarantees reduce the effective risk profile of infrastructure debt, enabling:

1. Lower cost of capital
2. Longer debt tenors
3. Improved investor confidence in project viability

3.1.1. Why This Matters

While India has been successful in attracting private and foreign investment into flagship metro rail and solar energy projects in major cities, critical sectors such as urban mobility, sanitation, logistics, and digital infrastructure in second-tier cities remain significantly underfunded.





This financing gap is not a reflection of limited demand or low growth potential but rather stems from structural constraints:

- local project developers often carry weak credit ratings;
- municipal and parastatal entities lack the balance sheet strength to raise capital independently;
- and there is a shortage of long-term, non-recourse debt.

Introducing a sovereign credit enhancement mechanism can help bridge this gap, crowding in private capital by mitigating risk, without placing the full financing burden on public institutions.

3.1.2 International Precedent: The ASEAN CGIF Model

India can learn from the Credit Guarantee and Investment Facility (CGIF), a successful regional initiative in Southeast Asia. CGIF is a multilateral guarantee facility established by:

- Asian Development Bank (ADB): A regional development bank headquartered in Manila, Philippines, that provides loans, technical assistance, and equity investments to promote social and economic development in Asia.
- ASEAN+3 governments: The 10 ASEAN nations plus China, Japan, and South Korea.

CGIF provides guarantees for local currency bonds issued by corporates and infrastructure developers in emerging Asian markets, helping them tap capital markets at lower yields and longer maturities. Its model has unlocked billions in infrastructure capital that would otherwise not have flowed into riskier jurisdictions.

Key characteristics include:

- Capitalisation by member countries and ADB
- Independent credit assessment teams
- Limited, time-bound guarantees to crowd in rather than crowd out private lenders

3.1.3 India's Opportunity

A similar India-specific facility could be:

- Co-capitalised by the RBI, MoF, NIIF (National Investment and Infrastructure Fund), and interested bilateral partners such as Japan (via JBIC) or the UAE (via Mubadala)
- Managed through an independent, professionally governed entity
- Focused exclusively on infrastructure sectors where bankability remains low despite high developmental impact: e.g., water treatment plants, freight corridors, and city bus electrification



This mechanism would send a strong market signal of state-backed credit discipline and crowd-in rather than crowd-out capital. It would also make Indian project finance structures more attractive to international insurance funds and pension boards, who require investment-grade structures for compliance and fiduciary reasons.

3.1.4 Prioritise Dispute Resolution Reform through a National Infrastructure Tribunal

One of the most persistent deterrents to long-term infrastructure investment in India is the prolonged and unpredictable nature of dispute resolution. Contractual disagreements, ranging from payment delays and performance penalties to regulatory changes and termination claims can take years to resolve, with many cases languishing in generalist civil courts or under-resourced arbitration forums.

This is not just a legal bottleneck, it is a capital allocation inhibitor. Infrastructure funds with strict timelines, return profiles and fiduciary duties often avoid Indian opportunities not because of underlying risk, but because of resolution opacity. Delays erode returns, block exits and reduce investor confidence.

3.1.5 The Case for a National Infrastructure Tribunal (NIT)

India urgently needs a specialised, fast-track judicial body: a National Infrastructure Tribunal (NIT) to handle infrastructure-related disputes across sectors such as transport, energy, logistics, digital infrastructure and urban development. Such a body would:

1. Be staffed with judges and technical experts trained in infrastructure, contracts and public finance
2. Operate on statutory time limits for case disposal (e.g., 90 to 180 days)





3. Accept cases from both private developers and public authorities, including state SPVs and nodal ministries

4. Create public case databases and jurisprudence for transparency and precedent-setting

This tribunal could either be:

- A. A standalone new body under the Ministry of Law and Justice, or
- B. A dedicated bench within the existing National Company Law Tribunal (NCLT) or Commercial Courts, with amended jurisdiction

3.1.6 Global Benchmark: The UK's Technology & Construction Court (TCC)

The UK's Technology and Construction Court (TCC) offers a powerful precedent. It is part of the King's Bench Division of the High Court and has built credibility over decades by handling complex engineering, construction and procurement disputes with:

- Specialist judges drawn from commercial, construction and technical backgrounds
- Procedural discipline with early case management and technology-enabled hearings
- Confidence from the investor community due to its speed, professionalism and consistency


India can adapt this model, with digital filing, regional benches and integration into public-private partnership contracts to offer pre-agreed dispute resolution pathways.

3.1.7 Strategic Impact & Benefits

The establishment of a specialised dispute resolution mechanism enhances predictability and contract enforcement, particularly in Public-Private Partnership (PPP) and Engineering, Procurement and Construction (EPC) frameworks. It would contribute to improving India's position on the World Bank's Contract Enforcement Index, where delays in judicial resolution remain a significant bottleneck. More importantly, it sends a clear market signal to global infrastructure investors that India is committed to strengthening legal certainty and investor protection. By accelerating arbitration and adjudication, such a mechanism also de-risks complex project finance structures, where delays in dispute resolution can obstruct payouts, disrupt cash flows, and block access to refinancing, undermining the financial viability of even well-structured projects.

