

Strengthening Audit Oversight in the Urban Sector and Financing Urban Infrastructure

Case Study Based Training Programme for
Officials of the Comptroller and Auditor
General of India

Indian Institute of Management Mumbai

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What are we discussing today?

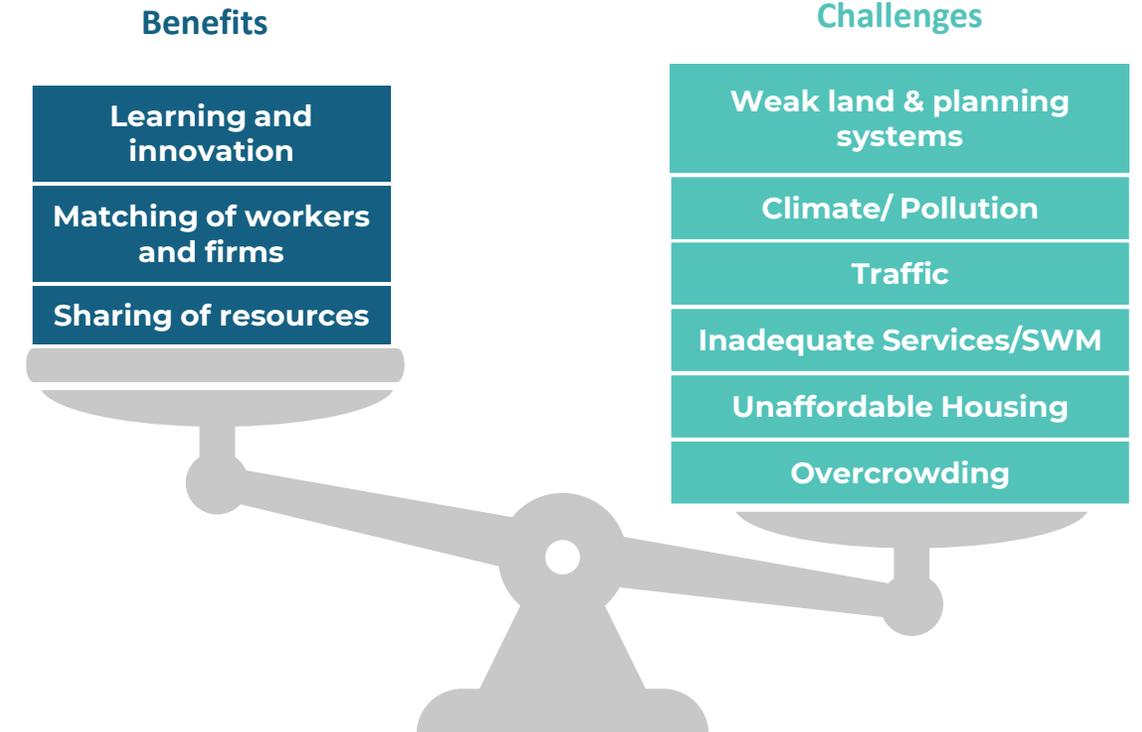
- Urban Context in India
- Why is Urban Infrastructure Financing so Important.
- Sources of Funding and Financing for Urban Local Bodies
- Constraints to Commercial Financing in the Urban Sector
- Municipal Bonds vs. PPPs
- Approaches to PPP
- Case studies and KPIs (service oriented)
- Role of CAG (Key considerations)

URBAN CONTEXT

Why Are Cities Important

- Around 36% of India's population resides in Indian cities. **By 2050, this will increase to 50%.**
- **With 7933 urban settlements,** India has the second largest urban system in the world.
- Cities contribute to an estimated **54% of India's GDP** and **48% of employment generation** (MoSPI: Economic Census, 2013).
- By 2030, **GDP of cities like Mumbai, Bengaluru, Ahmedabad will be comparable** to those of MICs of today.
- But Indian cities **face major challenges** including a depleting natural resource base, inadequate infrastructure, poor service provision and congestion

Benefits vs Challenges of Rapid Urbanization



To enable economic growth and improve livability, investing in and managing the urbanization process is critical: **the financing of the cities is a critical factor**

Yet...functional responsibilities and powers are not fully devolved to cities by states

Article 243W of the Constitution requires the state laws to endow municipal bodies with powers and authorities that enable them to function as the institutions of self-government. The 12th Schedule of the Constitution recommends transferring 18 functions to ULBs.

