



Chapter 24

Asia India

Experiments in local governments accessing the private capital markets provide promising results.

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Lessons

Experience in India with municipal credit is limited primarily because of a lack of decentralization beyond the state level. Most states, though financially weak, have significant autonomy—but this autonomy is not passed down to municipalities. Some states have taken steps to augment the power of lower levels of government, however, and these few exceptions have added positive chapters to the evolving story of local credit in India. The formation of municipal corporations with borrowing powers and the creation of successful municipal development funds are promising beginnings.

Although municipal governments continue to depend on revenue transfers from state governments, they have been assigned significant expenditure responsibilities, compounded in many cases by increasingly pressing infrastructure needs. Meanwhile, the country's debt market remains dominated by

the central government and public enterprises. To establish an effective municipal bond market, the government needs to create tax incentives for investing in bonds and regulations that support debt issuance, such as by providing for guarantees and establishing a market regulator. In the absence of these conditions, some states and municipalities have turned to financial intermediaries for funding for urban infrastructure.

While only the central government can tap international credit markets, local governments may borrow domestically. Ahmedabad was a pioneer in issuing bonds. The city undertook reforms that strengthened municipal tax revenue and sought a credit rating to enable it to issue bonds. The improvement in the city's fiscal position won it a strong credit rating, and its successful issuance of debt provided a model for other cities in India.

Two entities have facilitated municipal borrowing. The Municipal Urban Development Fund, created to provide infrastructure financing to local governments under the World Bank-financed Tamil Nadu Urban Development Project, functioned as a state-owned revolving fund. Providing a combination of loans and grants, with no state guarantee for lending, the fund achieved high repayment rates. However, while the fund proved financially viable, its scope and depth were limited by its reliance on state grants for funding. In addition, the fund's state ownership and management meant that its operations lacked autonomy, were weighed down by bureaucracy, and proved subject to political interference.

To address these shortcomings, the fund was converted into an autonomous, privately managed financial intermediary, the Tamil Nadu Urban Development Fund. Larger in scope, boasting solid performance indicators, and with a long list of potential borrowers, the new fund has attracted substantial private funding and has successfully linked private capital with local public infrastructure needs. The fund's structure, however, does not accommodate non-revenue-generating projects and limits its

accessibility to smaller municipalities that cannot issue bonds. A key challenge is to create mechanisms allowing these small local governments to access private sources of capital.

Even so, the Tamil Nadu Urban Development Fund has done much to improve municipalities' access to private capital for financing infrastructure investments. Its success points to the importance of a comprehensive approach that divides tasks between government and the private sector.

India has a three-tier structure of government comprising the center, the states, and the local governments—the *panchayati raj* institutions (rural local bodies) and municipalities (urban local bodies). Until the passage of constitutional amendments in 1992, however, the government system functioned essentially as a two-tier federal structure with powers, functions, and responsibilities divided between the central government and the states. This division largely satisfied the principles of both federal finance and fiscal federalism.

The central government is responsible for all functions with national importance and large economies of scale, while states bear the main responsibility for delivering basic public services, such as public order, public health and sanitation, and water supply and irrigation. However, the division is not absolute. States have concurrent jurisdiction with the center in such areas as education, electricity, economic and social planning, and population control and family planning. Where conflicts arise, however, the central government's power overrides that of the state governments, and any powers not delegated explicitly to state governments reside with the center.

Revenue raising powers are based on the principle of separation of revenue systems, with tax bases assigned exclusively to the center or to the states. Most revenue sources with a mobile tax base are assigned to the center, while those with an immobile or local tax base (liquor excise, motor vehicle tax, agricultural land and income taxes) are assigned to the states. The use of mobility as a criterion for dividing the tax base has resulted in powers to levy most broad-based taxes (income tax, corporation tax, customs and excise) coming to rest with the center, with the retail sales tax

the only major exception. The assignment of revenue powers has been asymmetric: states are charged with functional responsibilities that entail larger expenditures than they can meet from their own resources.

Even though states can levy taxes and duties that have substantial revenue potential, the revenue from these sources meets only about 50 to 60 percent of their current spending needs on average. Moreover, the principle of separation is applicable only in a legal sense, not an economic one. For example, while the center can levy taxes on production (excise duties), only the states can levy taxes on the sale or purchase of goods. Similarly, only the states can levy taxes on agricultural income and wealth, and only the central government can levy taxes on nonagricultural income and wealth.

