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A Case for Developing the Municipal Bond Market in India

Introduction

As India rapidly urbanizes, urban governance and management in general, and meeting the financial needs of urban areas in particular, have acquired greater urgency. Sankhe et al. (2010: 15) have projected that by 2030, 590 million Indians will live in cities, more than double the corresponding number in 2001; 91 million urban households will be middle class with higher expectations of quality and quantity of urban amenities; 70 per cent of net new employment will be generated in cities; US$ 1.2 trillion in capital investments, equivalent to 69 per cent of India's 2010 GDP, will be required to meet urban needs; 2.5 billion sq mt of roads will need to be paved, 20 times the capacity needed in the past decade; 7,400 km of metros and subways need to be constructed, 20 times the capacity added in the past decade; and affordable housing, schools, water, electricity and other amenities will be need to be provided to the rapidly expanding urban populace.

According to the Report on Indian Urban Infrastructure and Services (2011: 70), prepared by the Government of India-appointed High Powered Expert Committee chaired by Dr. Isher Judge Ahluwalia, between 2012 and 2031, India will need to invest Rs. 39,187 billion (US$ 835 billion) at 2009–10 prices, equivalent to 48 per cent of the country's 2010 GDP (see Figure 1), to meet its urban infrastructure requirements. In sharp contrast, the report estimated that for 2011–12, India's municipal expenditure would be equivalent to only 1.59 per cent of GDP, and less than a third would be met from own revenue sources (ibid.: 154).

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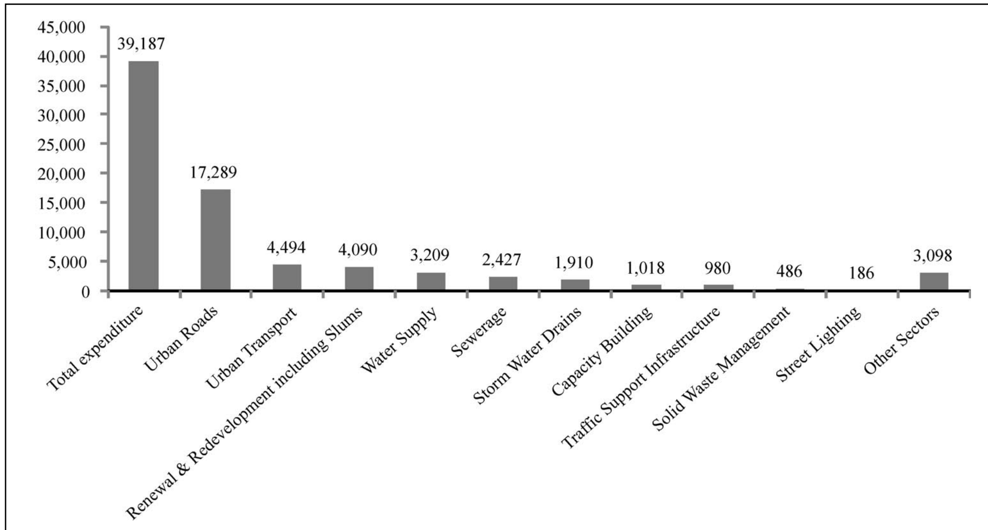
Figure 1: **Estimates of Urban Infrastructure Investment Requirements, 2012–31**

(In Rs. billion at 2009–10 prices)



Source: Government of India (2011).

While the projections of urban financing needs may differ among analysts, there is general consensus that substantially higher levels of financing on urban amenities will be required in the future. This task will need to be accomplished in the context of a declining gross domestic savings-to-GDP ratio, which peaked at 36.8 per cent in FY 2008, but is estimated to be much lower at 28.6 per cent in FY 2012 (Poddar and Shukla, 2012: 3). They argue that the sharp deterioration in India's public finances, with public sector savings-to-GDP ratio declining from about 4.8 per cent in FY 2008 to near zero in FY 2012, was primarily responsible for the decline. From a macro-economic perspective, reversing the declining trend in India's savings rate would be essential for meeting the country's urban financing needs. This would require fiscal consolidation at the Centre and in the states, and improved financial management of state-owned enterprises.

Better expenditure management could also assist by increased savings in budgetary resources. The Government of India proposes to introduce the Public Procurement (PP) Bill, 2012 that aims to regulate government purchases of above Rs. 50 lakh through a transparent bidding process.[1] Similar legislative or other arrangements for urban local bodies (ULBs) merit consideration.

[1] The draft Public Procurement Bill is available online at: http://www.nicf.gov.in/pdf/revised DraftPPBill.pdf.