URBAN PLANNING

**PLANNING FOR
ECONOMIC AND SOCIAL
DEVELOPMENT**

ROADS AND BRIDGES

WATER SUPPLY

SOLID WASTE MGMT

STREETLIGHTS



**PARKS &
RECREATION; PUBLIC
SPACES**

SLUM UPGRADATION

FIRE SERVICE

PUBLIC AMENITIES

Indian cities continue to grapple with multifaceted challenges that limit their ability to perform at their full potential

- Inadequate / poor quality of infrastructure and services
- Congestion
- Poor air quality and pollution
- Unequal resource distribution
- Weak institutions; Indian cities face urban governance issues and have poor implementation and absorptive capacity.

INFRASTRUCTURE NEEDS

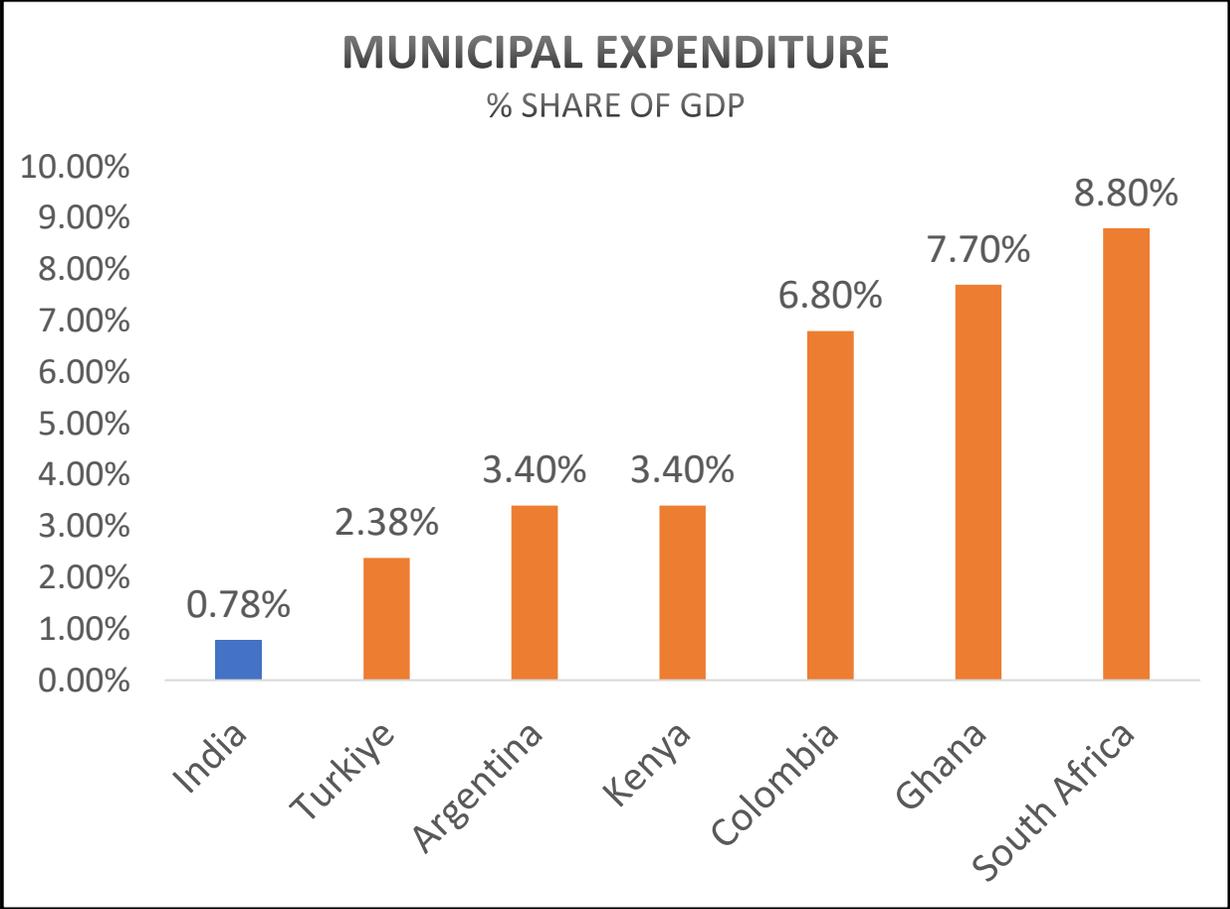
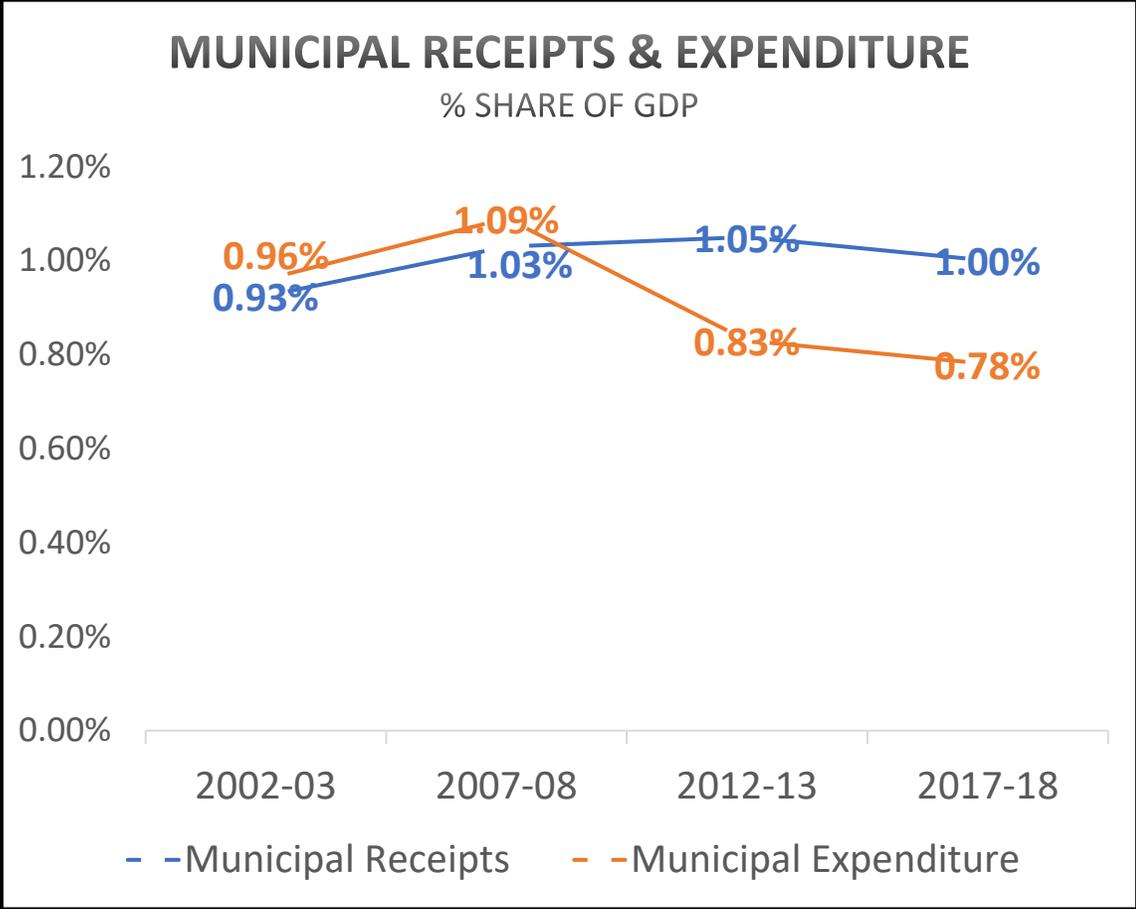
How big are the infrastructure requirements?

