Unlocking Potential: Exploring the Indian Municipal Bond Market

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1. Introduction

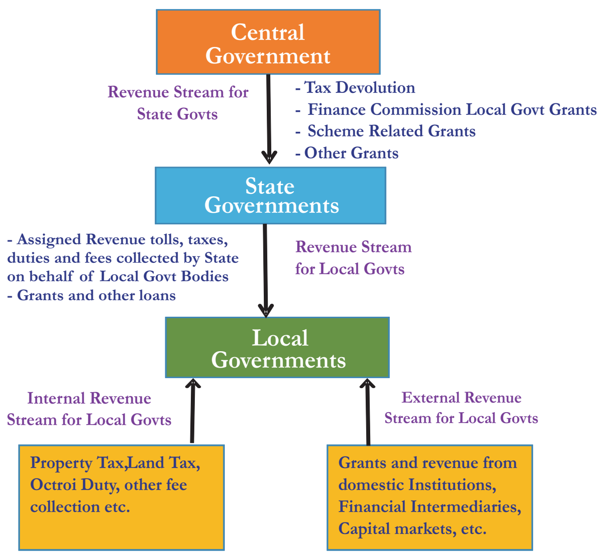
India, the world's most populous nation, is witnessing rapid urbanization with the United Nations (UN) projecting the country's urban population to reach 675 million by 2035[1]. While India's bustling cities are a testament to its economic progress, this rapid pace of urbanization has strained its urban infrastructure and public amenities with the World Bank (2022) estimating annual investments of $840 billion over the next 15 years - or an average of $55 billion per annum - for effectively meeting the needs of India's fast-growing urban population[2].

Traditional funding models may be inadequate for the scale and long-term nature of the sustainable urbanization projects required. Municipal bonds offer a promising avenue for Indian local governments to access domestic private capital for infrastructure financing, especially in the light of the sharp jump in their capital expenditure from around 30% of total expenditure (0.20% of GDP) in FY18 to 42% in FY20 (0.44% of GDP)[3]. This article explores the global market for municipal bonds, examining their benefits, challenges and potential role as a catalyst for India's urban transformation.

2. Urban Infrastructure Financing in India - Backdrop

Local governments comprising of Urban Local Bodies (ULBs) and Panchayati Raj Institutions (PRIs), form the third tier in India's three-level governance system after the Central Government of India (GoI) and the State Governments. The Constitution (74th Amendment) Act, 1992 (through the 12th Schedule) provides an

Figure 1: Revenue Stream in India's Three-Tier Governance Structure



Functions Listed in the 12th Schedule of the Constitution

1 Urban Planning
2 Regulation of land-use and construction of buildings
3 Planning for economic and social development
4 Roads and Bridges
5 Water Supply - Domestic, Industrial and Commercial
6 Public health, sanitation, conservancy and solid waste management
7 Fire Services
8 Urban forestry, protection of environment and ecology
9 Safeguarding the interests of weaker sections of the society
10 Slum improvement and upgradation
11 Urban poverty alleviation
12 Provision of urban amenities and facilities - parks, gardens and playgrounds
13 Promotion of cultural, educational and aesthetic aspects
14 Burials and burial grounds, cremations, cremation grounds and electric crematoriums
15 Cattle pounds, prevention of cruelty to animals
16 Vital statistics including registration of births and deaths
17 Public amenities - street lighting, parking lots, bus stops and public conveniences
18 Regulation of slaughterhouses and tanneries

Source: RBI Report on Municipal Finances

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[1]World Cities Report 2022 - Envisaging the Future of Cities https://unhabitat.org/sites/default/files/2022/06/wcr_2022.pdf

[2]Financing India's Urban Infrastructure Needs: Constraints to Commercial Financing and Prospects for Policy Action, World Bank (November 2022) https://documents1.worldbank.org/curated/en/099615110042225105/pdf/P17130200d91fc0da0ac610a1e3e1a664d4.pdf

[3]Report on Municipal Finances, RBI (November 2022) https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Report%20on%20Municipal%20Finances

illustrative list of 18 functions which the State governments may assign to the municipalities, partly or wholly, through their municipal laws. ULBs including municipal corporations, municipal councils and Nagar panchayats work within the limits prescribed by the respective State Municipal Act that creates and governs them.

Funding options vary across the levels of governance in India. The Central Government has elastic sources of revenue, which grow with the growth of the economy and can resort to deficit financing by borrowing from the market or the RBI. The States have relatively less elastic sources of revenue and limits on borrowings and accessing funds from the RBI. The third tier i.e. the local bodies have the most limited powers to raise resources. Their fiscal and financial management including the taxes, duties, charges and fees levied by them remain under the control of the State governments[4]. States meet a significant proportion of their ULBs' financial needs including capital investment via shared tax, revenue and capital grants and loans[5]. Nearly all Municipal Acts in India impose restrictions on the power of ULBs to borrow funds. As of November 2022, only the States of Odisha and Bihar explicitly allowed borrowing through bond issuances.

2.1. Municipal Finances in India: An Overview

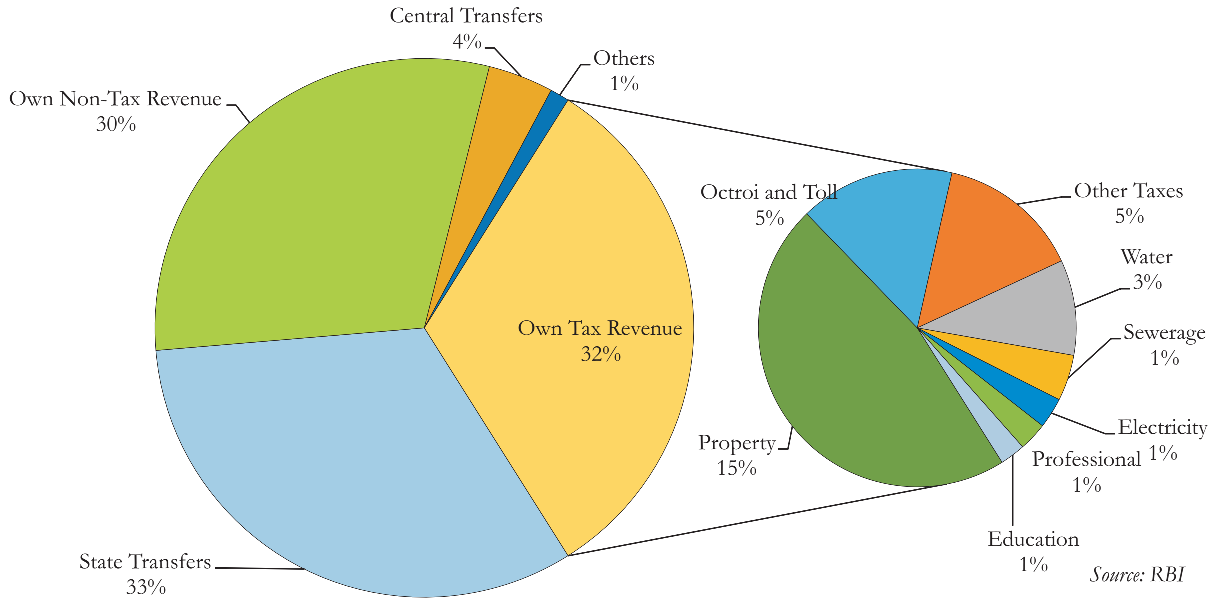
RBI's Report on Municipal Finances (2022)[6] reveals that the primary sources of revenue for ULBs in India are their own revenues (tax and non-tax) followed by transfers from their State governments and Government of India. Transfers from the State governments include assigned revenues, compensation, State Finance Commission grants and other State government grants. Property taxes dominate within the tax revenues collected by the ULBs. One of the primary reasons behind this is the split of the Goods and Services Tax (GST) collections since 2017 only between the Centre and States, although it has subsumed most of the consumption taxes imposed by the centre, states and local governments[7]. Fees and user charges followed by income from investments and rental income from municipal properties dominate non-tax revenue. Establishment expenses consisting of salaries, wages and pensions are the largest component of revenue expenditure, followed by operational and maintenance expenses. ULBs' debts comprise of commercial bank loans, institutional borrowing, international agency loans and open market borrowing through bonds. The World Bank report has highlighted that low urban infrastructure delivery in the context of increasing fiscal transfers from flagship GoI Urban Missions such as the Smart Cities Mission and AMRUT is resulting in budget surpluses which are not being used to finance capex.