3.1.8 Recommended Immediate Steps

To catalyse effective dispute resolution reform, the Ministry of Law and Justice should issue a white paper and initiate formal stakeholder consultations to build consensus on the structure, jurisdiction, and operational mandate of a National Infrastructure Tribunal (NIT). In parallel, NITI Aayog or the Department of Economic Affairs (DEA) should commission a comparative study to benchmark dispute resolution timelines across infrastructure sectors and states, identifying systemic delays and best practices.



Model Concession Agreements (MCAs) should be updated to incorporate default referral clauses to the NIT, ensuring uniformity and reducing arbitration uncertainty. Finally, development partners such as the Asian Development Bank (ADB), World Bank, and Asian Infrastructure Investment Bank (AIIB) should be invited to co-develop the Tribunal's digital infrastructure and provide targeted capacity-building to ensure speed, sectoral expertise, and global credibility.

3.1.9 Expand NIIF into a Multi-Thematic Infrastructure Sovereign Fund

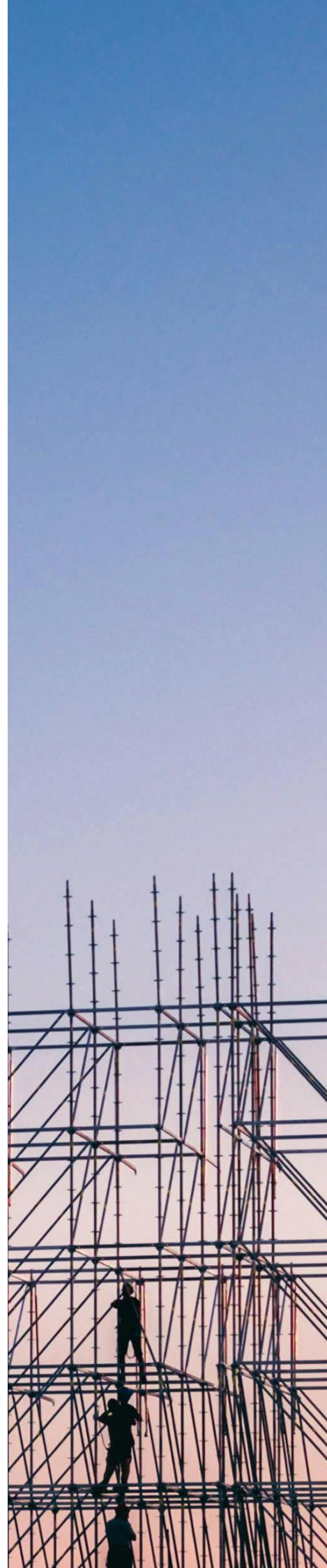
India's infrastructure ambitions require not only capital, but well-structured capital platforms that can absorb, manage, and multiply investor trust across sectors and regions. The National Investment and Infrastructure Fund (NIIF): India's sovereign-anchored fund has made a strong start, but remains too narrow in scope, limited in thematic diversity, and insufficiently catalytic in its current form.

We propose that the Government of India expand NIIF into a multi-thematic infrastructure sovereign fund, structured around specialised verticals, each with dedicated international co-investors, performance KPIs and governance boards.

3.1.10 What is NIIF?

Established in 2015, the National Investment and Infrastructure Fund (NIIF) serves as India's quasi-sovereign wealth fund, designed to attract long-term institutional capital into the country's infrastructure and strategic sectors. NIIF currently manages approximately \$4.9 billion across three vehicles:

- A. the Master Fund, which focuses on direct equity investments in infrastructure platforms such as roads and renewable energy;
- B. the Fund of Funds, which invests in third-party managed funds with sectoral expertise;
- C. and the Strategic Opportunities Fund, which provides growth equity to high-impact sectors including logistics, financial services, and digital infrastructure.





Its capital base is backed by marquee global investors, including the Abu Dhabi Investment Authority (ADIA), Temasek Holdings, and the Canada Pension Plan Investment Board (CPPIB), positioning NIIF as a key anchor for global capital mobilisation in India's development story.

3.1.11. What's Missing?

While NIIF has done well in forming platforms (e.g. Ayana Renewable Power, Aseem Infrastructure Finance), its operations remain centralised, slow to deploy and not structured thematically. Moreover:

- Greenfield urban infrastructure and social infrastructure (schools, healthcare, water) remain underrepresented.
- Tier-2 city infrastructure and state-level project vehicles struggle to access NIIF capital due to project readiness constraints and risk appetite gaps.
- Its investment corpus of \$4.9 billion is less than 3% of what India needs annually to meet infrastructure investment goals.

3.1.12. Global Inspiration

Sovereign-backed platforms globally have adopted multi-thematic architectures to scale and specialise, for example:

- Indonesia Investment Authority (INA) has sector-specific sub-funds co-invested with GIC (Singapore), ADIA, and APG (Netherlands).