The assignments of tax and expenditure authority have led to a vertical fiscal imbalance. In the financial year 1997/98 the states raised about 31 percent of total government revenue in India, but incurred about 57 percent of total expenditure. Transfers from the center made up the balance. The ability of the states to finance their current spending from own sources of revenue has declined over time, with own-source revenue falling from 69 percent of state spending in 1955/56 to around 55 percent in the 1990s (Rao 2000).

Recognizing that the revenue raising powers assigned to states are inadequate to meet their expenditure responsibilities, the Constitution provides for transfers from the center to state governments through tax devolution and grants in aid. To ensure that the transfers are allocated fairly, the Constitution requires that the president appoint a finance commission at least every five years to review central and state government finances and make recommendations on transfers to states for the next five years. In addition to these transfers, states receive assistance from the Planning Commission based on a formula determined by the National Development Council and transfers for specific purposes under programs implemented by national ministries.

Decentralization and Subnational Government

The Constitution of India that came into force in 1950 made detailed provisions for the democratic functioning of the central and state legislatures, but it did not make urban government a clear constitutional obligation. Even though the municipal acts of various states provided for regular elections to urban local bodies, or municipalities, these acts were often super-

sed for indefinite periods. Therefore, while the third tier of government existed in India, it took the form primarily of rural local bodies, or panchayats. Indeed, article 40 of the Constitution requires states to “organize village Panchayats (rural local bodies) and endow them with such power and authority as may be necessary to enable them to function as units of self-government.” In keeping with these constitutional requirements, many states enacted legislation for the creation of panchayati raj institutions and the devolution of functions and responsibilities to them, and state governments devolved some revenue and expenditure powers to these subnational units.

However, these initial decentralization efforts remained limited to a few states. The system remained far from representative, and there was no mechanism to prevent state governments from superseding elected local governments. Moreover, the fiscal powers devolved to these lower levels of government remained inadequate, so that they continued to depend on grants from the state government to meet their development spending needs.

Decentralization under the Constitutional Amendments of 1992

The constitutional amendments of 1992 (the 73rd and 74th), perhaps the boldest democracy initiative in the world, gave concrete shape to the Indian government’s commitment to vest power in the hands of the people. The amendments made the creation of elected urban local bodies a constitutional obligation and recognized both rural local bodies (panchayats) and urban local bodies (municipalities) as institutions of self-government. [The amendments defined three types of urban local bodies, depending on such criteria as population density, revenue generated for local administration, and the share of population engaged in nonagricultural activities: *nagar* (town) panchayats for areas in transition from rural to urban, municipal councils for smaller urban areas, and municipal corporations for large urban areas.] In the two-tier federal structure local governments below the level of the state had functioned merely as agencies of the state government. States now are required to hold regular elections for these local governments, with mandatory representation of women and disadvantaged groups (the scheduled castes, scheduled tribes, and backward classes). In 2000 India had more than 250,000 rural and urban local bodies (table 24.1).

The amendments set out an illustrative list of functions for urban and rural local governments. State finance commissions, regularly appointed by the state governments, ensure the devolution of financial resources to these local governments. The commissions review the finances of the local au-

Table 24.1. Third Tier of Government, India, 2000

Type of local authority	Number
Rural local bodies	247,033
<i>Panchayats</i>	238,682
Village level	232,278
Intermediate level	5,905
District level	499
<i>Autonomous councils^a</i>	8,351
Village councils	8,310
Block advisory committees	25
Autonomous development councils	16
Urban local bodies	3,682
Municipal corporations	96
Municipal councils	1,494
Nagar panchayats	2,092

a. In autonomous district council areas, for weaker sections and tribal areas.

Source: India, Ministry of Finance 2000.

thorities and make recommendations on the distribution of the state revenues between the state and local governments and among local governments, the assignment of tax and other powers to rural and urban local bodies, and the grants in aid to local governments.

The empowerment of the panchayats and municipalities to function as institutions of self-government has been slow (India, Ministry of Finance 2000). While there has been a downward push of power, it falls well short of a federal devolution.

Functional and Fiscal Decentralization

The Indian Constitution has allowed considerable fiscal decentralization to the state level. Despite the constitutional amendments, fiscal decentralization has not gone further. While states raised nearly 31 percent of total government revenue in 1997/98 and had command over 55 percent of the revenue for spending purposes, local governments raised only 3 percent of the total and had about 10.4 percent at their disposal (table 24.2).