In India, as ULBs are required by law to maintain a balanced/surplus budget, they have remained dependent on State and Central government transfers to meet their revenue shortfall. By issuing municipal bonds, ULBs can raise the funds when they need to finance important capital-intensive projects without having to rely on transfers from the Centre/State governments. ULBs need clear unconditional revenue streams to tap capital

[4]RBI DRG Study "Municipal Finance in India - An Assessment" https://rbidocs.rbi.org.in/rdocs/content/pdfs/82500.pdf
[5]Municipal Debt Financing in India, NIPFP (January 1998) https://www.nipfp.org.in/media/medialibrary/2014/11/MUNICIPAL_DEBT_FINANCING_IN_INDIA.pdf
[6]Report on Municipal Finances, RBI (November 2022) https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Report%20on%20Municipal%20Finances
[7]State of Municipal Finances in India - A Study Prepared for the Fifteenth Finance Commission, Indian Council for Research on International Economic Relations

markets. However, the dwindling basket of local taxes resulting in the overreliance on property taxes coupled with the numerous approvals required from the respective State governments, has limited Indian ULBs' ability to explore other funding options.

Chart 1: Breakup of Revenue Receipts of Indian Municipal Corporations - Average Share (%) FY18-FY20



Source: RBI

3. What are Municipal Bonds?

Municipal bonds, also known as muni bonds or munis are debt obligations issued by local governments such as municipal corporations or related agencies to raise funds for various public projects or general purposes. When investors buy or subscribe to municipal bonds, they are essentially lending money to the issuer in exchange for periodic interest payments - usually on semi-annual basis and the promise of return of the bond's face value upon maturity.

In India, municipal bonds are marketable debt instruments issued by ULBs either directly or through any intermediate vehicle (Corporate Municipal entity/statutory body/special purpose distinct entity) with an objective to on-lend towards projects implemented by the ULB. The funds raised may be utilized towards implementation of capital projects, refinancing of existing loans, meeting working capital requirements etc., depending on powers vested with the ULBs under respective municipal legislation[8].

[8]Guidance on use of Municipal Bond Financing for Infrastructure projects, PPP Cell, Department of Economic Affairs , Ministry of Finance, Government of India (September 2017) https://www.pppinindia.gov.in/report/Guidance%20on%20use%20of%20Municipal%20Bonds%20for%20PPP%20projects.pdf_1685082702.pdf

Figure 2: Pros and Cons of Municipal Bond Issuances for Municipal Corporations

PROs

- Access to private capital instead of relying solely on government grants
- Long term financing option spreading the cost of financing over multiple years
- Allows immediate commencement of essential public works and infrastructure projects, etc. requiring upfront investment
- Imposes greater financial discipline
- Better accountability in services, reporting and disclosures
- Improved rigour in project development
- Unlock full revenue potential of different streams/future cashflows
- Build a credit profile and credit history, smoothening future fund raising activities

CONs

- Creates long-term debt obligations for municipal corporations
- Municipal bonds are subject to market risks, including changes in interest rates and investor demand, which can affect the cost and feasibility of the issue
- Higher risks of project implementation
- To meet bond obligations, the municipality might need to increase taxes or fees, which can be unpopular and politically challenging
- Higher transaction costs and institutional setup required for managing bond issues
- Availability of alternative financing sources such as bank credit

3.1. Flow of Funds

A separate escrow account is created to serve as the primary source for servicing municipal bonds and funds raised from the project are used for replenishing the escrow account. The bondholders are subsequently paid (as per the terms of bond issue) from the dedicated escrow account.

Figure 3 - Funds Flow under Bond Financing for an ULB

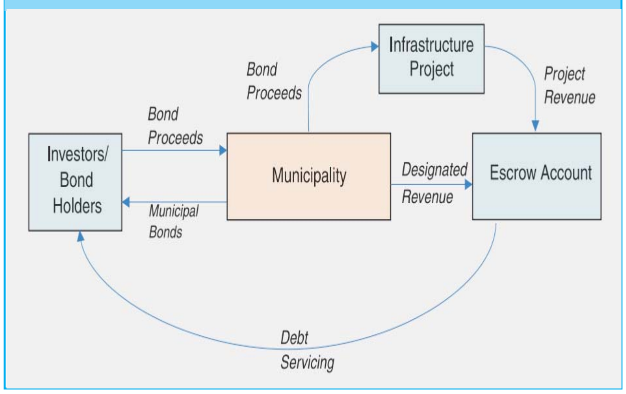
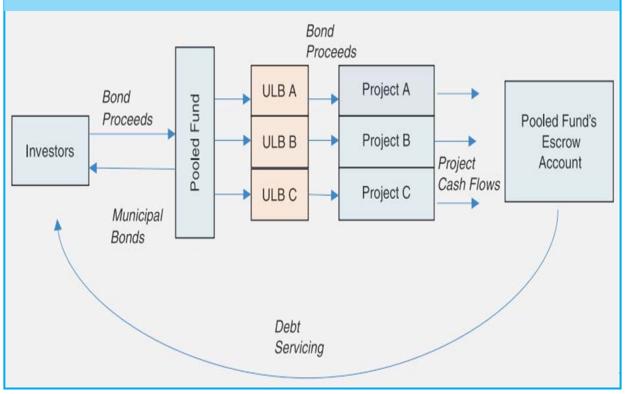


Figure 4 - Funds Flow under Pooled Finance Mechanism



Source: RBI

Pooled financing is beneficial for smaller ULBs by lowering the cost of bond issuance, as the risk is distributed among all participating municipal bodies. It also helps achieve economies of scale in administrative costs. In 2006, the Central Government approved the Pooled Finance Development Fund (PFDF) Scheme to provide credit enhancement to ULBs to access market borrowings based on their credit worthiness through the State-Level-Pooled Finance Mechanism (SPFE).

3.2. Types of Municipal Bonds

Based on the source of servicing, municipal bonds are classified into two broad categories: General Obligation Bonds (GO Bonds) and Revenue Bonds. General obligation bonds are commonly used to finance the general operations of the ULBs, while revenue bonds are employed to finance a revenue-generating project.