Infrastructure financing needs of municipalities and other ULBs in India have traditionally been met from grants and transfers from higher levels of government, state-owned institutions, and to a much lesser extent by bilateral and multilateral agencies providing grants and loans. By the mid-1990s, ULBs realized that these sources of funds were no longer sufficient to cater to their increasing infrastructure requirements. Additionally, as a consequence of the Constitution (74th Amendment) Act, 1992, ULBs had been entrusted with the responsibility of provision of services. However, due to the lack of funds to undertake such provisioning, it has been "a scenario of growing fiscal imbalance between function and finance (Venkatachalam, 2005: 4)."

In spite of the growing fiscal imbalance, and the fact that urban amenities directly impact the quality of life of urban residents, very limited innovations in urban financing sources and in governance structures have taken place since Independence (Garg, 2007). State governments have been reluctant to devolve powers to urban and local bodies, even in such large cities as Mumbai.[2]

The grants for urban areas are largely channelled through the state governments. The accounts of local bodies in India are not consolidated at either the state or the national level (Garg, 2007). The Eleventh Finance Commission, in its recommendations for the 2000–2005 period, had suggested a common accounting framework for local bodies, but progress on adopting such a framework has been reportedly limited (ibid.).

It is evident that the requirements for financing and managing urban amenities in India on the scale needed cannot be met through current methods and management capabilities. ULBs will need to acquire much greater capabilities in obtaining resources from both conventional sources, such as property tax, profession tax, cost recovery, user charges, entertainment tax and license fees; and non-conventional sources—increasing the net use value of land and other real estate, innovatively creating new property rights and using existing rights more effectively, deploying human resources more productively, treasury management, various modes of public-private partnerships (PPPs), and municipal bonds. The Report on Indian Urban Infrastructure and Services (2011) has also recommended strengthening of the capabilities of ULBs to generate

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[2] The budgeted expenditure of the Municipal Corporation of Greater Mumbai (MCGM) for 2012–13 is Rs. 266 billion, equivalent to 2.1 per cent of the total expenditure of the central government for 2012–13; while its balance sheet size, as of 31 March 2010, was Rs. 620 billion, placing it in the league of the top 35 companies in India by assets and revenue size (Viswanathan, 2012b).

revenue from a mix of conventional and non-conventional sources. These include establishing exclusive tax bases, rationalization of property taxes, unlocking of land value, including monetization of underutilized public land assets and betterment levies. The report briefly discusses municipal bonds as a financing source.[3]

It is in the foregoing context that this paper analyzes the role of municipal bond markets in financing urban infrastructure and amenities. The next section briefly describes municipal bonds as an avenue for financing urban infrastructure. This is followed by an overview of the size and structure of the municipal bond market in India. The fourth section discusses the modalities of the municipal bond market, including the major supply-side and demand-side constraints that need to be addressed in developing the market. Thereafter, certain reform directions are suggested. The final section provides concluding remarks.

Municipal Bond As an Avenue for Financing Urban Infrastructure

A municipal bond is an evidence of the obligation of a ULB to repay a specified principal amount on a certain maturity date along with the interest, at a stated or formula-based rate (Dirie, 2005: 273). Financing based on borrowing from the capital markets is expected to impose market discipline as only those projects would be undertaken that give a sufficient return on the investment and which lay emphasis on mitigation of risk and strong institutional structures (Mehta and Satyanarayana, 1999).

Municipal bonds have advantages in terms of the size of borrowing and the maturity period, often 10 to 20 years. Both these features are considered ideal for urban infrastructure financing. Further, if appropriately structured, municipal bonds can be issued at interest costs that are lower than the risk-return profile of individual ULBs. While the initial transaction costs of accessing this market are high—since a ULB needs to invest in meeting the pre-requisites of its first bond issue—as the issue size and frequency increase over time, competencies develop, thereby reducing the transaction costs.

Peterson (2003) elaborates on the benefits of municipal bonds over borrowing from a commercial or municipal bank. First, banks must establish a 'relationship banking' scenario; however, purchasers of bonds are not obligated to have a

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[3] The municipal bond financing mode was also recommended in 1996 by the Expert Group on the Commercialization of Infrastructure, also known as the Rakesh Mohan Committee.

long-term relationship with the issuer. Moreover, market competition of this kind that focuses on the cost of capital is expected to produce savings for experienced issuers. Second, while the loan departments of banks are required to possess proprietary information regarding a particular ULB—and they must develop techniques to ascertain the creditworthiness of the ULB—a municipal bond market relies on public disclosure of financial and other information by the ULB. Credit rating agencies use extensive methodologies to assess the creditworthiness of issuers, including ULBs, in bond markets. Third, most commercial banks focus on short-term lending, which is appropriate for incremental financing but not for long-term financing.