Thus local governments have very little revenue power. Decentralization notwithstanding, rural and urban local bodies in India face significant financing gaps (table 24.3).

In recognition of both the increased responsibilities and the financing gaps faced by local governments, the constitutional amendments were aimed at setting in motion a series of steps to improve the financial status

Table 24.2. Fiscal Decentralization, India, 1997/98

Level of government	Revenue collected (percentage of GDP)	Revenue accrued (percentage of GDP)	Revenue collected (percentage of total)	Revenue accrued (percentage of total)
Central	11.4	6.8	62.5	34.5
State	6.3	10.9	34.5	55.1
Local	0.6	2.1	3.0	10.4
Urban	0.5	0.8	2.7	4.0
Rural	0.04	1.3	0.3	6.4
Total	18.3	19.8	100.0	100.0

Sources: India, Ministry of Finance 2000; Rao 2000.

Table 24.3. Finances of Local Bodies, India, 1990/91 and 1997/98

	1990/91		1997/98	
	Total (crore rupees)	Share of GDP (percent)	Total (crore rupees)	Share of GDP (percent)
Rural local bodies				
Total expenditure	7,147	1.33	20,931	1.38
Expenditure on core services ^a	417	0.08	1,555	0.10
Other expenditure	6,730	1.26	19,377	1.28
Total revenue	6,614	1.24	19,356	1.28
Own revenue	370	0.07	677	0.05
Tax	238	0.04	377	0.02
Nontax	132	0.02	300	0.02
Other revenue	6,244	1.17	18,679	1.23
Urban local bodies				
Total expenditure	24,395	4.56	151,308	10.00
Expenditure on core services ^a	9,988	1.87	101,224	6.68
Other expenditure	14,407	2.69	50,085	3.30
Total revenue	3,931	0.73	12,179	0.80
Own revenue	2,736	0.51	7,599	0.50
Tax	1,935	0.36	5,892	0.39
Nontax	801	0.15	2,127	0.14
Other revenue	1,195	0.22	3,608	0.30

Note: One crore = 10 million rupees.

a. Roads, sanitation, water supply, and street lighting.

Source: India, Ministry of Finance 2000.

of local governments and their performance. The Eleventh Finance Commission (India, Ministry of Finance 2000) recommended the statutory provision of 1,600 crore rupees (Rs) to rural local bodies and Rs 400 crore to urban local bodies each year in 2000–05, to be distributed among states using the following criteria and weights:¹

<i>Criterion</i>	<i>Weight (percent)</i>
Population	40
Index of decentralization	20
Distance from highest per capita income	20
Revenue effort	10
Geographic area	10

In addition, the amendments mandate that tax assignments, revenue sharing, and grants in aid to local governments are to be based on the recommendations of the state finance commissions and that central grants are to be linked to duly elected and empowered local bodies. However, because of the lack of clarity in the functional jurisdictions of local bodies, implementation of the constitutional amendments remains far from effective.

Moreover, the devolution of powers and functions to local governments has varied widely across states, reflecting the variation in the willingness of state governments to devolve. In many states the “conformity acts” enacted to give effect to the constitutional amendments have sought to restrict the autonomy of local governments, particularly panchayats, through provisions at odds with the amendments (Rao 2000). Several state acts effectively treat the panchayats as agents of the government rather than as self-governing institutions. India’s experience with decentralization spans a broad spectrum: at one extreme is Kerala, where decentralization has been very successful; at the other are Uttar Pradesh, where local bodies have failed, and Bihar, where even the mandatory decentralization has not been completed.

Despite this dismal record, the 73rd and 74th constitutional amendments have been important in framing the decentralization process and strengthening local governments. The aim is to make subnational governments focal institutions in the provision of public services by endowing them with authority commensurate with their responsibilities and involving people at the local level. The amendments seek to transform local governments from constrained and indifferent institutions of governance into freer and more responsive ones.

Decentralization and Government Borrowing

The Constitution of India assigns borrowing powers to both the central and the state governments. However, while the central government may borrow from any source within the country as well as from abroad, state governments are restricted to borrowing within the country. Subject to conditions imposed by law, the central government can make loans to any state. It also can give guarantees on loans raised by any state as long as these do not exceed limits fixed under the Constitution (article 292). Central government loans to states are charged against the consolidated fund of India, a fund consisting of all revenues received by the central government, including loans.