Figure 5 - Types of Municipal Bonds

General Obligation Bonds (GO bonds)

Purpose: Used for financing general municipal functions, where it may not be possible to ensure direct cost recovery from specific functions or projects

Repayment: Repayment and servicing backed by the full faith, credit, and taxing power of the issuer. Taxation may be income taxes, property taxex, sales taxes, etc.

Common Issuers: States, Cities and towns, School districts

Revenue Bonds

Purpose: Commonly employed to finance the upfront expenditure of a revenue-generating project

Repayment: Repayment and servicing guaranteed by the specific revenues generated by the issuer

Common Issuers: Transportation systems, Hospitals, Power systems, Sewer systems, Water systems, Other local authorities that generate revenues from providing services to the public

Based on the experience in the US municipal bond market - the world's most diversified, historically, GO bonds are considered the more secure as they are backed by the full faith and credit of the municipal government. On average GO bonds tend to have higher credit ratings and default less than revenue bonds. Revenue bonds have a more diverse makeup with diverse credit ratings and generally offer higher yields to investors than GO bonds. Some local governments also opt for hybrid structures whereby their general revenue serves as a backup for servicing their revenue bonds in case of shortfall in the expected income generation. Other variants of municipal bonds include:

- Bonds of special purpose vehicles (SPVs) or SPFE such as China's LGFV. These entities issue the bonds and debt servicing is financed through the pooled revenue stream of the participating municipal bodies.

- The Pfandbrief system of private financing of public infrastructure followed in Germany, where large mortgage banks pool local authority debt into "pfandbriefs", which is effective credit enhancement of entities that may not otherwise be creditworthy through a complex system of government guarantees[9].
- Green municipal bonds issued to support financing of green infrastructure projects.

The choice of instrument type is based on the following considerations.

Table 1: Bond instrument type: Considerations[10]

Factors	If Yes	If No
Project has direct revenue streams that are sufficient to meet debt servicing after meeting operations and maintenance (O&M) cost obligations	Revenue bonds - Public issue or private placement	GO bonds through private placement
Municipal Act prohibits charge on municipal assets	Unsecured	Secured
Expectation of interest rates during project term is either (i) steady and increasing or (ii) High volatility	Fixed Rate	Floating rate
Expectation of fall in interest rates in the medium term	Callable bonds	No call option
High appetite for tax-free structures	Tax-free	Taxable bonds

3.2.1. Municipal Bonds vs Sovereign Bonds

Sovereign bonds or Government securities (G-Secs) dominate the Indian fixed income securities market and are considered the least risky instruments for investors. Consequently, the yields of debt instruments of all other issuers are priced relative to G-Secs of similar maturity and pay a "spread" i.e. higher yield as compensation for the additional risk borne by their investors. Although issued by local governments, municipal bonds are not considered part of the G-Sec market but rather as corporate/public sector bonds. Even after having investment grade ratings, ULBs are considered riskier than the corporates with same rating because of their dependency on state transfers and guarantees. Credit rating of an ULB largely depends on the State's financial position[11].

[9]Infrastructure Development in India: Emerging Challenges, Rakesh Mohan (May 2003) https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=141

[10]Guidance on use of Municipal Bond Financing for Infrastructure projects, PPP Cell, Department of Economic Affairs , Ministry of Finance, Government of India (September 2017) https://www.pppinindia.gov.in/report/Guidance%20on%20use%20of%20Municipal%20Bonds%20for%20PPP%20projects.pdf_1685082702.pdf

[11]https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=824

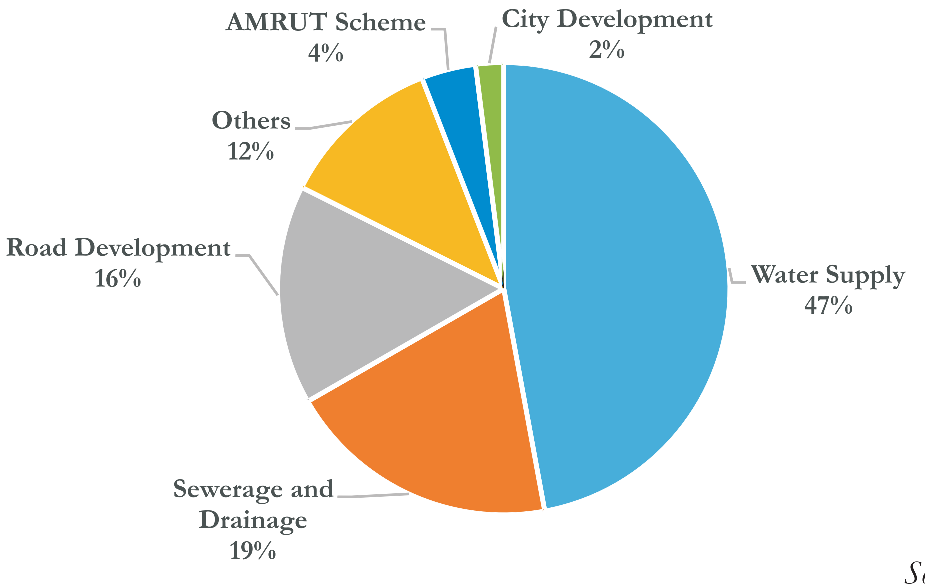
Table 2: Distinction between Sovereign Bonds and Municipal Bonds

	Sovereign Bonds	Municipal Bonds
Issuer	Central Government of India and State Governments/UT	Urban Local Bodies (ULBs) or any institution of self-government constituted under Article 243Q of the Constitution of India
Nature	Sovereign Bonds	Corporate/PSU Bonds
Types	Dated G-Secs, T-Bills and State Government Securities	General obligation bonds, Revenue bonds
Risk of Default	Credit risk free status	Subject to credit risk
Purpose	Meet budgetary deficit	Infrastructure financing, general operation
Regulator	Reserve Bank of India (RBI)	Securities Exchange Board of India (SEBI)
Status	Budgeted borrowings	Off-balance sheet liabilities
Issue	Transparent market borrowings through auctions	Private placement and Public issue
Trading	Anonymous trading on NDS-OM, Stock Exchanges and Bilateral	Trading platforms, Reporting on Stock Exchanges
Settlement	Guaranteed settlement by CCIL	CCP settlement not available
Taxation	No tax exemption	Tax exemption possible
Liquidity	Very liquid	Highly illiquid
Tenure	0-50 Years	Revenue bonds 3-30 Years (SEBI)
Applicable Laws	The Government Securities Act, 2006 The Government Securities Regulations, 2007	Companies Act, 2013 Securities and Exchange Board of India (Issue and Listing of Municipal Debt Securities) Regulations, 2015 [Last amended on August 18, 2023]
Applicable Rating	Sovereign rating by international Credit Rating Agencies (CRA) considered by foreign investors	Investible Grade Rating (IGR) of cities issued by domestic CRAs

3.3. Use of Funds

The proceeds from taxable bonds issued by Indian ULBs have been used to finance the expansion of essential municipal services, viz., roads, water supply and sewerage, possibly because user charges in such infrastructure projects are easier to enforce and the amount and frequency of expected revenues can be predicted with some certainty. In the case of tax-free bonds, the government guidelines explicitly state the areas for which bond proceeds can be used. Thus, the overall experience indicates that the proceeds from municipal bonds in India have almost exclusively been used for capital expenditure and/or expansion of essential municipal services[12].