- Saudi Arabia's PIF has 13 verticals, each focused on a national or strategic priority—from logistics to entertainment infrastructure.
- UK's Infrastructure Bank channels capital toward net zero and levelling-up objectives via regional and sectoral windows.

3.1.13. Proposed Model for NIIF Expansion

We recommend NIIF be restructured to include five distinct thematic verticals, each with its own Board, capital commitments, and project pipeline:

1. Urban Infrastructure & Mobility Fund
Targeting metros, e-bus fleets, transit-oriented development in cities.
2. Green & Resilient Infrastructure Fund
Focused on renewable energy, EV charging networks, flood/water infra, nature-based solutions.
3. Digital Public Infrastructure Fund
Funding data centres, fibre rollouts, GovTech platforms, and smart cities.
4. Logistics & Industrial Corridors Fund
Dedicated to multi-modal hubs, freight highways, inland waterways, and port-linked SEZs.
5. State Partnership Windows
Ring-fenced pools for states with good infra project pipelines (e.g. Tamil Nadu, Gujarat, Karnataka), matching funding for shovel-ready PPPs.



Each vertical can be:

1. Co-capitalised by foreign institutional partners (e.g. JBIC, GIC, EIB)
2. Professionally staffed with sector experts
3. Tied to performance-based incentives and ESG scoring

3.1.14 Why This Matters

- Builds investor confidence through sectoral specialisation
- Reduces time-to-capital for state and city-level project SPVs
- Encourages global co-investment in less obvious but critical sectors like water and urban waste
- Makes NIIF a visible engine for India's infrastructure diplomacy, like how Saudi Arabia uses PIF or China deploys the Silk Road Fund

3.1.15 Implementation Pathway

- A Cabinet-level decision to authorise expansion and reconstitution of the NIIF Trust
- Integration with Gati Shakti and India Investment Grid for pipeline alignment Negotiated co-anchor commitments from bilateral partners (e.g. UAE, Japan, Singapore)
- Professionalisation of each vertical with separate CIOs and project prep teams

3.1.16 Final Thought

If India is to absorb \$200–250 billion per year in infrastructure capital, NIIF must evolve from a proof-of-concept fund, into a platform of platforms, which is targeted, trusted, and transformational.

3.2 State Governments: Execution is Everything


India needs to adopt a “Project Readiness Framework” across all infrastructure departments. One of the most overlooked obstacles to unlocking infrastructure finance in India is the poor project preparation ecosystem. This is a systemic failure that leads to:

- Delays in financial closure
- Unresponsive procurement cycles
- Poor-quality DPRs (Detailed Project Reports)
- Unbankable projects entering the market prematurely

To address this, state governments, particularly their urban, transport, water, and housing departments should adopt a unified “Project Readiness Framework”, aligned with global best practices and tailored to Indian institutional realities.

3.2.1 Global Inspiration: South Korea's PIMAC Model

South Korea's PIMAC: Pre-Investment Management Advisory and Consulting, has long been recognised as a gold standard for infrastructure project screening..



Established by the Korean Development Institute (KDI), PIMAC operates as an independent body that reviews, refines and rates all major public infrastructure projects before they can be tendered or funded. Key features include:


- Economic feasibility studies (cost-benefit analysis, IRR thresholds),
- Demand forecasting and social impact evaluations,
- Stakeholder mapping and risk identification,
- Advice on financing structure (PPP vs. EPC vs. annuity),
- Institutional capacity assessments.

This rigorous early-stage screening ensures that only viable, financeable projects enter the pipeline, saving time, public resources and investor bandwidth.

3.2.2 The Problem in India

Most Indian infrastructure projects, especially at the state and municipal levels, suffer from:

1. Incomplete land acquisition and resettlement planning
2. Weak inter-departmental coordination (e.g. between environment, roads, and urban bodies)
3. DPRs prepared without demand-side data or risk analysis,
4. Inadequate documentation, legal clarity and clearances,
5. Limited consultation with downstream stakeholders (local communities, financiers, or O&M contractors)



These problems cause cascading delays, increased cost of capital, and investor reluctance. According to the Ministry of Statistics and Programme Implementation (MoSPI), as of 2024, over 500 central infrastructure projects were delayed, with average overruns exceeding 30% in cost and 18 months in time.

3.2.3 What the Framework Should Include

The proposed Project Readiness Framework (PRF), coordinated by NITI Aayog and adopted across states, should include:

Screening Checklist (aligned to investor needs):

- A. Demand forecast and user-pays viability
- B. Cost-benefit analysis and IRR > 10%
- C. Social and environmental impact pre-assessment

Land & Legal Readiness Index:

- A. % of land acquired
- B. Status of encumbrance clearance
- C. Extent of R&R (resettlement & rehabilitation) completion

Financial Structuring Viability:

- A. Appraisal of likely PPP structure (e.g. Hybrid Annuity, Toll-Operate-Transfer)
- B. Fit with existing sectoral fiscal constraints
- C. Debt-serviceability benchmarks for ULBs or SPVs

Stakeholder Mapping & Consultation:

- A. Identification of project-affected communities, local businesses
- B. Financial and development partners consulted (e.g. NIIF, multilateral banks)
- C. Independent value-for-money and legal compliance review