Further, debt financing has advantages over grants from higher levels of government. As highlighted by the Report on Indian Urban Infrastructure and Services (2011), debt financing entails an obligation to repay. Hence, ULBs are constrained to duly plan, design and execute projects with the objectives of obtaining adequate revenues, minimizing operation and maintenance (O&M) costs, and generating a surplus over the O&M costs, which is sustained over the lifetime of the asset created (GoI, 2011: 145). On the other hand, grants have a tendency to result in soft budget constraints, leading to wasteful expenditure.

The municipal bond mode of financing allows both the borrowers and the lenders to have greater flexibility. Local government bond issuers are likely to be less restricted by annual budget cycles and the capital grants' decisions of higher levels of government (Mehta and Satyanarayana, 1999). Further, they can unbundle their functions, which enables them to make separate decisions about the placement of their liquid deposits and about obtaining advice regarding the financial and/or technical components of their infrastructure projects (Peterson, 2003). However, it should be noted that the danger of such unbundling is that a credit partner who understands various aspects, especially the financial impacts of different activities of the ULB on each other, would be absent (Peterson, 2003). The flexibility available to the lenders arises out of the possibility of trading municipal bonds prior to the end of their tenor in the secondary bond market. Liquidity in such a market is essential for the development of the primary municipal bond market.

However, it ought to be noted that the afore-mentioned advantages of a municipal bond market can only be realized when a sound fiscal and regulatory framework is established to create an enabling environment for developing the market. Such a framework would need to clearly address various aspects of

this market, such as ex ante borrowing activities of ULBs, ex post procedures regarding municipal default and insolvency, and domains that involve shared responsibilities between different levels of government in a federal state (GoI, 2011: 147).

Municipal Bond Market in India: Size and Structure

Since 1997, 25 municipal bond issues have taken place in India, which have included taxable and tax-free bonds and pooled financing issues, mobilizing funds to the tune of nearly Rs. 14 billion, approximately US$ 0.3 billion (Sheikh, 2011: 12). The bond releases by ULBs in India cannot be classified as either revenue bonds (secured exclusively by the revenues from a certain project, which uses the bond proceeds for financing) or as general obligation bonds (backed by the complete taxing power of the municipal government). Instead, they have been referred to as structured debt obligations (SDOs). Their distinguishing feature is that they are issued conditional on the borrower pledging or 'escrowing' certain sources of revenue for debt servicing. Bond repayment is, then, given the highest priority and kept independent of the ULB's overall financial and fiscal position (Pethe and Godke, 2002).

It ought to be noted that these municipal bond issues have been distributed among only a few ULBs, with a quarter raised by the Ahmedabad Municipal Corporation, and around one-sixth each by the Nashik Municipal Corporation, and by ULBs around Bangalore (Asher and Sheikh, 2011). The tenors of the issues have varied, being mostly in the range of 5 to 10 years; project-specific pooled issues have had a tenor of 15 years. Of the 25 municipal bond issues, 17 have been to fund water supply and sewerage projects and 6 have been used to fund road works (Sheikh, 2011: 37–38). This is possibly because user charges or tariffs in such infrastructure projects are easier to enforce and the amount and frequency of expected revenues can be predicted with some certainty.

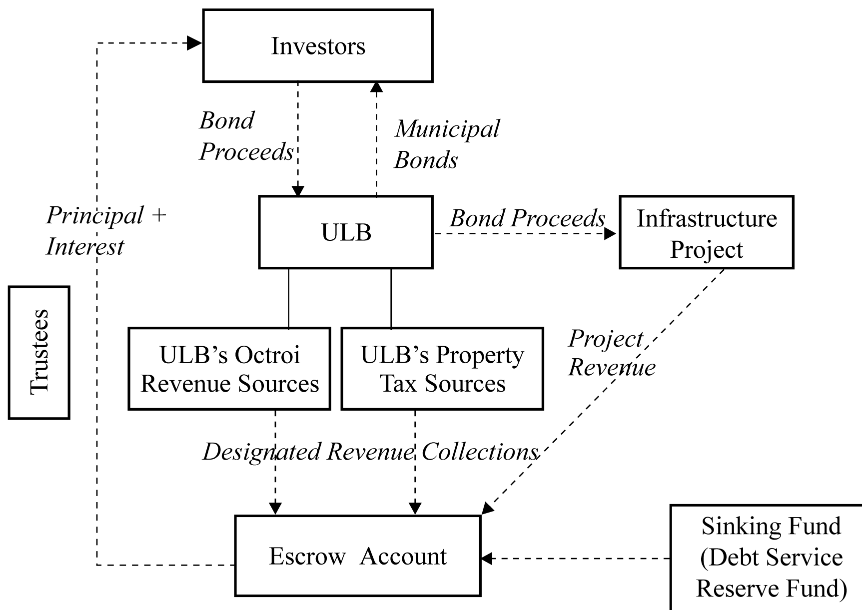
Models of Municipal Bond Financing

The models followed across Indian ULBs for issuing bonds have many similar features. These were studied to generate a chart showing the flow of funds (see Figure 2).