Urban investment needs (FY 21 to FY 36) and investment trends (FY 11 to FY 18)

| INR (in Lakh Crore) | Capex needs FY 21-36 (2020 prices) | | | Actual annual capex FY 11-18 - current Prices | | |
|--------------------------|---------------------------------------|---------------|------------------------|--|-------------|------------------|
| | MGI 2010* | HPEC 2011* | Calibrated estimate | FY 11 | FY 18 | Avg. FY 11-18 |
| Basic municipal services | 36.00 | 44.64 | 40.32 | 0.50 | 1.11 | 0.73 |
| Urban transport | 35.73 | 9.63 | 27.54 | 0.09 | 0.37 | 0.22 |
| Others | - | 7.20 | 7.83 | - | - | - |
| Total | 71.73 | 61.47 | 75.69 | 0.59 | 1.48 | 0.95 |
| Share of GDP% | 1.12% | 0.96% | 1.18% | 0.61% | 0.68% | 0.63% |
| INR per capita | 9180 | 7830 | 9720 | 1530 | 3330 | 2340 |

| Items | Value |
|---|-----------------------|
| Total Urban Investment required (FY 21-36) | USD 841 Billion* |
| Total Urban Investment required (FY 21-36) (in Rs) | 75-80 Lakh Crore |
| Average Annual Urban Investment required (FY26-36) | 5-8 Lakh Crore |

India's municipal finance system is constrained by international standards



Snapshot of Property Tax Revenues in Indian States

Table 3

India: Property tax receipts 2017/18 as share of GSDP and per capita of population, various states.

| State | Property tax as share of GSDP |
|----------------|-------------------------------|
| Gujarat | 0.40 % |
| Maharashtra | 0.34 % |
| Karnataka | 0.21 % |
| Telangana | 0.21 % |
| Madhya Pradesh | 0.15 % |
| Tamil Nadu | 0.13 % |
| Andhra Pradesh | 0.12 % |
| West Bengal | 0.12 % |
| Uttar Pradesh | 0.06 % |
| Punjab | 0.05 % |
| Kerala | 0.04 % |
| Uttarakhand | 0.03 % |
| Assam | 0.03 % |
| Odisha | 0.02 % |
| Rajasthan | 0.02 % |
| Haryana | 0.01 % |
| Bihar | 0.01 % |
| India | 0.15 % |

INDIA: 0.15% of GDP

With substantial state variation as %GSDP:

Gujarat 0.4%

Maharashtra 0.33%

Telangana 0.21%

Karnataka 0.20%

Remaining 13 states from 0.01 to 0.15.

**Substantial Potential
for Increase**

Source: State of Municipal Finances in India: A Study prepared for the Fifteenth Finance Commission, ICRIER, 2019.

Role of Property Taxation

| | % of GDP | % of Total General Taxes | % of Total Local Taxes |
|-------------------------|----------|--------------------------|------------------------|
| High-Income Countries | 1.1% | 4.5% | 37.7% |
| Middle-Income Countries | 0.6% | 2.1% | 35.5% |
| Low-Income Countries** | 0.3% | <1% | 15–20% |

Source: Adapted from Norregaard 2013, combined with data from OECD and GFS (2009–10).

** Low-income country data is not systematically available through the GFS statistics, thus estimated from various reports including Kelly 2013a, Bahl and Martinez 2008, Bird and Slack 2004, Franzsen and McCluskey 2017.

Philippines (0.4%) Mexico (0.31%), India (0.17%), Bangladesh (0.16%), Nicaragua (0.13%), Egypt (0.08%), Vietnam (0.04%), Zambia (0.02%)

Substantial Potential for Increase

Source: Kelly, White and Aanchal (2020). Property Tax Diagnostic Manual (World Bank)

For meeting the Viksit Bharat Vision...