While state governments have constitutional powers to borrow, the central government exercises overall control over their borrowing. A state cannot raise a loan without the consent of the central government if the state has an outstanding loan made by, or guaranteed by, the central government.

Local governments, with the exception of municipal corporations, are not vested with borrowing powers by the Constitution. Instead, they are wholly dependent on state governments for capital loans. The borrowing powers of municipal corporations are governed by the Local Authorities Loans Act of 1914, which permits them to borrow on security of their funds for public works that they are legally authorized to carry out, for relief works in times of famine or scarcity, for the prevention of outbreak of any dangerous epidemic diseases, and for the repayment of lawfully incurred debt.

Despite the borrowing powers under the Local Authorities Loans Act, municipal corporations must obtain the prior approval of their state government to borrow. The act requires municipal corporations to submit to their state government such details as the purpose for which the loan is sought, the amount of the loan, information about the loan security, the schedule for loan disbursement, loan terms, revenue receipts, and expenditure profile. The limits on borrowing are determined by annual ratable value (a measure of the value of a property, based on expected gross annual rent, on which the property tax is based), the value of municipal properties and assets, own revenues, and the general financial position of the municipal corporation. The act does not permit municipal corporations to use debt instruments to raise finance for services and infrastructure.

Municipal corporations and municipal councils also have raised loans from banks and other financial institutions and from government agencies such as the Housing and Urban Development Corporation, with the ap-

proval of state governments and with state guarantees for the debt. Local governments thus continue to depend heavily on higher levels of government. While the dependence on intergovernmental transfers ranges from 60 to 65 percent of recurrent expenditures for municipalities, rural local bodies (panchayats) depend almost entirely on transfers to meet recurrent expenditures. Since decentralization was initiated, some states, such as Gujarat and Maharashtra, have adopted legislative provisions explicitly authorizing local authorities to undertake open market borrowing. However, there have been no serious attempts to encourage or empower local bodies to use debt instruments even within the limits of the Local Authorities Loans Act of 1914 (Mathur 1999).

Domestic Debt Markets

While India's equities market attracts the participation and interest of a large number of retail investors, its debt market has traditionally remained a wholesale market, with the government and public enterprises the predominant borrowers. Despite being the third largest market in Asia by outstanding debt issued, the Indian debt market until recently was largely a captive one (Analyst 2002). The statutory liquidity ratio requirements of the Reserve Bank of India, under which banks must invest part of their deposits in central and state government bonds and other approved securities, resulted in a captive investor base of a few hundred banks and institutional investors.

A retail debt market existed in the country in the late 1950s and 1960s, when individual investors accounted for more than half the holdings of government securities. However, the administered interest rate regime, which lowered yields on government securities, and the availability of other financial instruments led to the disappearance of this market.

Although it is not difficult to see why the debt market in India remains immature, interest and participation in the market have increased markedly in recent years. Annual trading volumes more than doubled from Rs 450,000 crore in 2000/01 to Rs 700,000 crore in the first seven to eight months of 2001/02. This growing interest reflects in part the downtrend in stock markets, which has led investors to look for safer investments. The deregulation of interest rates has also quickened the development of the market. Lending and borrowing rates now are determined by the market with the Reserve Bank of India's bank rate (or refinance rate) serving as the benchmark.

A healthy, vibrant, and efficient domestic debt market is essential for a strong economic future for India. The devolution of functions and powers

to lower levels of government has come with a corresponding decline in central government grants, subsidies, loans, and other transfers. In response to the need to generate domestic finance for development, particularly the enormous amounts of long-term finance needed for infrastructure, efforts are under way to stimulate the development of domestic debt markets. Efforts are also aimed at designing and financing pilot projects that are commercially viable and ensuring that participating municipal governments are creditworthy borrowers (Analyst 2002).

As the debt market expands to include insurance companies, pension funds, mutual funds, banks, primary dealers, provident funds, and corporations, its focus can be expected to widen beyond the current focus on government securities to incorporate a repurchase market, commercial paper, debentures, bonds, and securitized debt (India, Ministry of Finance 1997, 2001).