While most components of the generic municipal bond model used by Indian ULBs, shown in Figure 2, are self-explanatory, certain factors need to be highlighted. Debt servicing has been undertaken by using the revenues of the

respective ULB, such as octroi[4] and property tax, which were deposited in an escrow account for the purpose. These were designated beforehand as collateral and served as the main credit enhancement measures. Additionally, in some cases, revenues from the infrastructure project financed by the municipal bond issue were also routed to the escrow account; and a debt service reserve fund (called the sinking fund) was also established to supplement the repayment in case the other revenues fell short.

Figure 2: **Flow of Funds for an Indian ULB's Municipal Bond Scheme**



Source: Adapted from Pradhan (2003).

When ULBs are not found to be creditworthy on a stand-alone basis, 'pooled financing' may be undertaken. Under such a scheme, funds raised from bonds are loaned out by the issuers (usually, called bond banks) to more than one borrower (in this case, more than one ULB). These borrowers should not be related among themselves (Fahim, 2010). Undertaking pooled financing is in itself a credit enhancement for smaller ULBs. Pooled financing needs to be combined with project design and management expertise. It also requires enhancing the competence of ULBs to meet the pre-conditions of a bond issue, such as accounting, management information systems, and procurement reforms.

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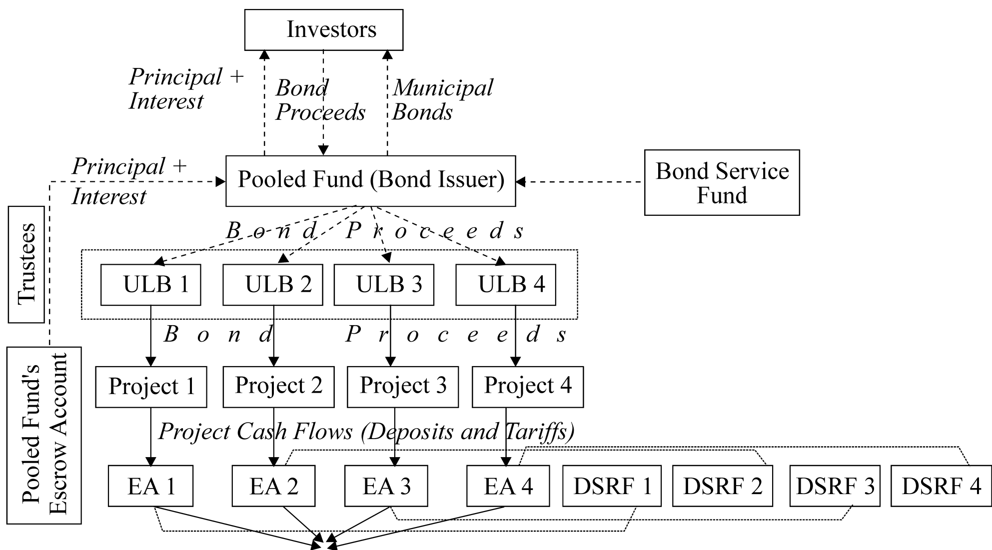
[4] Octroi is defined as a levy on goods that are brought into the limits of a city for consumption, use or sale within the city (Vaidya and Johnson, 2001).

The components involved in the flow of funds in a pooled financing structure are illustrated in Figure 3. For debt servicing in the case of pooled financing in India, escrow accounts were created at the ULBs, which collected the deposit (one-time) and tariff (monthly) charges from the respective projects. The projects were funded using the proceeds from the bond issue. Hence, the bonds were similar to revenue bonds. Additional credit enhancements included creation of debt service reserve funds at each of the ULBs where the tax and other revenue collections of the ULB are remitted. Further, in the case of a few issues, provision for state finance commission devolutions (SFCD) intercept was made, under which a shortfall in the payments into the ULBs' debt servicing accounts would be made up from future devolutions from the State Finance Commission that accrue to the ULBs. Further, a Bond Service Fund, in which state funds are held in the form of liquid securities, may be used by the pooled fund if the afore-mentioned means of debt servicing were to fail.

Figure 3: **Flow of Funds for a Pooled Financing Scheme in India**



Source: Sheikh (2011).

Note: EA = Escrow Account; DSRF = Debt Service Reserve Fund.