Digital Transparency & Pipeline Monitoring:

- A. Real-time tracking via the Gati Shakti portal
- B. Integration with the India Investment Grid
- C. Public project readiness score published quarterly



3.2.4 Potential Impact

If adopted rigorously, a PRF could:

1. Improve bankability of over 60% of subnational infrastructure projects
2. Cut pre-bid delays by 40%, reducing cost overruns and project stalling
3. Create a credible pipeline that international investors and multilateral institutions can underwrite against

3.2.5 Implementation Pathway

Here is a five-step process that could be taken:

1. NITI Aayog and DEA (Department of Economic Affairs) issue model guidelines
2. Pilot PRFs in 3 to 5 high-capacity states (e.g. Maharashtra, Tamil Nadu, Gujarat)
3. Establish a Project Readiness Cell in each state's infrastructure department
4. Partner with global knowledge agencies (e.g. KDI, World Bank's INFRA program, ADB)
5. Offer performance-linked capital support to states with PRF-compliant projects

India doesn't lack capital. It lacks investable projects. A structured, transparent and institutionalised Project Readiness Framework is the fastest, most cost-effective way to fix the first mile of infrastructure investment.

3.3.1 Create State-Level Infrastructure Facilitation Cells

Another adjacent recommendation is State governments can establish dedicated Infrastructure Facilitation Cells (IFCs) within their departments of finance or planning to serve as single-window hubs for infrastructure investors and developers.

These IFCs should be empowered to:

- Fast-track project-level clearances (land, environment, utilities, etc.) by coordinating across state agencies
- Liaise directly with central ministries and regulators, especially the Ministry of Environment, Forest and Climate Change (MoEFCC), to resolve bottlenecks
- Monitor contract enforcement KPIs, such as time taken to sign concession agreements, release annuity payments, or resolve disputes
- Maintain a dashboard of infrastructure project health and investor red flags to provide visibility and credibility to external stakeholders

States like Gujarat (via iNDEXTb) and Tamil Nadu (via Guidance TN) have already pioneered such models with measurable success in improving investor response times, reducing red tape and attracting high-quality FDI into sectors like logistics, EV infrastructure and renewable energy.

Scaling this approach nationally would create a federated network of infrastructure support platforms, enabling India to meet its infrastructure targets with greater speed, transparency and investor trust.

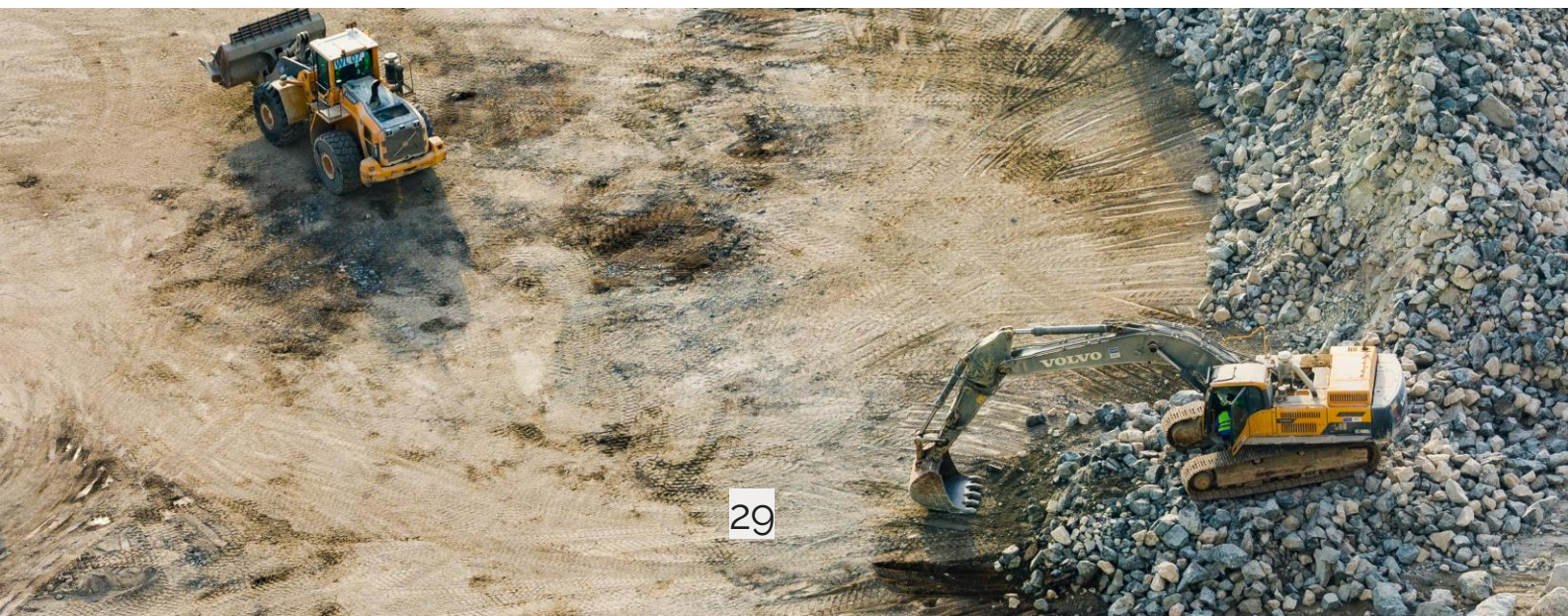
3.3.2 Institutionalise Fiscal Discipline and Off-Balance Sheet Transparency


As part of the PRF, in order to build trust with global investors and credit-rating agencies, state governments must embed fiscal discipline into infrastructure planning, particularly around borrowing practices and contingent liabilities.