In a significant step in developing domestic bond markets, municipal bonds are beginning to emerge as important instruments for mobilizing resources for local governments' development spending needs. As noted, some states (including Gujarat and Maharashtra) have explicit legislation governing borrowing by local authorities in the open market. It is amendment of the Local Authorities Loans Act of 1914, however, that is most likely to foster the growth of the municipal bond market. Such an amendment should promote the development of a fully fledged municipal bond market through tax incentives encouraging individual and institutional investors to invest in bonds. Regulatory measures providing for bond guarantees and insurance and a specific regulatory role for the Securities and Exchange Board of India or the establishment of a similar regulatory authority would also be necessary (India, Ministry of Finance 1997).²

The First Local Bond Issue: The Experience of Ahmedabad

Bangalore was the first city in India to obtain a credit rating and issue municipal bonds. The Municipal Corporation of Ahmedabad, the largest city in Gujarat, followed suit. However, unlike the Bangalore municipality, which issued bonds subscribed to by private investors alone, the Ahmedabad Municipal Corporation issued bonds subscribed to by both public and private investors. By doing so, it became the first urban local body in South Asia to raise funds through a public issue (its issue is therefore generally referred to as the first bond issue).

The Ahmedabad Municipal Corporation turned to borrowing in the open market as part of its efforts to recover from a deteriorating financial condition. Despite having sound finances until the early 1980s, its current

revenue deficit had reached Rs 60 million by the end of 1993/94. Revenue yields from its two main taxes—the property tax and the *octroi* tax (a tax on the entry of goods into a local area for consumption or sale)—were proving inadequate, in part because of lax administration and enforcement of municipal taxes and the corporation's poorly trained management staff. Moreover, the city's expenditure needs were growing. In the second half of the 1980s the city's slum population doubled, and living conditions for poor people became dangerously unhealthy. To compound matters, the city government had neither plans nor funds to undertake the investment needed to address the situation.

Given the enormity of the problems, the state changed the administrative leadership and management of the Ahmedabad Municipal Corporation in 1994, and a general reform program was instituted. The municipal corporation initiated a \$145 million capital improvement plan covering water supply, sewerage, bridges, overpasses, and a slum development project. It also acted to strengthen the property tax base and improve the administration, enforcement, and collection of both property and octroi taxes (Mathur 1999). Most important, the municipal corporation decided to take advantage of statutory provisions allowing it to raise finance.

In 1996 the Ahmedabad Municipal Corporation asked the Credit Rating Information Service of India to rate the institution's inherent creditworthiness and its financial position, becoming the first Asian urban local body to receive a credit rating for a proposed domestic bond issue.³ Initially the municipal corporation obtained a credit rating of A+, signifying "adequate safety with regard to timely payment of interest and principal amount." Based on its financial performance in 1996/97, however, the rating agency upgraded its rating to AA (SO), indicating a "high degree of certainty regarding timely payment of financial obligations on the investment."

The proceeds of the Rs 100 crore (\$29 million) bond issue were to fund part of the capital improvement plan, with the rest of the costs to be met from internal accruals and assistance from multilateral financial institutions (USAID 1997). In addition, a U.S. government \$22.5 million loan guarantee allowed matching support from private U.S. lenders.

The Ahmedabad bond issue was designed as a structured obligation with octroi revenues from 10 collection points earmarked for servicing the issue and kept in an escrow account. Placement was both private and public, with 75 percent (Rs 750 million) privately placed and 25 percent (Rs 250 million) sold in the retail market (table 24.4). The bond issuance process was supported by the U.S. Agency for International Development (USAID),

Table 24.4. Terms of the Bond Issue by the Ahmedabad Municipal Corporation

Issue size	Rs 1,000 million (Rs 750 million on a firm allotment basis)
Commitment	Net public offer of Rs 250 million fully underwritten
Face value	Rs 1,000 at par
Maturity	Seven years, with repayment in thirds in the fifth, sixth, and seventh years
Redemption	In three installments: Rs 333 at the end of the fifth year, Rs 333 at the end of the sixth year, and Rs 334 at the end of the seventh year
Interest or coupon rate	14 percent a year, payable semiannually on the outstanding principal (At 14 percent, the coupon rate was substantially higher than the 10.7 percent being offered on government bonds of comparable maturity.)
Tax exemption	None
Credit rating	AA (SO) by Credit Rating Information Service of India
Security	Charge or mortgage on physical assets of the Ahmedabad Municipal Corporation
Structured	Escrow on octroi revenues of the Ahmedabad Municipal Corporation
Listing	Ahmedabad Stock Exchange and National Stock Exchange
Regulation	Securities and Exchange Board of India

Note: SO indicates structured obligation.

Source: Ahmedabad Municipal Corporation 1999.

which helped adapt U.S. municipal bond financing techniques to the Indian capital markets.