The Experience

As is evident from the two models outlined above, the crucial credit enhancement undertaken was the creation of escrowed accounts to ensure that there was a dedicated account from where repayment for the municipal bond

issue would be made. However, in some cases, it is believed that there may have been 'overcollateralization' due to several layers of credit enhancement (Chattopadhyay, 2006), which may have even included pledging of municipal properties. A few issuances such as those by the ULBs in Bangalore (1997), Indore (2000), Hyderabad (2003) and Chennai (2003 and 2005) carried guarantees from their respective state governments as their escrowed accounts were insufficient as credit enhancers (Srikumar, 2010).

While the first bond issue by the Ahmedabad Municipal Corporation attracted a few individual investors, for all subsequent municipal bond issues, the investors have been institutional investors such as public sector banks and companies and insurance companies.

Political support has been found to be significant at two levels for municipal bond issuances. Firstly, each ULB needed to take permission from the respective state government (even if it was not giving an explicit guarantee), followed by permissions from the Securities and Exchange Board of India (SEBI). The ULB also had to comply with the provisions of the Government Securities Act, 1920. Further, support from local elected representatives has been a necessary condition for the success of bond issues by the ULBs in Ahmedabad, Nashik and Ludhiana, to enable the bureaucracy to undertake rigorous measures associated with engaging with the municipal bond market; and the lack of it has led to failure in the cases of bond issues by the ULBs in Pune and Vijayawada (Bagchi, 2001).

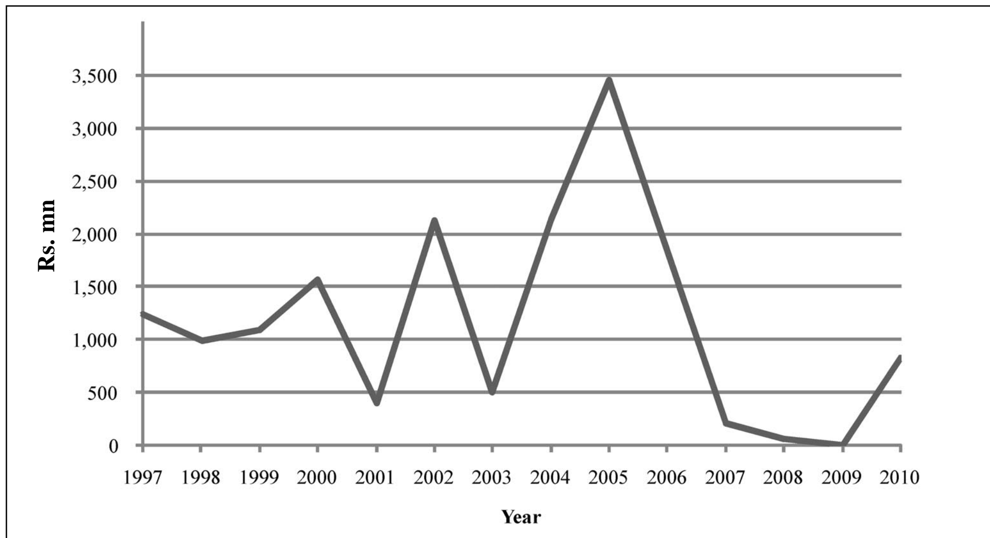
Even though the funds raised on the municipal bond market have been miniscule in relation to the large investment requirements, certain non-financing benefits have accrued to the ULBs in the process of issuing municipal bonds. These have included, most significantly, regular disclosure of financial and non-financial information pertaining to the ULB concerned and the introduction of accounting reforms.

ULBs that have accessed the bond market have gathered experience, which they could leverage while issuing subsequent bonds. This has pertained to financial and fiscal planning; preparation and implementation of infrastructure projects, as highlighted by the experiences of the Ahmedabad Municipal Corporation (Pradhan, 2003; Srikumar, 2010) and the Nashik Municipal Corporation (Bagchi, 2001); understanding when to access the market; co-ordination across different entities; and enforcement of the conditions stated in bond-related documents as highlighted by the experience of the Tamil Nadu Water and Sanitation Pooled Fund (Sheikh, 2011).

Trend in Municipal Bond Issuance

The trend in the value of municipal bond issues from 1997 to 2010 suggests that there was much enthusiasm until 2005; however, a sharp fall in the value of these issues has been observed in the past few years (Srikumar, 2010; Vaidya and Vaidya, 2008). This is shown in Figure 4.

Figure 4: **Trend in Value of Municipal Bond Issues in India, 1997–2010**



Sources: Srikumar (2010); Vaidya and Vaidya (2008); information memoranda of pooled financing issues by Tamil Nadu Urban Development Fund (TNUDF) for the years 2002, 2008 and 2010; information memoranda for municipal bond issues by the Chennai Metropolitan Water Supply and Sewerage Board and the Chennai Municipal Corporation.