States should be required to:

- Maintain fiscal risk dashboards that track public debt, guarantees, annuity payment obligations and liabilities from SPVs (Special Purpose Vehicles)
- Publicly disclose off-balance sheet infrastructure commitments (e.g. viability gap funding, power purchase obligations, PPP guarantees), ideally in a standardised format
- Undergo independent fiscal risk assessments by credit rating agencies or audit institutions—like the frameworks used by Chile and South Africa

This transparency gives investment committees the data confidence they need to differentiate between high and low risk subnational borrowers. Over time, this also incentivises fiscal prudence at the state level and makes blended finance more viable for long-gestation infrastructure.





Category	Metric	Reporting Frequency	Disclosure Format
Public Debt Exposure	Total Outstanding Debt (₹)	Quarterly	Summary + full annex
	Debt-to-GSDP Ratio (%)	Quarterly	Graph + trendline
	Debt Maturity Profile (0–5/5–10/10+ years)	Semi-annual	Histogram
	Interest Coverage Ratio	Annual	KPI panel
Off-Balance Sheet Liabilities	Contingent Liabilities (e.g. guarantees to SPVs, utilities)	Annual	Note disclosure
	Viability Gap Funding (VGF) obligations by sector	Annual	Sector-wise breakdown
	Power Purchase Agreements (PPAs) & Minimum Revenue Guarantees (MRGs)	Semi-annual	Contract list w/ exposure
	Pension and health benefit liabilities (if applicable)	Annual	Actuarial summary
PPP Exposure	Total PPP Projects Active	Quarterly	Table by sector/location
	Aggregate Annuity Payment Obligations (next 10 years)	Annual	Waterfall chart
	% of PPP contracts with delayed payments or under arbitration	Quarterly	Heat map
Project Performance Risk	No. of stalled or significantly delayed infrastructure projects	Quarterly	Progress traffic light
	Cost Overrun Index (% over original estimate)	Quarterly	Sector-wise trend
Transparency & Governance	Independent Audit Status of Infra SPVs	Annual	Compliance checklist
	Rating Status (by CRISIL/ICRA/CARE) of all state infra borrowing entities	Quarterly	Dashboard of ratings

Table 1: Build State-level metrics and presentation format



3.3.4 Mandate Public Disclosure of Arbitration Timelines and Compliance

India's infrastructure sector is plagued by prolonged and opaque dispute resolution, particularly in PPP contracts. Investors often lack visibility on whether awards are honoured, how long disputes take, and which jurisdictions are more prone to breach.

Our recommendations:

- As part of the transparency drive, India can create a National Infrastructure Dispute Dashboard, housed under NITI Aayog or DEA, listing:
 - Number of ongoing disputes (by sector and state),
 - Average arbitration duration,
 - Compliance rates with arbitration awards,
 - Status of post-award enforcement (including court challenges).
- Require regulators (e.g. NHAI, SECI, ULBs) to submit quarterly updates on contract compliance and dispute resolution to the dashboard.

- Rank states and nodal agencies based on their enforcement culture, using KPIs like time-to-settlement, % of awards honoured within 6 months, and % of cases escalated to court.

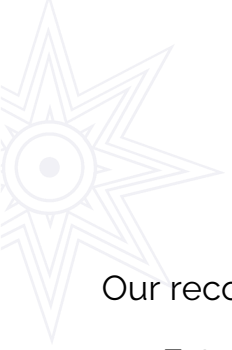
3.3.5 Why it matters

This acts as a reputational pressure mechanism and a signal to investment committees, who typically penalise jurisdictions with opaque legal risks. A transparent enforcement map can help investors price risk more accurately and may reward high-performing states with cheaper capital.

A very good benchmark for India would be the World Bank's Benchmarking Infrastructure Development framework emphasises dispute disclosure as a critical investment climate indicator.

3.3.6 Harmonise land and environmental approval processes digitally

In India, land acquisition, forest clearance and environmental permissions are fragmented across ministries, states, and legacy databases, causing average delays of 18 to 36 months. Traditionally this is one of the biggest reasons for stalled infrastructure projects.