Chart 2: Use of Proceeds from Indian Municipal Bonds - Share (%)



Source: RBI

3.4. Rationale for Investment in Municipal Bonds

Globally, investors - retail investors in particular, choose municipal bonds for the higher yields and tax benefits offered by them. However, investments in the Indian municipal bond market are almost wholly by institutional investors including banks, mutual funds, insurance companies and pension funds. The rationale for banks' investments in municipal bonds in India include[13]:

- Long outstanding account relationship
- Ancillary business from the Municipal Corporation
- Satisfactory financial indicators
- NCDs rated at par or above their minimum rating criteria for investment
- Bonds considered under PSU category
- High tax collection efficiency
- Escrow and structured bond payment mechanism provides strength to the bond issuance
- Presence of covenants
- Comfort from the Arranger regarding due diligence, approval of PPM by SEBI

[12]Report on Municipal Finances, RBI (November 2022) https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Report%20on%20Municipal%20Finances
[13]https://jana-cityfinance-live.s3.ap-south-1.amazonaws.com/municipal_bond_repository/D12.%20Bank%20of%20Baroda.pdf

Issues flagged by investors included[14]:

- Lack of availability of updated financial information, disclosures and access
- Limited credit enhancement for municipal bonds
- Pricing challenges and illiquidity due to lack of frequent and sizeable issuances
- Inconsistency of management with frequent changes
- Lack of incentives for municipal bodies to tap debt market

4. Global Experience – Evolution of the Municipal Bond Market

4.1. From Solid Ground to Slippery Slopes: US Municipal Bond Market vs. China LGFV Bonds

The United States has the world's most vibrant market for municipal bonds with a size of almost 16% of the country's GDP. These bonds are used as a means to raise capital for urban infrastructure development for nearly two centuries. The first recorded municipal bond in the United States was issued in 1812 by New York City to fund the digging of a canal. The beneficial impact on the city's economy prompted other states and cities to actively issue bonds to fund infrastructure such as new roads, bridges and waterworks. As a result, the outstanding debt of the US municipal bond market reached $200 million by 1860[15]. This figure more than doubled to $516 million by 1870, and as of 2023, the total stood at $4.05 trillion. The long-term presence of a sophisticated credit market for funding infrastructure has been the central force behind the economic development in the US. States and cities have expanded the scope of bond financing to include subsidized housing, private hospitals, urban redevelopment, and private industrial development.

The US Census Bureau 2012 shows a complex local government landscape with approximately 89004 units including various governing bodies such as counties, municipalities (cities, towns, villages), townships, school districts, and special-purpose districts. Debt securities issued by any of these entities qualify as 'municipal bonds' in the US even if the issuer is not a traditional municipal corporation. Similar to India, property taxes remain a key revenue source for US municipalities and both rely on state transfers for infrastructure development. However, barring the municipalities in the State of North Carolina, US municipalities enjoy a significantly higher degree of autonomy compared to their Indian counterparts for issuing debt instruments.

Municipal bonds in the US are structured to provide tax advantages recognising the public good element in urban infrastructure making them highly attractive to retail investors who buy the bonds directly or indirectly through mutual funds and ETFs. Investments in the US municipal bond market are dominated by individual investors (nearly 50%), followed by mutual funds (nearly 25%) and the remainder mostly divided between financial institutions and insurance companies.

[14] https://mohua.gov.in/upload/uploadfiles/files/17%20Presentation_on_Muni_Bonds_in_India_Rajeev%20Radhakrishnan.pdf
[15] https://www.city-journal.org/article/the-muni-bond-debt-bomb

Chart 3A: Size of US Municipal Bond Market Outstanding Amount (USD Trillion)

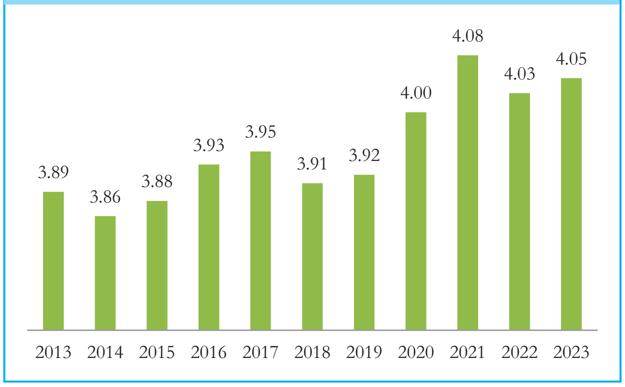


Chart 3B: US Municipal Bond New Issuances Segregation by Type (USD Billion)

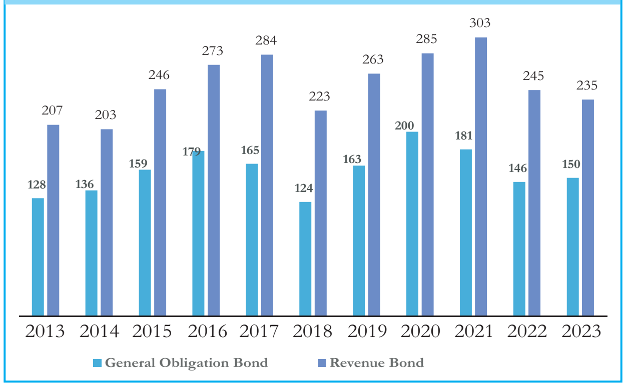
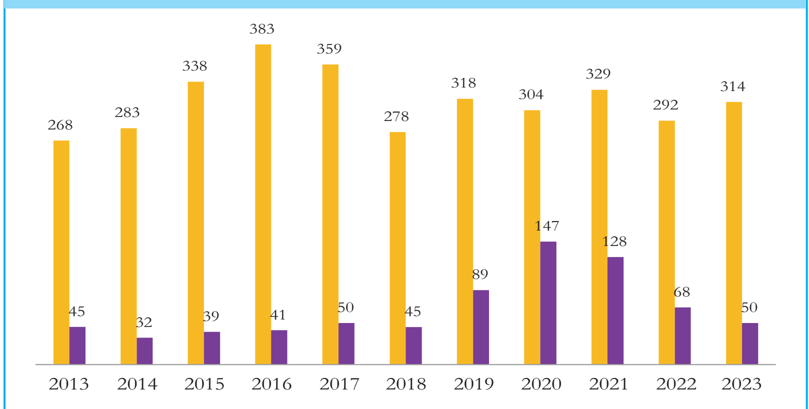


Chart 3C: US Municipal Bond New Public Issuances Segregation by Tax Treatment (USD Billion)



Source: SIFMA

Tax advantages offered enable local governments to lower their cost of financing, keeping user charges at affordable levels or municipal taxes at acceptable rates. Municipal bonds incentivize their issuers to be fiscally prudent. To address concerns of inherent default risk and improve transparency, bond issuers often utilize credit rating agencies (CRAs) to assess the creditworthiness of their bonds. The Moody's Investor Services 2023 report[16] discusses the resilience and liquidity of the US municipal bond market and further highlights that US munis have lower default rates compared to global corporations and other competitive issuers. Approximately 91% of all Moody's-rated municipal bonds classified as investment grade (A or higher) at the end of 2022, maintaining this trend since 2020.