A Model for Municipal Bond Issues

Ahmedabad's municipal bond financing has developed into a model for India. More than 30 Indian cities have sought credit ratings as the basis for issuing municipal bonds or as a guide to improving their financial condition. The growing interest in municipal bonds among India's institutional investors is gradually opening a substantial new source of financing for the development of Indian cities. In addition to Ahmedabad and Bangalore, several other cities—Ludhiana, Nagpur, Nasik, Madurai, and Surat—have raised funds from the Indian capital market through municipal bonds.

Municipal bonds are not the only avenue through which local governments in India are seeking to gain greater access to credit markets. They are also looking at innovative mechanisms that bundle underlying loans and involve greater private sector participation. One such mechanism is the Municipal Urban Development Fund, conceived in the late 1980s as part of the Tamil Nadu Urban Development Project. The fund and its successor have been used to finance infrastructure projects in municipalities throughout the state of Tamil Nadu.

Tamil Nadu's Experience with Urban Development Funds

Tamil Nadu is the third most urbanized state in India (after Maharashtra and Gujarat), with 40 percent of its population in urban areas. Sixty percent of the state's urban population lives in towns of more than 100,000, and about 15 percent lives in Chennai (formerly Madras), the capital of Tamil Nadu. The urban poor constitute 30 percent of the population of Tamil Nadu.

Challenges in Urban Infrastructure

The urban population in Tamil Nadu has been growing steadily for a century, increasing sixtyfold between 1901 and 1991. Many small towns have emerged, with a small economic base and little ability to generate employment or invest in infrastructure. The infrastructure needs are great. Per capita water supplies fall significantly below the norms. Only 16 percent of the population has access to adequate sanitation in town panchayat areas, 32 percent in municipal council areas, and 57 percent in municipal corporation areas. While 70 percent of the solid waste generated is collected, most local bodies do not have organized disposal facilities, and less than 50 percent of the roads are provided with storm drains (Malathi 2000).

Several factors account for the huge backlog in infrastructure investment. Urban infrastructure has been neglected in the state because urban areas have lacked political lobbying power proportionate to the size of the urban population and because the central and state governments have tended to give priority to investments in rural infrastructure. The underinvestment also results from constraints on the generation of resources for financing urban infrastructure, including unpredictable and discretionary government resource transfer systems, weak financial accountability, inappropriate methods of property tax assessment, inadequate user charges, and poor billing and collection systems. Also contributing are the weak managerial and administrative capacity of urban local bodies, the lack of long-term finance, and the limited options for municipal finance.

Moreover, there are unrealistic expectations about the ability of improvements to pay for themselves. Municipal corporations and councils seek to finance capital investments in urban infrastructure entirely through debt, relying on user charges or general tax revenues to cover the debt and operation and management costs. This strategy ignores the divergence between private and social benefits (or costs) and the lack of buoyancy in local tax revenues.⁴ As a result of these factors, coupled with the outdatedness of

laws governing local administration, urban local bodies have remained almost entirely dependent on the state government for their survival.

Decentralization and Its Financial Implications

The Tamil Nadu state government's decentralization strategy has been to empower urban local bodies by recognizing their constitutional governance and by increasing the amount and predictability of financial transfers while holding the local bodies accountable for meeting minimum requirements in delivering services. The Second State Finance Commission recommended a level of transfers to enable the local bodies to meet their revenue expenditure needs and part of their investment needs. Most of the transfers (87 percent) would take the form of untied funds but with suitable monitoring mechanisms and greater accountability. The balance (13 percent) would be disbursed through various funds to meet the wide-ranging needs of local bodies (Tamil Nadu, Finance Department 2000).

Some of the major recommendations of the State Finance Commission implemented since 1997/98 include the transfer of 3.6 percent of the state's tax revenue to urban local bodies; the allocation of transfers on the basis of population, per capita expenditure, and per capita revenue; the setting aside of 15 percent as an equalization and incentive fund to reward performance and build the capacity of weak and unviable urban local bodies; and the transfer of 90 percent of the entertainment tax to local bodies (Malathi 2000; Tamil Nadu, Finance Department 2000).

Despite the additional resources channeled to urban areas, the available financing falls far short of investment needs (table 24.5). The state finance commission estimated that in 1996–2001, Rs 4,810 crore (\$1.3 billion) would be required for investments in core urban infrastructure facilities. Table 24.6 gives an indication of the size and type of investments needed for some of these core infrastructure requirements.