- Indian Cities need to be growth drivers and job catalysts
- However, lack of integrated planning, large infrastructure gaps, labor market mismatches, and local regulatory and institutional issues constrain productivity and job growth
- Fixing this requires multiple interventions but most importantly:

PCM { **Bridging infra financing gaps through private capital mobilization (PCM)**
Improving services with enhanced institutional capabilities

JOBS { **Addressing major planning, institutional and infrastructure constraints to foster an enabling local business environment, enhancing urban livability and realizing the economic potential of cities.**

Focus on Commercial Financing by the Government of India: Urban Challenge Fund (UCF)

July Budget Statement FY 24-25

Cities as Growth Hubs

64. "Working with states, our government will facilitate development of 'Cities as Growth Hubs'. This will be achieved through **economic and transit planning**, and **orderly development of peri-urban areas** utilizing **town planning schemes**."

Creative redevelopment of cities

65. "For creative brownfield redevelopment of existing cities with a transformative impact, our government will formulate a framework for **enabling policies, market-based mechanisms and regulation**."

Water Supply and Sanitation

69. "In partnership with the State Governments and Multilateral Development Banks we will promote **water supply, sewage treatment and solid waste management** projects and services for **100 large cities** through **bankable projects**"

Union Budget Announcement 2025/26

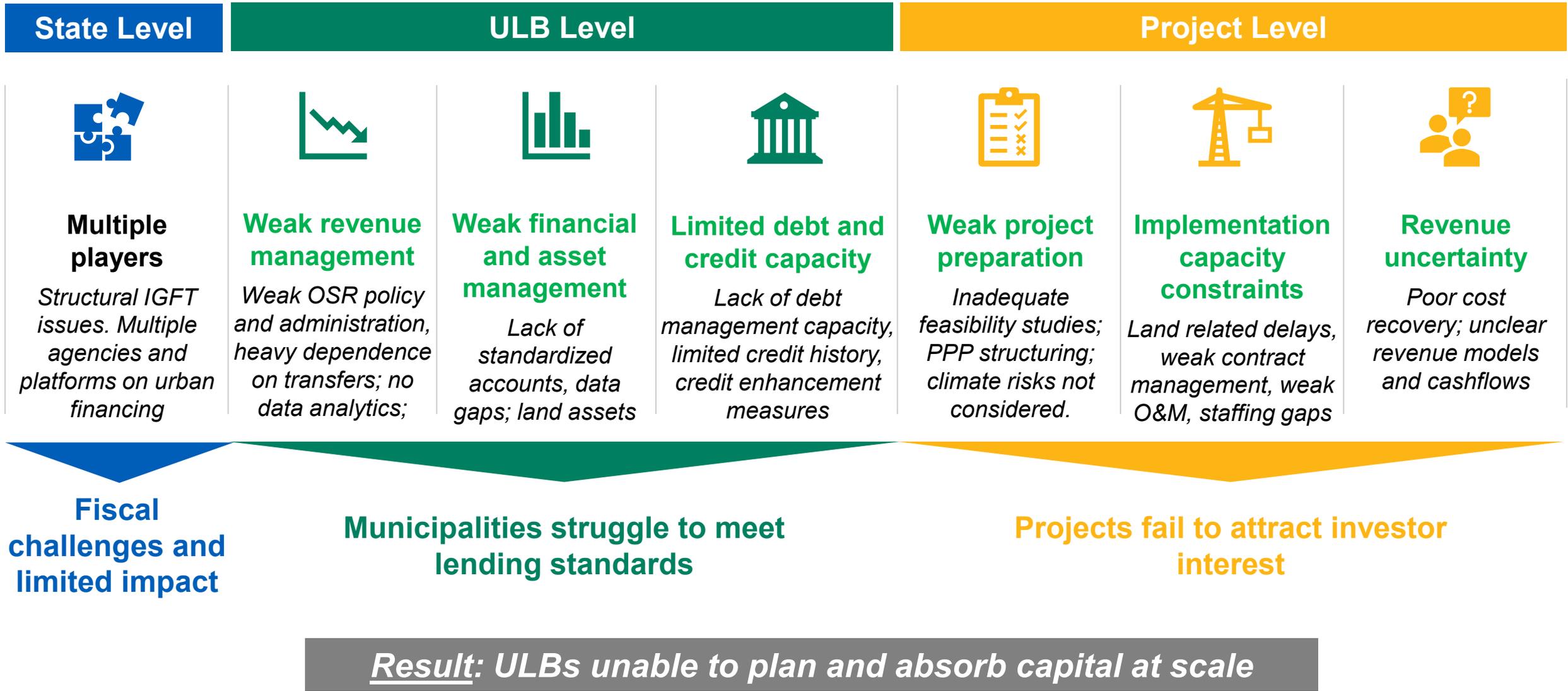
Building on the July Budget proposals, urban sector reforms related to governance, municipal services, urban land, and planning will be incentivized.