Notwithstanding the overall stability of municipal credit quality in the US with the rating distribution substantially skewed toward the investment-grade, there have been some high-profile defaults highlighting the dangers of mismanagement and economic downturn for municipal finances. These include:

[16]Moody's Investor Services. (2023, July 19). US municipal bond defaults and recoveries.

- The Puerto Rican Debt Crisis: Since 1898, limited governing power as a US territory allowed Puerto Rico to issue attractive tax-exempt bonds, fuelling its development but also its debt burden that exceeded $72 billion and $55 billion in unfunded pension liabilities by 2016. In 2016, US Congress passed the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA), which created the Puerto Rico Financial Oversight and Management Board to restructure the unsustainable burden. The board oversaw a bankruptcy process that culminated in March 2022, when a federal court confirmed a plan that reduced Puerto Rico's debt by 80%.

- City Of Detroit, Michigan Bankruptcy: Declining population and tax revenues over several decades coupled with a risky financial strategy using certificates of participation (COPs) with variable interest rates that backfired when the Federal Reserve lowered rates eroded the city's financial foundation and it filed for bankruptcy in 2013 due to a crippling $18 billion debt[17].

Despite these exceptions, the enduring success of the US municipal bond model, has led to exploration of municipal bond markets in developing countries over recent decades. However, the case of Chinese LGFVs serves as a cautionary tale of too much of a good thing.

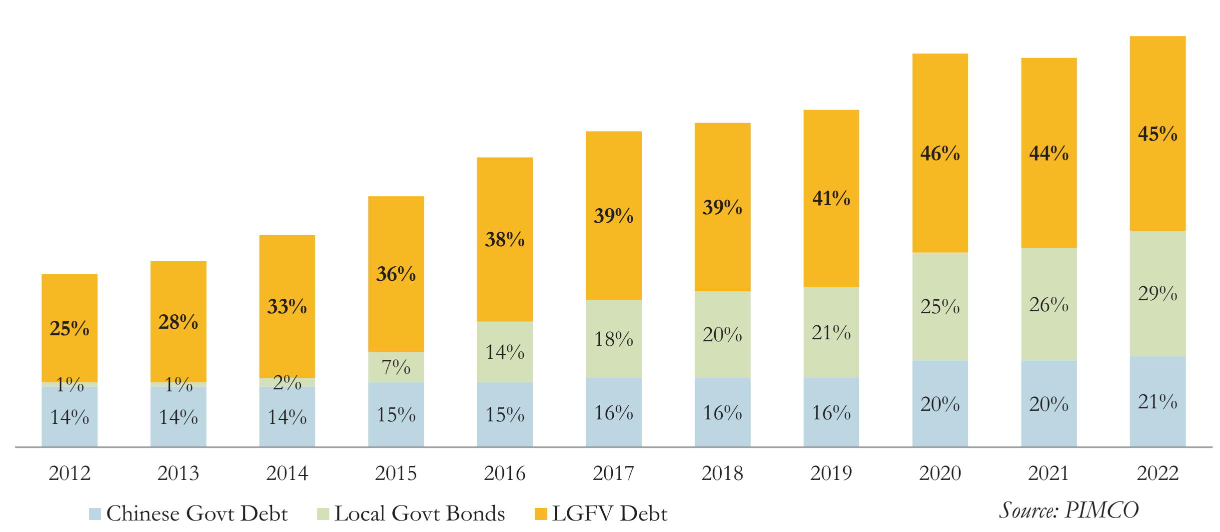
China's local governments are responsible for 85% of general budgetary spending, bearing significant fiscal duties in areas such as pensions, medical care and unemployment insurance[18]. Local Government Financing Vehicles (LGFVs) are off-balance-sheet entities used by local governments in China since the 1980s to fund real estate development and other local infrastructure projects thereby supporting the local economy. These LGFVs typically operate as SPVs that raise funds predominantly by borrowing from banks as well as a range of non-banking institutions including trusts and wealth management products, with the remaining raised by issuing bonds or other equity-like instruments to insurance companies, institutional investors and individuals[19]. LGFVs loans are classified as corporate debt. China's tax revenue sharing reform was restructured in 1994 to bolster central control of taxation, significantly diminishing local governments' share of tax revenues and weakening their fiscal strength. As a result, local governments became increasingly reliant on non-budgetary revenue, particularly land use right transactions.

LGFVs were initially established for single purposes, such as constructing toll roads or utilities, where the expected revenue stream could service the debt incurred. This model, allowing LGFVs to borrow from international financial institutions, proved successful and spread rapidly across China. Consequently, most Chinese cities established SPVs to facilitate investment and infrastructure development. The use of LGFVs gained significant momentum following the 2008 financial crisis when the Chinese government announced a massive stimulus plan funded through local government borrowing facilitated by LGFVs. As recently as May 17, 2024, China urged local governments to buy unsold homes driven by concerns about the sector's drag on

[17]https://www.demos.org/research/detroit-bankruptcy
[18]https://eastasiaforum.org/2023/11/03/chinas-local-government-credit-dilemma/
[19]https://www.forbesindia.com/article/column/the-rise-of-chinas-shadow-banking-system/38108/1

economic growth[20]. China's issuance of local government bonds in May 2024 reached the most in seven months, a sign that authorities were ramping up fiscal stimulus to support the economy[21].

Chart 4: Breakdown of the Chinese Debt Market as a Percentage of GDP



Source: PIMCO

While the LGFV model has undoubtedly contributed to China's economic growth and rapid infrastructure development, the reliance on opaque financing structures, rising debt burden and overall doubts on repayments amid declining land sales revenues and an aging population now pose a threat to China's financial stability. There are also rising concerns about the quality of the underlying projects financed. A key challenge associated with LGFVs is their limited profitability and insufficient cash flows to service debt. Significant mismatches between short-term borrowings and long-term investments financed amid inadequate returns necessitate further fundraising by local governments to meet creditor obligations. During its economic boom, surging local debt in China remained manageable as the direct returns from debt-funded projects and their long-term positive externalities often offset interest costs.

As per IMF estimates, LGFV borrowings were almost the same size as official central and local government debt combined by 2022[22]. The growing burden of LGFV debt amid China's slowing economy and its struggling property sector prompted the Chinese Communist Party to take action in July 2023. The Party pledged to formulate "a basket of plans" to address the risks stemming from local government debt. Chinese media houses reported that the party allowed Chinese provinces and local governments to sell about 1.5 trillion yuan ($210 billion) of special financing bonds to help 12 regions repay debt[23]. On November 8, 2023, the People's Bank of China committed to provide emergency liquidity support to regions with a relatively heavy debt

[20]https://www.moneycontrol.com/news/business/real-estate/china-attempts-to-end-property-crisis-with-broad-rescue-package-12725534.html
[21]https://finance.yahoo.com/news/ina-ramps-stimulus-biggest-bond-044006900.html
[22]https://www.imf.org/en/Publications/CR/Issues/2023/02/02/Peoples-Republic-of-China-2022-Article-IV-Consultation-Press-Release-Staff-Report-and-529067
[23]https://www.pimco.com/gbl/en/insights/local-government-financing-vehicles-a-growing-risk-for-chinas-economy

burden[24]. New restrictions limit the ability of local governments to guarantee LGFV debt. As the largest creditor to LGFVs, Chinese commercial banks are likely to see a large increase in nonperforming exposures and operational pressure from even a small amount of LGFV defaults, with regional banks being most exposed. China's LGFV model of financing is now regarded to be the harbinger of more problems than the ones it has solved. The LGFVs have become the black hole of the Chinese financial system[25].