Power of Local Authorities to Borrow

In Tamil Nadu local bodies are empowered to raise money from financial institutions under the Tamil Nadu Urban Local Bodies Act of 1998 (Act 9 of 1999). This act was enacted by repealing the Tamil Nadu District Municipalities Act of 1920 (which had earlier empowered local bodies to raise money) and the municipal corporation acts of Chennai, Madurai, Coimbatore, Tiruchirapalli, Tirunelveli, and Selam. The new act brings all the state's urban local bodies—town panchayats, municipal councils, and municipal corporations—under one common, comprehensive act.

Table 24.5. Estimated Gap in Urban Infrastructure Financing, Tamil Nadu, 2002 (crore rupees)

Type of local body	Investment needs	Borrowing capacity	Financing gap
Municipal corporations	2,653	1,698	955
Municipal councils	1,351	419	932
Total	4,004	2,117	1,887

Source: Rajivan 1999.

Table 24.6. Infrastructure Investment Requirements by Type of Urban Local Body and Sector, Tamil Nadu, 1996–2001 (crore rupees, except where otherwise indicated)

	Municipal corporations	Municipal councils	Town panchayats	Total	Share of total (percent)
Water supply and sewerage	522	212	167	901	24
Sanitation	875	520	127	1,522	40
Solid waste management	40	32	24	96	2
Storm drains	287	81	192	560	15
Roads	337	197	62	596	16
Lighting	26	21	63	110	3
Total	2,087	1,063	635	3,785	100

Note: Annual inflation during the period covered was 12 percent.

Source: Tamil Nadu, Finance Department 1996.

Under the Tamil Nadu Urban Local Bodies Act of 1998 a municipal corporation may, by resolution, borrow through debentures or other means secured on various revenues (taxes, duties, fees, and dues authorized by the act) funds required for construction works, acquisition of land, payment of government dues, or repayment of existing loans. Borrowings must be approved by the state government, along with their terms and conditions, date of flotation, and time and method of repayment. The act limits the repayment period of a loan to no more than 60 years and the maximum amount that can be borrowed to 12.5 percent of the ratable value of property in the municipality.

The Local Authority Loans Rules specify that for loans from nongovernment sources that are not repayable by annuities, the local government is to create a sinking fund to ensure adequate funds for debt service. The local

government is expected to make semiannual or annual payments into this fund sufficient to repay the loan within the term fixed for repayment. (Under present regulations, however, it is not obligatory for all municipalities to create sinking funds for resources raised after 1981/82.) The accountant general, who audits the accounts of municipalities, may instruct the local authority to transfer money from its income into the sinking fund in the event of a shortfall. However, objections raised during audits usually are not taken seriously because the accountant general lacks the power to summon and question the responsible officials (India, National Commission to Review the Working of the Constitution 2001).

Municipalities face borrowing limits based on the ratable value of property within their boundaries. However, evidence suggests that this debt limit has not been effectively enforced. For example, in Chennai the ratable value of property was estimated at Rs 3,842 million in 1995/96. This implies a borrowing ceiling of Rs 480 million—but the Chennai Municipal Corporation's outstanding debt in 1995/96 was Rs 856.2 million. An alternative standard, used by the Municipal Urban Development Fund, is a ceiling on the debt service ratio (the ratio of debt service requirements to own-source revenues). For the Chennai Municipal Corporation the projected debt service ratio has been between 17 percent (in 1995) and 36 percent (in 2000).

A debt ceiling linked to the performance of the municipal corporation, as determined by the debt service ratio or debt service coverage ratio (the ratio of cash flow available for debt payments to the total debt payments due), appears to be a better measure for limiting local borrowing than one linked to the annual ratable value. The reason is that a debt ceiling linked to the debt service or debt service coverage ratio, by definition, acts as a check on the amount that a municipality would borrow. In contrast, the annual ratable value measure generally will not. As noted, the annual ratable value method for valuing property in a municipality (and thus estimating its ability to repay debt) is inappropriate in India.

Municipal Urban Development Fund

The main challenges in the urban sector in Tamil Nadu, as elsewhere in India, are to reduce the massive backlog of infrastructure investment and improve the delivery of basic urban services. To improve urban infrastructure throughout the state, the government of Tamil Nadu in 1988 launched the Tamil Nadu Urban Development Project, financed by the International Development Association, the concessional lending arm of the World Bank. As part of this project, the Municipal Urban Development Fund was con-

ceived as an innovative mechanism for financing revenue-generating infrastructure projects proposed by municipalities throughout the state.