For financing investment on a scale as large as US$ 800 billion (GoI, 2011), fiscal transfers from the higher levels of government to ULBs, while critical, will not be sufficient; hence, the significance of unconventional modes of finance is expected to increase. While the municipal bond market remains at a nascent stage, the Government of India realizes that the debt route could become increasingly important in the future. As part of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), GoI has made some efforts to enable ULBs to access the bond market. Credit ratings for municipal corporations and municipal councils of the 63 JNNURM cities are being released regularly. The credit ratings released by the union Ministry of Urban Development for April 2010 suggested that nearly 40 per cent of them were found to be in the investment grade (MoUD, GoI, 2010: 62).

However, the fact that none of these ULBs have accessed the bond market recently implies that there are major supply- and demand-side constraints limiting its use.

Indian Municipal Bond Market: Supply- and Demand-Side Constraints

Broadly, the constraints in the municipal bond market in India can be classified as those on the supply and those on the demand side. The constraints on the supply side inhibit ULBs from issuing bonds and those on the demand side limit investors (individual and institutional) from participating in the municipal bond market.

Supply-Side Constraints

There exists a contradiction between 'sound fiscal health' indicated by the fiscal surpluses of ULBs and a high level of under-spending due to statutory obligations, which bind ULBs to restrict their expenditures; moreover, the ULBs are not granted liberal permission by their respective state governments to incur debt (Mohanty et al., 2007). Analysis undertaken by them of the financials of 35 major municipal corporations reveals that most of them generate revenue surpluses and, overall, the resource gaps are not very large; however, spending by all the municipal corporations is lower than the level required to provide and maintain a minimum level of civic amenities. Moreover, Mathur (2006: 87) finds that under-spending in Indian cities is to the tune of about 130 per cent as compared to the Zakaria Committee (1963) norms for municipal expenditure at 2001–02 prices.

Absence of buoyant sources of revenues for ULBs increases their reluctance to borrow.[5] A study by Pethe and Lalvani (2006) emphasizes that due to insufficient devolution of taxation powers, the tax revenue powers of ULBs in Maharashtra are highly restricted. Further, it finds that the growth of revenues is also limited by the few non-tax handles available to ULBs. The unpredictable nature of the flow of grants from the state government has also inhibited project management efficiency, and hence the suitability of bond finance. Thus, the current institutional arrangements of state governments constrain the capacities of even the 'financially better off' ULBs to access the municipal bond market.

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[5] This is especially relevant because octroi was the only tax under the complete jurisdiction of local city governments. However, as of May 2012, octroi has been abolished in all the states of India except Maharashtra.

The mismatch between revenues and responsibilities continues at the level of ULBs, leading to a severe vertical fiscal imbalance. Mohanty et al. (2007) found that out of the 18 functions to be performed by municipal bodies in India, less than half of them had a corresponding financing source, which would heavily saddle the ability of ULBs to deliver. Additionally, revenues are also restricted as state governments continue to decide crucial parameters such as user charges and property tax coverage (Chattopadhyay, 2006).

It is ironic that even though there is a lack of own financing sources for ULBs to meet their expenditure needs, and the probability of debt default of major municipal corporations is found to be low on parameters such as interest coverage ratio, debt coverage ratio and ratio of debt repayment to revenue receipt (Mohanty et al., 2007), the access of municipal corporations to borrowed funds is limited.

The JNNURM grants have crowded out funds that could have been borrowed from the market. Though the mission was supposed to reduce grant support to creditworthy cities and increase their borrowing from the market, it has instead acted as an impediment. This is substantiated by the fact that borrowings in the municipal bond market peaked during 2002–05 (see Figure 4). Yet in 2007–08, two years after the introduction of the JNNURM, ULBs had incurred capital expenditures to the tune of Rs. 180 billion, of which only 3 per cent was in the form of borrowing (Parikh, 2011: 58). The Report on Indian Urban Infrastructure and Services (2011) also articulated that one of the reasons for this could be the ‘soft money’ available for project financing through JNNURM.

Presently, there is a skills deficit in the staff employed at ULBs, especially with regard to understanding the commercial borrowing market and the processes involved in creating SDOs, as well as planning capital expenditures over a long term, i.e., a time period of 15 to 20 years, to enable improved capital absorption capacity; this deficit is leading to ad hoc efforts. Further, though a common accounting framework for ULBs was introduced in the National Municipal Accounts Manual (NMAM) in December 2004 and almost all the states agreed to this (GoI, 2009: 169), the framework has not been implemented across all the ULBs. In some states, the manuals conforming to the NMAM have not been prepared; in a few, the manuals have been prepared but not notified; and in other states, the requisite training has not been provided to ULBs to adopt the manual.