4.2. Behaviour of Municipal Bonds - Market Microstructure Studies

With the US being the most liquid market, most studies analysing market behaviour in the municipal bond market, focus on the US market. Exemptions on most municipal bonds from federal and state taxes, creating a yield advantage compared to taxable bonds of similar credit quality makes them attractive for individual investors and households. However, trading patterns show that their spread over US Treasuries is more dependent on market liquidity. Research has also highlighted that the absence of market infrastructure leads to municipal bonds being primarily traded over-the-counter (OTC) leading to higher search costs for investors seeking to sell their bonds on the secondary market, compared to exchange-traded securities[26].

Table 3: Research Findings on Microstructure of Municipal Bond Market

Sr No	Title	Author	Summary
1	The Muni Bond Spread: Credit, Liquidity, and Tax (2014)	Andrew Ang, Vineer Bhansali, Yuhang Xing	The paper states that the spread between municipal bond yields and treasury yields is attributable mainly to liquidity component and in less degree to credit and tax component
2	Relative Risk in Municipal and Corporate Debt (1983)	Jefferey Skelton	The research paper suggests that default risk cannot account for the much steeper slope of the muni yield curve relative to Treasury yields
3	Financial Intermediation and Costs of Trading in an Opaque Market (2007)	Richard Green, Burton Hollifield and Norman Schuroff	The research study point out that opacity and monopoly power of broker-dealers can also play major roles in deciding spreads between municipal bond yields and treasury yields
4	Municipal Bond Markets (2019)	Dario Cestau, Burton Hollifield, Dan Li and Norman Schürhoff	The research article highlights that tax exemption allows municipal issuers to secure funds at lower rates than corporate bonds, making municipal bonds essential for US infrastructure financing. This exemption attracts retail investors but deters tax-exempt or tax-deferred institutions. Consequently, households hold the most municipal debt, unlike other large financial markets.

[24] https://www.moneycontrol.com/news/world/chinas-central-bank-vows-liquidity-for-debt-laden-regions-11696331.html
[25] https://www.reuters.com/world/china/debt-laden-local-governments-pose-fresh-challenges-chinas-growth-financial-2023-03-10/
[26] (SCHWERT, 2017), Municipal Bond Liquidity and Default Risk, The Journal of Finance

5. The Indian Municipal Bond Market – A Chequered History

The municipal bond market is one of the most underdeveloped segments of the Indian debt market, despite their long history. Municipal bonds have been around in the form of corporation and port trust bonds since the Local Authorities Loan Act of 1914. The Local Authorities Loan Act of 1914. Successive enactments under the Government of India Acts of 1917 and 1935 further allowed municipal corporations to raise funds from the open market. Some of these were also listed on the stock exchanges such as the Bombay Stock Exchange (BSE)[27]. RBI initially provided discussion on market borrowing by local authorities in its 1970 bulletin and subsequently by the Seventh Finance Commission (SFC) in the Finance Commission Report of 1978. According to the SFC, market borrowing constituted about 43% of the total municipal debt in FY77. RBI in its report on the finances of local authorities defined local outstanding debt as market loans, loans from the government and any other loans by the city corporations, municipalities and port trusts. Market borrowing by local bodies remained strictly regulated by the Planning Commission through its borrowing capping on the state governments and monitored by RBI[28].

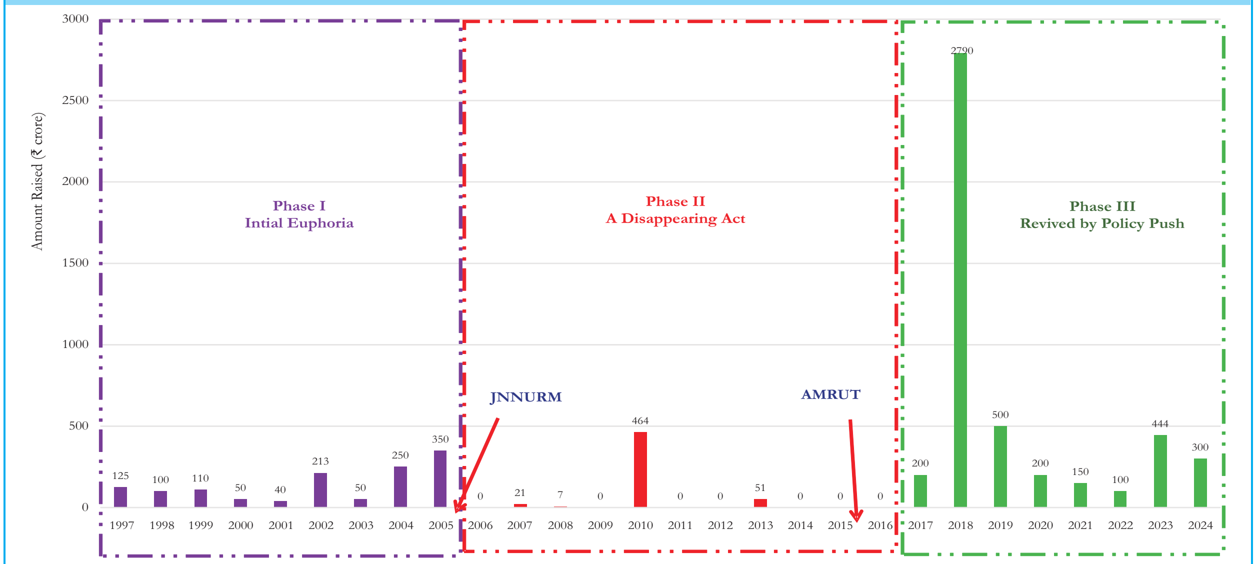
Recognising the importance of and challenges in rapid urbanization in India, the Indo USAID Financial Institution Reform and Expansion Debt Market Component FIRE(D) project was initiated in November 1994 that worked with Indian cities, financial institutions and policy-makers to foster the development of a commercially viable urban infrastructure finance system. In August 1995, the development of a rating methodology for municipal bonds was initiated under the FIRE(D) project. It also held a national level workshop on “Municipal Bonds - Potential and Relevance for India” in December 1995 that eventually paved the way for the Rakesh Mohan Committee of 1996 on 'Commercialization of Infrastructure Projects' which recommended private sector participation in urban infrastructure development and emphasized the need for accessing capital market, including the issuance of municipal bonds.

The FIRE(D) project provided support for commercially viable infrastructure projects (CVIPs) for more than 20 cities and urban bodies. While the Tiruppur Area Development project was India's first water supply and sewerage project with private sector participation structured along commercial lines as a SPV, the Ahmedabad Municipal Corporation issued city bonds without government guarantee under the project to part finance its water and sewerage project[29] moving towards a market-based system of local government finance[30]. Of the total issue amount of ₹100 crore of the 7 year bonds with coupon of 14% per annum payable semi-annually on the face value of ₹1000, ₹75 crore was fixed for banks, financial institutions and mutual funds and the remaining ₹25 crore was the net offer to public[31]. Bangalore Mahanagara Palike was the first ULB to raise resources through private placement of municipal bonds with state guarantee in 1997[32].