58. "The Government will set up an **Urban Challenge Fund** of **1 lakh crore** to implement the proposals for '**Cities as Growth Hubs**', '**Creative Redevelopment of Cities**' and '**Water and Sanitation**' announced in the July Budget."

59. "This **fund will finance up to 25 per cent** of the cost of bankable projects with a stipulation that **at least 50 per cent of the cost is funded from bonds, bank loans, and PPPs**. An allocation of **10,000 crore** is proposed for 2025-26."

CONSTRAINTS TO ACCESSING COMMERCIAL FINANCING

ULB Readiness Challenges: Why municipalities struggle to access and deploy capital?



Capital Market Challenges: Why financing fails to reach municipal borrowers?

Market Access Barriers



Fragmented Borrowing

Small, fragmented borrowing; no economies of scale ~ high cost of capital.



Weak Investor Confidence

Cash flows from projects unclear; Long-term creditworthiness of ULBs not fully trusted



Tenor Mismatch

5-10 years loans vs longer tenor requirements

Capital is expensive and intermittent

Institutional Weakness



Multiple overlapping entities

Parallel funds with seemingly overlapping mandates



Aggregator lacks capacity and scale

MUINFRA lacks scale and expertise



Regulatory environment not conducive

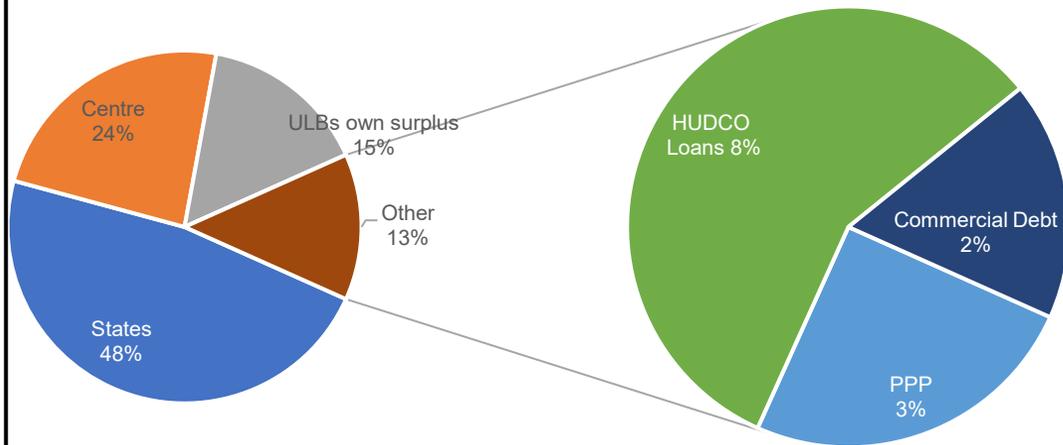
Lack of systematic process for pvt. financing (ex-ante and ex-post).