Demand-Side Constraints

Indian financial market conditions are possibly diverting potential investors away from municipal bonds and restricting diversification of their funds. The borrowing market in India is characterized by the existence of a bipolarity due to which, on the one hand, long-term funds, including pension funds, funds of the Life Insurance Corporation (LIC) and provident funds of the Employees State Insurance Corporation (ESIC), and funds from the Reserve Bank of India (RBI) and commercial banks, are routed towards buying central government securities (Wells and Schou-Zibell, 2008); and on the other hand, short-term funds are deposited in banks. Institutional investors with long-term funds and commercial banks face regulatory constraints (such as mandatory holding requirements) on purchasing municipal bonds (USAID, 2011). Attractive returns on the Government of India securities also discourage investments in municipal bonds.

In addition, the appetite of investors for municipal bonds is low as they are believed to be relatively illiquid instruments (Vaidya and Vaidya, 2010). This is mainly due to a missing secondary market for these instruments, as opposed to established secondary markets (though, they remain limited in size) for the bonds issued by the central government and state governments (Chattopadhyay, 2006), which result in investors having to hold municipal bonds until maturity.

There remains a divide between lending for the priority and non-priority sectors in the capital market.[6] However, urban infrastructure is not listed as a priority sector. This could be diverting investment away from urban infrastructure.

As a result of the absence of a culture of public disclosure across ULBs, prospective investors tend to place little reliability on the information given by ULBs. A recent study of the websites of the top 10 cities in India (in terms of population) revealed that though most of them had published their budget information online, none of them had disclosed their audited financial statements for the year ended on 31 March 2012 (Viswanathan, 2012a).

While central government bonds are primarily regulated by the Reserve Bank of India and the corporate bond market is primarily regulated by SEBI, and

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[6] The RBI has prescribed that banks operating in India have to lend a certain proportion of their funds for development-related activities. The activities covered are said to be under the "priority sector". They include agriculture, small-scale industries, small businesses, education and housing. Presently, domestic banks, belonging to both the public and the private sectors, have to lend 40 per cent of their net bank credit (NBC) to the priority sector; and foreign banks have to lend 32 per cent of their NBC to the priority sector.

some investors are regulated by the Insurance Regulatory and Development Agency (IRDA) and the Pension Fund Regulatory and Development Authority (PFRDA) (Wells and Schou-Zibell, 2008); there is little clarity on who is the regulator of the sub-national bond market, including the municipal bond market. Moreover, there is currently no insolvency law in India which can be applied to local government bodies. As the Government of India (2011) Report highlights, the municipal bond market is faced with a moral hazard as much of the regulatory responsibility ends up with the municipal borrowers; the borrower-lender interface lies with the state governments; and most of the responsibility affecting lenders lies with the Government of India. Therefore, in case of municipal insolvency or default on bond repayments, it is difficult to envisage who would bail out the concerned ULB (GoI, 2011). In short, the confidence that investors have in the municipal bond market is reduced due to the absence of a specific regulator and clear regulations.

Hence, investors tend to perceive municipal bonds as risky investments (Vaidya and Vaidya, 2010). This perception is further accentuated by the fact that often there is discontinuity in the top management of ULBs and changes in their leadership, which result in changes in the fiscal and financial priorities (USAID, 2011).

Reform Directions

The previous discussion suggests that several reforms are needed to broaden and deepen India's municipal bond market. Even then, it is likely to remain one among several modes of financing urban infrastructure and amenities. The Report of the Sub-Committee on Financing Urban Infrastructure in the 12th Plan, submitted in March 2012, has also acknowledged that regulatory, supply- and demand-side constraints need to be addressed to encourage municipal borrowing as a significant source of funding for ULBs (MoUD, GoI, 2012: 48). Additionally, the report has also noted that the development of municipal bond markets took a long time in most countries, including in the United States, where it took almost a century to develop (ibid. 48). Thus, other urban governance reforms, as well as public financial management reforms, will need to be pursued simultaneously; moreover, ULBs will need to acquire greater competence in project design and management skills and in pursuing PPPs of various types. Reforms that will have a direct impact on the municipal bond market in India are suggested below.