[27]Source: Historical BSE Bhavcopy
[28]https://www.nipfp.org.in/media/medialibrary/2014/11/MUNICIPAL_DEBT_FINANCING_IN_INDIA.pdf
[29]https://pdf.usaid.gov/pdf_docs/Pdabs495.pdf
[30]RBI DRG Study "Municipal Finance in India - An Assessment" https://rbidocs.rbi.org.in/rdocs/content/pdfs/82500.pdf
[31]https://www.business-standard.com/article/specials/first-bonded-city-198011201078_1.html
[32]https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=824

In order to incentivise investors to participate in the nascent municipal bond market, the GoI proposed the issuance of tax free municipal bonds during the Budget Speech in 1999. In 2001, GoI issued guidelines for issue of tax-free municipal bonds to state governments. However, issuances came to a sudden halt after the launch of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2005 which envisaged total investment of about ₹1 lakh crore available to municipal corporations in the form of grants from the Centre.

Chart 5: Municipal Bond Issuances in India



Source: Refinitiv

On June 25, 2015, the Ministry of Housing & Urban Affairs launched the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme to focus on developing basic infrastructure in selected 500 cities and towns across the country. The AMRUT programme instituted 11 mandatory reforms in ULBs, including improving creditworthiness of cities and incentivising issue of municipal bonds to finance urban development. The Government of India also provided financial incentives in the form of a lump-sum grant-in-aid for municipal bond issuances at the rate of ₹13 crore per ₹100 crore of bonds issued under the scheme. Following the success of the scheme, the AMRUT 2.0 scheme was launched on October 1, 2021, for a period of 5 years from FY22 to FY26 with a total outlay of ₹299000 crore - nearly 3 times of the AMRUT scheme. The AMRUT scheme was subsumed under AMRUT 2.0 and State/UTs were directed to complete AMRUT projects by March 31, 2023. As of December 2022, ₹3940 crore had been raised through municipal bonds by 11 ULBs and ₹227 crore had been released as incentive to these ULBs for bond issuances. Credit rating work had been completed in 470 cities and 164 cities had received Investible Grade Rating (IGR)[33].

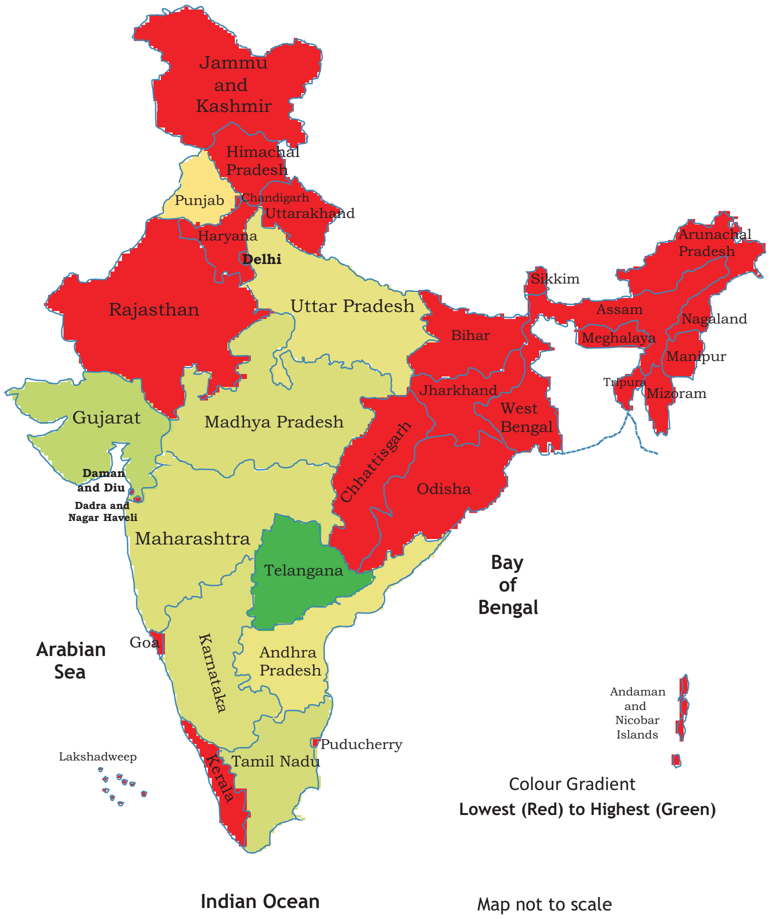
In 2016, the Government urged SEBI and the Department of Economic Affairs to collaborate and facilitate the issuance of municipal bonds for at least 10 cities within a year for the Smart Cities mission. In a bid to

[33] https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1881751

enhance transparency, increase trading activity and improve information dissemination within the municipal bond market, SEBI in 2017 amended its Issue and Listing of Debt Securities by Municipalities Regulations[34]. The amended regulations mandate issuers to demonstrate a record of surplus income for the three preceding years coupled with absence of defaults on any debt obligations within the past 365 days.

Pune Municipal Corporation became the first Indian city to list its bonds on BSE under the amended regulations in 2017 while Indore Municipal Corporation listed its bond on the National Stock Exchange's (NSE) debt market platform in 2018. In April 2021, Ghaziabad Municipal Corporation listed India's first green municipal bonds on BSE. NSE launched the country's first Municipal Bond Index in February 2023. In February 2023, Indore Municipal Corporation issued municipal bonds specifically targeted towards retail investors[35]. Overall, by October 2023, 12 cities had already raised more than ₹4384 crore through municipal bonds[36].

Figure 6: Statewise Exploration of Municipal Bonds in India



[34]https://www.sebi.gov.in/legal/regulations/feb-2017/securities-and-exchange-board-of-india-issue-and-listing-of-debt-securities-by-municipalities-amendment-regulations-2017_34210.html

[35]https://economictimes.indiatimes.com/markets/bonds/indore-municipal-corporations-green-bonds-oversubscribed-5-91-times-on-final-day/articleshow/97923247.cms?from=mdr

[36]https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1968528

In 2019, RBI allowed Foreign Portfolio Investors (FPIs) to invest in municipal bonds within the limits set for FPI investment in State Development Loans (SDLs)[37]. In November 2022, RBI released the Report on Municipal Finances that explored alternative sources of financing for municipal corporations as its theme. The Union Budget for FY24 announced further incentives for cities to improve their creditworthiness for bond financing through governance reforms for property tax and segregating a portion of the user charges on urban infrastructure.