Institutions fail to channel capital effectively

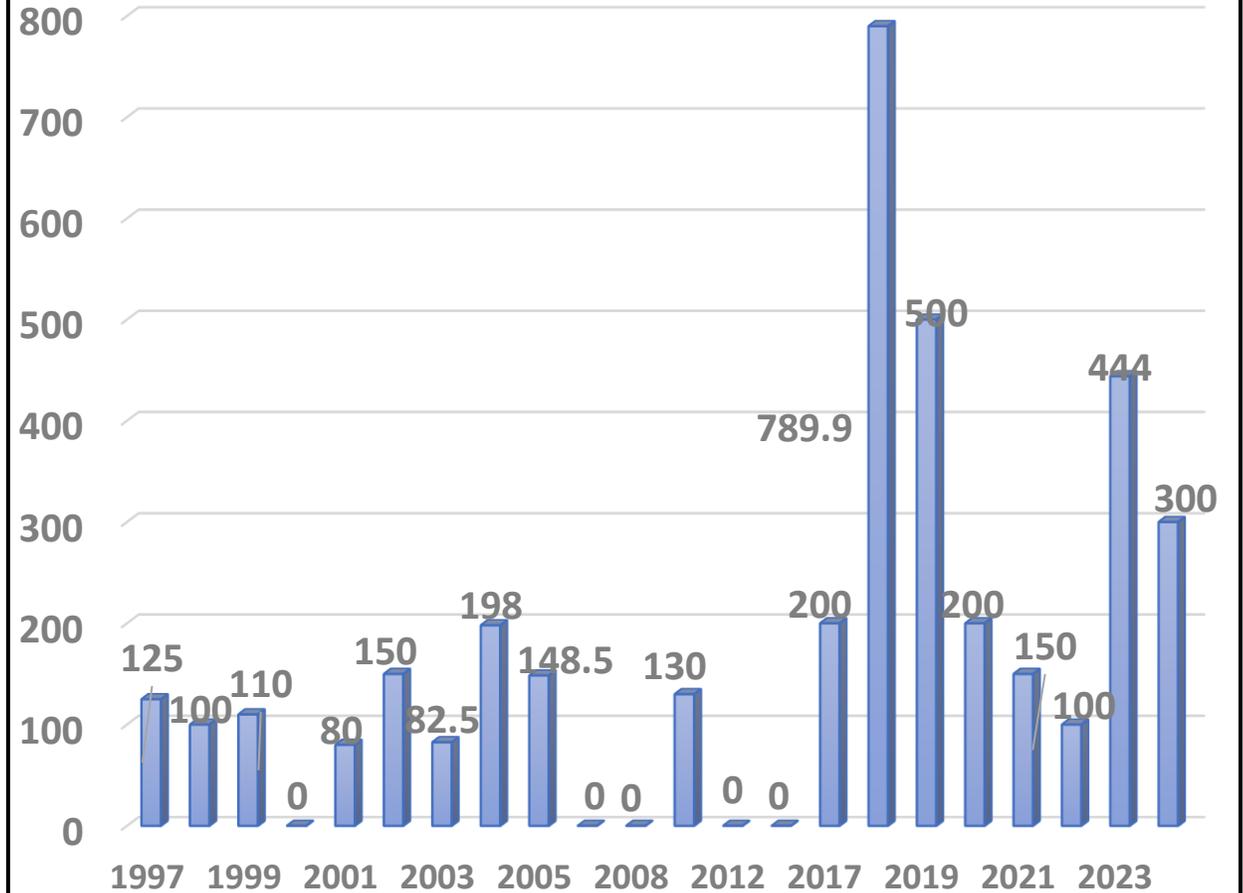
Result: Capital markets struggle to deliver long-term, affordable finance to ULBs

Commercial financing of urban infrastructure is negligible

Total capital expenditure on urban infrastructure by source of funds, FY11-1



Issue of Municipal Bonds by Municipal Bodies (INR Crore)



MOVING FROM TRADITIONAL GRANT FUNDING TO PRIVATE CAPITAL MOBILIZATION

PPPs AND MUNICIPAL BONDS/ BORROWINGS

PPPs vs. Municipal Bonds to finance urban infrastructure

- Given the nature of investments in the urban sector, PPPs are relatively **not as widely popular** compared to other sectors (e.g., urban transport, energy)
- Few PPP examples include wastewater reuse with clearly identified off-takers, Waste to Energy plants, land-based developments (general), Commercial markets, and so on.

HOW TO CHOOSE

- **Do we have stable revenue streams available in the identified projects?** – if there is little scope (and the private sector believes so) of government implementing the user charges due to policy and political issues or will not be able to collect revenue (e.g., from resale of treated water, say from an IDC), there will be little scope for **traditional non-HAM PPP**.