Our recommendations:

- Extend the capabilities of the PM Gati Shakti National Master Plan portal to act as a Unified Clearance Dashboard (UCD)
- Integrate data and processing workflows from:
 - MoEFCC's Parivesh portal (environmental clearances)
 - Ministry of Rural Development's Bhuvan and Bhoomi portals (land records)
 - State-level GIS and urban development authorities
- All project approvals should be geo-tagged, timestamped, and tracked in real time across levels of government
- Introduce a Single Reference Number (SRN) for every infrastructure project clearance to allow centralised tracking, accountability and escalation

3.3.7 Impact

A streamlined project development framework accelerates project preparation and readiness, ensuring that proposals reach financial close more quickly and with greater clarity. It also enhances the quality of investor due diligence by providing standardised, transparent data on risk allocation, approvals, and financial viability. Critically, such a framework reduces inter-departmental blame-shifting and slippage, by clearly assigning responsibilities and timelines across government stakeholders, minimising bureaucratic friction and improving accountability.



4. Aligning Capital with Indian Compatibility

4.1 Anchor capital through platform strategies, not just projects

One-off project investments in Indian infrastructure often struggle with execution risk, weak inter-agency coordination or political disruption. In contrast, platform-based investing offers foreign infrastructure funds a more resilient and scalable model of engagement.

4.1.1 What Is a Platform Strategy?

Instead of investing in a single asset (e.g. one toll road or one solar plant), investors commit to an operating platform, which is a professionally managed entity with:

1. A multi-asset pipeline
2. On-ground execution capability
3. Built-in regulatory navigation
4. Governance aligned to global compliance standards

These platforms own, operate and expand infrastructure assets across a sector or region, giving investors exposure to scale, diversification, and long-term value creation.


4.1.2 Examples of successful foreign-backed platforms:

- Macquarie: India's largest foreign road operator, with an expanding portfolio via the National Highways Authority's (NHAI) Toll-Operate-Transfer (TOT) model and InvITs
- Brookfield: Invested over \$15 billion across Indian real estate, renewable energy, telecom infrastructure and logistics via integrated platforms with in-house operating teams
- CDPQ and Temasek: Partnered in renewable and transmission platforms with companies like ReNew and Greenko

4.1.3 Why it works

Platform-based investing offers several strategic advantages for infrastructure capital. First, it reduces headline risk, as diversified platforms are better positioned to absorb localised regulatory or operational disruptions than standalone Special Purpose Vehicles (SPVs).

Second, it enhances operating leverage by enabling shared technical, legal, and compliance functions across assets therefore, significantly lowering per-asset management costs.



Finally, platform investors typically benefit from greater strategic influence, often securing board representation, co-control rights, and a direct role in shaping ESG strategy and engaging with policy stakeholders which, are all advantages rarely available through passive asset-level investments.

4.1.4 Our recommendation:

Foreign infrastructure funds entering or expanding in India should seek to co-anchor or co-create platforms in core sectors such as:

- Urban logistics
- EV charging networks
- Water and sanitation
- Mid-sized ports and rail freight corridors

These platforms may also receive priority engagement from sovereign actors, including NIIF, Gati Shakti nodal agencies and state PPP units.

4.2 Underwrite Risk Using “Three Centuries Thinking”

India's infrastructure risk is too often assessed through monolithic label such as “emerging market”, “frontier market”, or “BBB sovereign”, which obscure the nuances of its internal diversity.

To guide investors and risk committees toward better capital decisions, the International Centre for Sustainability (ICfS) proposes a new lens: the “Three Centuries Model”.

The Three Centuries Model recognises that India is not one market but three. There is the 19th, 20th, and 21st century economies coexisting across regions and sectors. For investment committees, this model provides a granular, ground-up framework to assess risk and opportunity based on institutional maturity, policy reliability, and execution capacity, rather than relying on outdated, top-down country labels.

19th-century India:

Typically found in rural belts, interior states, and low-capacity municipalities. These areas are marked by weak contract enforcement, underdeveloped local institutions, and inadequate last-mile infrastructure. In these contexts, private capital must be underwritten by grant-based development finance, sovereign-backed guarantees, or blended structures that absorb early-stage risk and build foundational capacity for future investment.

20th-century India:

Spanning tier-2 cities, industrial corridors, and port-linked economies, it represents the urban-industrial core where institutions are functional but still maturing. While offering strong demand fundamentals, these areas remain vulnerable to bureaucratic friction, sporadic rent-seeking, and political volatility. Here, risk is moderate and best mitigated through platform-based partnerships, structured guarantees, and active government facilitation to navigate policy and operational complexity.

21st-century India:

Seen in metropolises like Mumbai, Bengaluru, Hyderabad, Delhi NCR, and in globally integrated sectors such as renewables, digital infrastructure, and fintech. This India showcases world-class execution, contract reliability, and rapid innovation uptake (e.g., UPI, FASTag, India Stack). These environments offer relatively low-grade risk, comparable to parts of Eastern Europe, and typically require no additional de-risking beyond standard emerging-market protocols, making them immediately investible for institutional capital.