Table 4: A Brief Timeline of the Indian Municipal Bond Market

Year	Development
1994	FIRE(D) project commenced
1996	Rakesh Mohan Committee recommends development of the municipal bond market in India
2001	Government of India issues guidelines for issue of tax-free municipal bonds to state governments
2005	Municipal bond issuance comes to halt after Government's push for JNNURM
2006	Central Government approved Pooled Finance Development Fund (PFDF) Scheme to provide credit enhancement to ULBs to access market borrowings based on their credit worthiness
2008	Working Session on Developing India's Municipal Bond Market: Constraints to overcome was organized by the Ministry of Urban Development jointly with Ministry of Finance
2008	RBI's DRG Study on "Municipal Finance in India – An Assessment" suggests easing of borrowing restrictions on ULBs and for financing urban infrastructure through exploring the options of: (i) municipal bond markets, (ii) specialized municipal funds and (iii) public-private partnerships.
2012	World Bank undertakes exercise to study regulation of municipal borrowing on the request of Ministry of Urban Development and Department of Economic Affairs
2014	The Government sets up Corporate Bonds and Securitization Advisory Committee to review the progress and provide recommendations for developing the municipal bond market
2015	SEBI notified separate framework for Issue and Listing of Debt Securities by Municipalities
2015	Launch of AMRUT scheme
2017	SEBI amends Issue and Listing of Debt Securities by Municipalities Regulations for smooth and transparent listing of municipal bonds
2017	Credit rating agencies launch new infrastructure project rating system with a new rating scale that focuses on the expected loss of project
2019	RBI allows Foreign Portfolio Investors (FPI) to invest in municipal bonds
2021	Ghaziabad Municipal Corporation listed India's first green municipal bonds
2021	Launch of AMRUT 2.0 scheme
2022	RBI released the Report on Municipal Finances
2023	Union Budget for FY24 announced the Urban Infrastructure Development Fund (UIDF) through use of priority sector lending shortfall to be used by public agencies to create urban infrastructure in Tier 2 and Tier 3 cities
2023	Indore Municipal Corporation launched municipal bond offering targeted towards retail investors
2023	NSE launched India's first municipal bond index for tracking municipal debt securities

The mandated credit ratings for cities and ULBs planning bond issuances have significantly enhanced issuer transparency in the segment.

[37]https://rbi.org.in/scripts/FS_Notification.aspx?Id=11545&fn=5&Mode=0

Table 5: Parameters for Credit Rating of Municipal Bonds in India

Economic Factors	Legal Set-up	Administrative Factors	Accounting and Auditing Practices	Debt Factors	Financial Indicators	Finances of State Government
Nature of local economy	Borrowing powers and limits	Organizational structure	Systems of accounting	Composition of current debt burden	Fiscal data on the issuer	Trends of revenue surplus/deficit, revenue deficit/Gross Fiscal Deficit
Local employment and income characteristics	Pending litigation's or disputes	Division of responsibilities between the Administrative and Political wings	Industrial relations.	Interest and debt service coverage ratios	Budgetary and planning processes	Interest payment/Revenue expenditure Debt servicing/Gross transfers
Development indicators and current availability of urban services.	Powers of taxation	Quality and continuity of management, extent of delegation	Nature and quality of audit.	Past debt service performance	Tax base and past trends	Non-development exp./Aggregate disbursement Tax revenues/Revenue exp.
	Powers to levy user charges	Depth of management extent of delegation		Evaluation of credit enhancement mechanisms, if any	Composition and timing of revenue and expenditure, past trends	Gross transfers/Aggregate disbursements
Project Viability	Actual control over revenue sources considering the political implications of tax and user charge	Tax billing, collection and enforcement mechanism		Commitments/encumbrances on cash flows	Trends in tax rates and user charges	Trends in overall deficits and Gross Fiscal Deficits.
Constitution of the project as a departmental project or an SPV	hikes	Track record in project implementation		Degree of reliance on short-term borrowings	Extent of cost recovery on various urban services	
Sources and uses of funds for project being financed	Collection enforcement mechanisms under the Act and restrictions on operations	Degree of autonomy enjoyed by the local body		Maturity matching profile	Financial flexibility to meet unforeseen contingencies	
Analysis of projected revenues and expenditure for the tenure of the instrument as well as the		Management Information System		Recourse available to lenders, in case of default, as per the Act.	Revenue surplus/deficit	
underlying assumptions		Industrial relations.			Extent of State budgetary support	
Revenue flow pattern from the project and extent of cost recovery					Operating and collection efficiency	
Committed budgetary support and other credit enhancement measures					Sources and allocation of capital expenditure, trends	
Sensitivity analyses to user charge hikes, cost of borrowing etc.					Extent of borrowings, if any, from non-governmental sources and the degree of compliance with the credit discipline imposed by such lenders.	
Evaluation of credit enhancement measures, if any.						

Source: CARE Ratings

6. Challenges to the Municipal Bond Market in India

Despite supportive measures over recent years, the municipal bond market in India remains underdeveloped. As on April 30 2024, the size of total outstanding municipal bonds in India was about ₹2484 crore[38], a minuscule amount compared to the ₹113.95 lakh crore outstanding of central government market loans (G-Secs and Treasury Bills) and about ₹56.70 lakh crore outstanding of marketable securities issued by the State State Governments/UT.

Table 6: Key Challenges in India

India's Federal Structure	Borrowing capacity of ULBs is constrained by state legislation that dictate which entities can borrow, the amount, purpose, term, and required approvals.
Lengthy Process	Borrowing by ULBs often requires case-by-case approval from the state government. This process is not very transparent and lengthens timelines.
Revenue Stream	Many of the local taxes have been subsumed under the GST since 2017. Local autonomy in formulating tax policies is severely limited. Further, the revenue streams of state governments and ULBs in India often overlap constraining the debt servicing capacity of ULBs. The World Bank has highlighted that cost recovery by Indian urban utilities on average also appears to be below many comparator countries including large federal countries (Brazil, Mexico) and other large middle-income countries (Colombia, China, Egypt, Jordan, Russia, South Africa, Vietnam).
High Cost	High transaction costs associated with accessing the capital market include management fees, royalty fees and underwriter's expenses.
Lack of Transparency	There is no consolidated information with regard to the financial position or financial performance of ULBs along with opaque governance structures. Lack of well-defined performance standards and accountability mechanisms within the municipal system discourages potential investors.
Illiquidity of Bonds	While municipal bonds issued since 2017 have been listed either on the BSE or NSE, the market is highly illiquid, primarily on account of the small issuance sizes.

7. Way Forward

The Indian debt market has evolved significantly in recent years with the introduction of new products as well as the focus on expanding the access to retail investors by creating an enabling environment through online trading platforms, reduction in the face value of corporate bonds from ₹1 lakh to ₹10000 and increased disclosure requirements for issuers. SEBI's additional disclosure requirements for issuers as well as the mandated credit ratings under the AMRUT programme have also enhanced the transparency in the municipal bond market.

A McKinsey Global Institute report estimates that cities could generate 70 percent of net new jobs created by 2030 and drive a near fourfold increase in per capita incomes across the nation[39]. New Delhi is projected to

[38] https://www.sebi.gov.in/statistics/municipalbonds.html
[39] https://www.mckinsey.com/featured-insights/urbanization/urban-awakening-in-india

overtake Tokyo as the world's most populous city by 2028[40]. The UN expects that by 2050, two out of every three people are likely to be living in cities or other urban centres, with India driving the change by adding 416 million urban dwellers. As the demand for infrastructure grows among Indian cities, ULBs must further explore alternative and sustainable modes of resource mobilisation.

Based on the US experience, Indian ULBs should actively explore public issues of tax-free municipal bonds targeted at retail investors. Innovative structures such as green bonds can be pitched to a wider international investor base capitalizing on the international interest generated in Indian bonds following the inclusion of Indian FAR G-Secs in prominent global bond indices. Municipal bonds that offer higher yields over similar maturity G-Secs may also find takers in commercial banks under RBI's new investment norms that came into effect from April 1, 2024. While overhauling the tax/revenue streams as well as the administrative federal structure will take time, ULBs can use the recent developments in the Indian debt market to their advantage and explore fund raising for infrastructure development through municipal bonds.

[40]The World's Cities in 2018 https://population.un.org/wup/Publications/