PPPs vs. Municipal Bonds to finance urban infrastructure

- In such cases, **look at the ULB Balance Sheet – does it have enough fire power** (general obligation bond issuance – which has been the norm in India by ring fencing property taxes, et al.).

Therefore, debt repayment capacity / revenue surplus, etc. of ULB will be important for borrowing on Balance Sheet.

- Alternatively, **HAM also solves the weak revenue stream problem** as private sector gets annuity payments and does not have to worry about revenue coming in from projects, **but then the burden shifts on the ULB and they must find the money to make payments to the contractor.** *(Typical PPP model used in the sector)*
- Therefore, HAM works in a similar way as borrowing (both must be serviced through repayments / annuity payments).

PPPs vs. Municipal Bonds to finance urban infrastructure

- The only nuance here is that in case of bond issuance, etc. – **debt management capacity, credit rating, etc.** will come into the picture. HAM will involve annuity payments which can be linked to performance indicators.
- The other aspect is if risk allocation possible and necessary? – if ULBs don't want to transfer operational responsibility or don't see the value in allocating risks to the private sector, then PCM could be the way to go.
- PCM is a **way to mobilize capital**, but PPP is a **purchase of services** that will also bring in operational aspects in terms of risk allocation, efficiency improvement and so on. *(Why PPP was chosen over EPC or traditional procurement)*

PPP programs sustain because they have been seen as providing better value for money compared to public procurement.

**PPPs are an alternative form of procurement
bringing in efficiency gains and innovation from
incentive alignment**

(NOT JUST A CREATION OF ASSET)

Why do we amalgamate the public and private sector?

- **Efficiency approach** (productive vs. allocative)
 - **Private**: Efficiency and Innovation
 - **Public**: Natural monopoly, affordable access
- **Accountability approach** (intensive vs. extensive)
 - **Private**: Simpler, they want value (such as profit)
 - **Public**: affordable, safety, political
- **Cost of Capital approach**
 - **Private**: Closely linked to the return of investment, usually higher than public cost of capital, threshold of participation
 - **Public**: Implicit and often hard to measure, not linked to the risk of investment.

Private sector does not provide funding- they provide financing in anticipation of returns

PPPs seek to harness both in a way that delivers the broad goals of the public sector.

FEW CASE STUDIES OF PPPs and KPIs (outside of urban sector)

Amman Airport in Jordan: A service solution

The airport shall meet the following specification:

Space available (not how many passengers going through)

- Check in Queue Area: 1.2 sqm/ peak hour passenger
- Baggage Claim: 1.7 sqm/php

Time (not how many queues)

- 6 min for check in
- Max baggage time in arrival belt not to exceed xx min based on type of aircraft

Keeping public priorities in mind

Illustrative only, values
may differ

Lesotho Hospital

| KPI | Target |
|---|---|
| Outpatient Visits | 310,000 per year |
| Emergency Surgery times: time between notification of the OT and administration of anesthesia | <60 minutes in 90% cases (service failure deduction: 1%) |
| Heart Attack: % of patients who receive aspirin within 30 min of evaluation | >95% compliance (service failure deduction: 1%) |
| Lab test turnaround time for 14 key tests | <60 minutes in 99% of cases (service failure deduction: 1%) |

Acquiring a service and not just building an asset (beds)

Illustrative only, values may differ

ROLE OF CAG / AUDITORS AS ENABLERS

Key Considerations: Upstream audit oversight is critical

- DPR / project preparation is key. How is the cost of the project determined? E.g., cost of underground sewer drains.
- Affordability: Projects are over-designed and over-capacity for what users and/or governments can afford. Over capacitated WTE plants.
- Project readiness: Land availability.
- HAM model: Annuity payments should be linked to repayment capacity (similar to debt repayments).
- Sources of revenue often unclear: Downstream off-taker of treated wastewater not available. Demand may not be sufficient to support capacity/design
- KPIs should be service oriented keeping public priorities in mind
- What value does private sector bring in? Example: Supplementary services: Collection and Transportation can improve user charge collection;
- Purchase of service and improvement in efficiency
- How was extent of Viability Gap Funding (VGF) determined?
- Risk allocation: Is it clearly defined?

THANK YOU