First, capacity building of ULBs in planning capital investments (USAID, 2011) and financial management, including sound accounting and budgeting systems,

should be given priority to tackle the supply-side constraints. There is room for specialized financial institutions, including those in the public and joint sectors, that have acquired project design and management expertise and can access a mix of financing, both commercial and concessional, at attractive terms, to prepare ULBs to access the municipal bond market. The Report of the Thirteenth Finance Commission emphasized that "proper accounting and audit mechanisms and adequate transparency would be critical for the success of the municipal bond issues (GoI, 2009: 183)". Specifically, municipal accounting, audit and regular disclosure of financial statements and information relating to prevailing service levels require the urgent attention of policy-makers and urban administrators. Further, to strengthen the creditworthiness of ULBs, certain institutional and administrative reforms would have to be undertaken, including increased autonomy to ULBs to initiate realistic tax rates and user charges for the services provided by them, and permitting ULBs to pursue less rigid employment practices (Mohanty et al., 2007). Such reforms are expected to impact the demand side as well.

Second, if capital grants to those ULBs which can access the municipal bond market are structured in a manner that requires a mix of grants, own sources of revenue, and debt financing, including through the issuance of bonds, then the supply of municipal bonds may expand, while improving public financial management.

Third, municipal bonds could be given the status of 'public securities' so that they become admissible for statutory liquidity ratio (SLR) investment by commercial banks. The urban infrastructure sector could also be included as a priority sector for the purpose of lending. This is expected to increase the demand for municipal bonds from institutional investors.

Fourth, the existing regulatory framework needs to undergo specific changes to incorporate municipal bonds. Steps to be undertaken could include the following: *(i)* allow institutional investors to invest in long gestation projects such as urban infrastructure projects (Pethe and Godke, 2002); *(ii)* develop public disclosure guidelines for ULBs by an established and experienced institution such as SEBI (Joshi, 2011); *(iii)* reduce state government guarantees; and *(iv)* establish borrowing limits for ULBs and strictly enforce them (Joshi, 2011). These would permit the market to discipline the financial and fiscal behaviour of ULBs and would ensure that the option to borrow from the market is used judiciously.

Fifth, introduction of a bankruptcy law applicable to urban entities (Joshi, 2011) and regulatory support to develop a secondary market for municipal bonds,

which will allow for arbitrage opportunities, treasury operations, balancing portfolios and asset-liability management (Pethe and Godke, 2002), and would also increase the demand for these debt instruments. In this regard, the Government of India (2011) Report recommends that a clearly defined fiscal and regulatory framework for municipal borrowings would be helpful in encouraging greater willingness by the ULBs to access the bond market, while favourably impacting the risk perceptions of the demanders of such bonds.

Sixth, promotion of standard bond models based on the past experiences of ULBs would enable the creation of a standard benchmark for a municipal bond issue structure and easier comparisons and pricing (USAID, 2011).

Concluding Remarks

The analysis in this paper has demonstrated that India's future will be increasingly urban and its implications, including for meeting urban infrastructure needs, must be internalized in the thinking and actions of all stakeholders. ULBs in India will need a policy and regulatory environment in which they can enhance their capacities to generate resources from a range of conventional and non-conventional sources. It is from this perspective that broadening and deepening of the municipal bond market in India must be viewed. Even a modest source of funding, which municipal bonds are likely to attain with reforms, can be helpful in meeting India's urbanization challenges.

There is a need to experiment with different modes of design and structuring of municipal bonds, including pooled funding methods. For example, financial intermediaries created to facilitate the municipal bond market should not be limited to a single lending instrument and should have the ability to adjust lending instruments and lending terms to enable them to meet the demands of borrowers. Too rigid structures could inhibit innovations in meeting the differing needs and capacities of ULBs.

Based on the analysis of supply-side and demand-side constraints inhibiting the growth of the municipal bond market in India, the paper suggests broad reform directions. These range from a better fiscal and regulatory framework governing ULBs, to substantially improving the competencies of ULBs in areas such as accounting, budgeting and procurement systems, and in project conception and management, to measures to increase the demand for municipal bonds as an asset class for provident and pension funds, and for insurance companies. Specialized financial institutions, including those in the public and joint sectors, may find preparing ULBs for the issuance of municipal bonds an

attractive business opportunity. They have the potential to better blend a mix of financing, both commercial and concessional, and to generate the scale required to deploy the requisite expertise.

The extent to which India succeeds in meeting the challenges of providing urban infrastructure and amenities will determine the quality of life of an increasing proportion of the nation's population. As urban areas are more conductive to agglomeration economies and innovations, the quality of life in India's cities will also have a significant impact on the country's growth dynamics. Thus, the broadening and deepening of the municipal bond market, even if it can only make a modest contribution to the projected financing needs of urban India, merits serious consideration. However, this task should not be perceived as only a financial sector initiative; it should be underpinned by efforts to enhance the competence and improve the fiscal and regulatory environment of municipalities and other ULBs.

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