4.2.1 Why it matters for Investors:

1. This framework allows granular risk pricing across geography, sector and governance maturity
2. It enables differentiated hurdle rates within one country, improving capital allocation accuracy
3. It reframes India from being a "yes/no" proposition to a "where/what/how" strategic thesis

An illustration that helps drive the point home could be a 500 MW solar project in Gujarat's REZ (Renewable Energy Zone) with clear tariff indexation should not carry the same risk discount rate as a PPP bus terminal in Bihar's capital city. Bihar is a state that is still largely 19th century. The 3-centuries model demonstrates that although Gujarat still has large pockets characteristic of 19th century India, other areas are quickly developing from the 20th century model to a 21st century." The model considers not only the socio-economic landscape, but also the legal, environmental, cultural and religious factors too.

4.2.2 What next

The ICfS in London is currently leading a multi-stakeholder research project to formalise the Three Centuries Model for investment underwriting. This includes:

- Developing a geo-sectoral risk scoring framework
- Piloting state and corridor-level readiness indices
- Partnering with global asset managers, development banks and legal scholars

The output will be a publicly available investment guidance toolkit by 2026, enabling investment committees to make better-informed decisions aligned to India's evolving realities.



5. Investment Committees: Rethinking the Risk Lens

5.1 Move from country risk to project-type risk

One of the most persistent barriers to capital deployment in Indian infrastructure is the over-application of sovereign or country-wide risk premiums by global investment committees.

Many funds, especially those bound by traditional internal models assign a uniform IRR threshold or hurdle rate to all Indian projects, regardless of the project's geography, sector, regulatory maturity, or revenue model.

Why this is flawed:


- It penalises low-risk, well-regulated subsectors (e.g. solar in Rajasthan, EV infra in Gujarat)
- It discourages investment in high-need, high-impact sectors (e.g. sanitation, city-level logistics) even when those projects are fully de-risked through blended finance

5.1.1 **Our** **recommendation**

Investment committees must adopt granular, project-type risk stratification, aligned with:

- Sectoral precedents of tariff stability, dispute resolution and ESG governance,
- State-level enforcement scores and fiscal health (as per proposed ICfS State Infrastructure Risk Index),



- 
- Nature of revenue models (availability payments vs. tolls vs. annuity vs. hybrid PPPs). In other words, ICs need to adjust risk profiles based on what revenue model is being used in a specific project, which in turn is incubated in the context of the 3-centuries framework.

5.1.2 An illustration

A solar park in Rajasthan backed by SECI (Solar Energy Corporation of India) with a 25-year PPA and dollar-linked tariffs carries fundamentally less risk than a logistics park in a northeastern state with volatile road access and no performance guarantees. Yet both are often priced using the same 18–20% IRR benchmark.

5.1.3 Our proposal

Institutional investors should adopt a tiered risk grid for India, grounded in the Three Centuries Model (see section 4.2), enabling capital allocation decisions to be made not by generic sovereign labels but by specific combinations of state capacity, sectoral maturity, and project structure, as well as taking into account education levels, environmental factors, rule of law and levels transparency.

Rather than demanding perfect policy continuity, investors must recognise that predictability, not perfection is the true asset in a democratic and fast-evolving economy like India. Judging India by its occasional regulatory shifts, rather than its long-term directional consistency, risks overlooking some of the most investible infrastructure opportunities in the Global South.

5.1.4 Where India performs well:

- 1.The renewable energy sector has seen consistent central policy backing, honouring of legacy PPAs, and relatively stable dispute outcomes
- 2.Digital public infrastructure, including fibre rollouts, data centres, and India Stack adoption, is backed by bipartisan consensus and low policy volatility
- 3.National highways and expressways operate under mature concession frameworks (e.g. Hybrid Annuity Model), with NHAI acting as a credible counterparty

5.1.5 What Investors should do:

Institutional investors should adopt a "sector-and state-sensitive" approach to policy risk by using historical policy consistency and contract enforcement records as forward indicators, rather than relying solely on macro-level risk ratings. They should prioritise jurisdictions with a demonstrated track record of translating policy into on-ground compliance, even in politically dynamic regions.



Rather than waiting for perfect reform, investors can deploy adaptive structuring tools such as step-in rights, inflation or FX-linked indexation clauses, and multilateral political risk insurance (e.g. from MIGA), to manage risk within existing frameworks.


Major global infrastructure investors like Actis and Global Infrastructure Partners (GIP) have successfully invested in India's power and transport sectors, leveraging long-term sectoral consistency and policy resilience to achieve strong returns, despite operating in environments where broader governance remains imperfect.

5.2 Incorporate ESG-Plus metrics

As ESG becomes a mainstream criterion for infrastructure investing, many institutional investors still reduce it to a carbon footprint calculation while missing governance, compliance and social risk factors that are especially relevant in India.

What ESG-Plus should include:

1. Environmental, not just carbon, but:
 - Water stress impact
 - Local biodiversity exposure (e.g. flamingo corridors)
 - Long-term climate vulnerability (e.g. flood zones in Assam, drought risk in Bundelkhand)



2. Social License to operate, including:

- Land acquisition footprint and dispute status
- Community consultation records
- Labour rights and gender inclusion in infrastructure operations

3. Governance is a critical missing piece in India:

- Contract compliance history
- Arbitration track record
- Clarity of reporting and audit quality of SPVs

5.2.1 What we are doing:

The ICfS is developing an “Infrastructure ESG-Plus India Index”, due in 2026, which will

- Score projects and SPVs on multidimensional ESG-Plus metrics
- Provide state-and sector-level benchmarking tools for fund managers
- Integrate with Gati Shakti, the National Investment Grid, and investor due diligence pipelines

5.2.2 Why It Matters:

ESG-Plus scoring improves risk-adjusted return visibility, increases access to green and blended capital, and helps align infrastructure portfolios with SDG fund mandates.





6. Currency Risk: The Hidden Drag-on Returns

6.1. Recognise currency depreciation as a systemic risk, not a market anomaly

For foreign investors, particularly those with dollar or euro liabilities, India's infrastructure story is often undermined by a persistent, underpriced risk: the Rupee itself.

Despite healthy operational metrics and sound fundamentals in many sectors, INR depreciation erodes returns when converted back to hard currencies. This creates a disconnect between asset performance and investor outcomes, especially for long-gestation projects like roads, urban utilities, and social infrastructure, which lack natural hedges or dollar-linked revenue.

6.2. Why this matters:

- The INR has depreciated against the USD by ~3.9% per annum over the past two decades (RBI, 2024). This creates compounded losses of over 35% in dollar terms over a typical 10-year holding period, even for well-performing assets.

- According to the World Bank (2021), the lack of long-term hedging tools or risk-sharing mechanisms adds 5–7% to infrastructure project costs in emerging markets like India, effectively pricing out risk-averse capital.
- In FY23, over \$13 billion of infrastructure-related FDI flowed into India (DPIIT), but was heavily skewed toward short-payback, FX-linked assets (e.g., data centres, solar parks with dollar PPAs), while core sectors like water, roads, and rail remain underfunded.

6.3. The Core Problem:

India does not yet offer affordable, long-tenor hedging solutions. Most currency hedging instruments in India (via RBI or commercial banks) max out at 3 to 5 years and are prohibitively expensive, especially for infra investors with 15 to 25 year horizons. As a result, many investors “go naked” on currency risk—or avoid INR-exposed projects entirely.

6.4. Our recommendation:

Institutional investors and credit committees must internalise INR depreciation as a systematic risk that requires proactive mitigation, not passive tolerance.



Where possible, FX exposures should be:

- Backed by indexed revenue models (e.g. hybrid annuity with inflation-linked adjustments),
- Structured through concessional finance blended with DFI guarantees (e.g. US DFC, MIGA), or
- Offset through natural hedging in revenue (e.g. FX-linked tariffs in SECI solar PPAs).

6.5 An illustration

A 25-year SECI-backed solar plant in Rajasthan may offer USD-linked tariffs and a counterparty guarantee from a central PSU. In contrast, an identically sized water treatment plant in Madhya Pradesh, despite social impact and cost recovery via municipal annuity exposes the investor fully to INR depreciation with no offset.

Yet both are often benchmarked to the same internal hurdle rate and IRR model. This leads to capital misallocation.

6.6 Our proposal:

Support the creation of a National Currency Risk Mitigation Facility in partnership with the Ministry of Finance, NIIF, and multilateral partners. This facility would:

- Offer long-tenor risk-sharing mechanisms for INR depreciation
- Subsidise hedging for qualifying infrastructure projects (especially climate-aligned)
- Co-invest via blended finance platforms to crowd in institutional debt

The facility could be capitalised initially at \$1–2 billion and pilot-tested across 3–5 infrastructure sectors with varying FX sensitivity.





From Hesitation to High-Conviction Capital

India does not need to become a Western-style investment destination to attract Western-style capital. It must simply become more legible, more credible, and more predictable within its own institutional framework. With coordinated reform and a deeper understanding of how infrastructure risk should be measured and rewarded, India can become one of the most dynamic capital magnets in the Global South.

India's infrastructure story is not just a developmental imperative; it is one of the world's most significant long-term investment opportunities. With its demographic weight, political stability and reform momentum, India offers investors the rare combination of scale and durability.

But unlocking this opportunity requires a shift, from viewing India through the lens of macro-level country risk, to understanding it as a multi-speed investment ecosystem where project quality, sector maturity and institutional capacity vary sharply across states and sectors.

This white paper has presented a detailed, stakeholder-specific roadmap to bridge the capital gap from sovereign institutions to state governments, from regulators to investment committees. If adopted, these reforms would not only accelerate infrastructure delivery, but also reduce the cost of capital, improve project bankability, and ensure better alignment between global capital and Indian development priorities.

At the heart of our recommendations is a call for better signalling, better structuring, and better measurement; not perfection, but credibility.

At the International Centre for Sustainability (ICfS), we believe that India can move from underfunded ambition to global infrastructure leadership. We will continue to support this journey through research, policy dialogue and frameworks such as the Three Centuries Model and the forthcoming Infra ESG Plus India Index to help investors think more wisely, and India govern more confidently.

The capital is waiting. The blueprint is clear. Now is the time to build.

International Centre For
Sustainability
Ex Oriente Lux