The Municipal Urban Development Fund was set up on a pilot basis as a wholly state-owned revolving fund to provide long-term capital for municipal infrastructure projects. The fund was embedded in the machinery of the government, managed by the project management group and administered by the director of municipal administration. The fund provided subsidized loans combined with grants, with no state or other guarantees. It proved to be popular with municipalities because it gave them access to new capital and on terms and conditions they found acceptable. Debt repayment rates were high (about 90 percent). In the first five years the fund disbursed about \$63 million for more than 500 subprojects.

Conceived as an experiment, the Municipal Urban Development Fund proved to be a financially viable municipal credit scheme. Before it could become a sustainable independent financial intermediary, however, it needed to overcome several obstacles (World Bank 2002):

- The fund's lending capacity was far too small compared with the potential demand for investment financing.
- The fund's mobilization and deployment of funds were not optimal. It relied heavily on grants from the government of Tamil Nadu, and its outflows comprised a mix of grants and subsidized loans.
- The fund depended entirely on public financing, including financing on-lent from an International Development Association credit line.
- Located within the administrative machinery of the government, the fund lacked autonomy and faced a risk of political interference.
- The fund's staff were subject to the constraints of the civil service system.

Tamil Nadu Urban Development Fund

In 1996, with the aim of achieving managerial efficiency and attracting private capital to urban infrastructure, the Municipal Urban Development Fund was converted into an autonomous financial intermediary—the Tamil Nadu Urban Development Fund. The new entity was established as a trust fund with private equity participation—the first public-private partnership in India providing long-term municipal financing for infrastructure without state guarantees. In addition, the scope of operations was widened to include urban infrastructure projects sponsored by public undertakings (entities in which the government has at least 51 percent ownership) and private investors. The restructured fund has three main purposes:

- To finance urban infrastructure projects that improve living standards.
- To facilitate private participation in infrastructure through public-private partnerships and joint ventures.
- To operate a complementary window, a grant fund, to finance poverty alleviation projects for specific low-income population groups.

Eligible borrowers include urban local bodies, statutory boards, public undertakings, and private corporations. Eligible sectors include transport, sanitation, water supply, solid waste management, integrated area development projects, roads and bridges, and sites and services.

In contrast with the Municipal Urban Development Fund, the Tamil Nadu Urban Development Fund is located outside the government. The fund is managed by Tamil Nadu Urban Infrastructure Financial Services, an asset management company set up under the Companies Act of 1956. The company is a joint venture between the government of Tamil Nadu (with an equity stake of 49 percent) and three financial institutions—the Industrial Credit and Investment Corporation of India (21 percent), the Housing Development Finance Corporation (15 percent), and Infrastructure Leasing and Financial Services (15 percent). The government's equity stake is restricted to 49 percent to facilitate a private sector orientation in investment decisions.

The arrangement has enabled the Tamil Nadu government to retain experienced financial institutions whose strong reputation in India's business and financial community is expected to help the fund raise additional resources from other private investors (World Bank 2002). The Industrial Credit and Investment Corporation of India is the lead managing partner of the asset management company. The Housing Development Finance Corporation is a leading finance corporation in housing and regional development. Infrastructure Leasing and Financial Services is a rapidly growing financial institution that specializes in developing and financing private infrastructure projects in India on a limited recourse basis.

The Tamil Nadu Urban Development Fund, which is similar to state revolving funds in the United States and municipal banks in Europe that finance infrastructure projects, is expected to develop into a self-standing financial intermediary capable of financing viable urban infrastructure projects. The basic infrastructure investments undertaken by the fund are based on city development strategies or corporate plans. These plans identify the key issues facing a city and help establish priorities through a con-

sultative process involving elected officials, municipal officers, government agencies, community and professional groups, and business and industry representatives.

Lending Policies and Terms. The Tamil Nadu Urban Development Fund lends only for capital expenditure purposes. It does not finance land acquisition costs, operation and maintenance expenditures, and other expenditures such as salaries. The fund's management company ensures that a project to be funded meets several eligibility requirements: The project must be a high-priority capital expenditure program of an urban local body or statutory body. It must be an urban infrastructure project (excluding power and telecommunications) that will contribute to an improvement in the living standards of the urban population. It must have obtained appropriate statutory and environmental clearances, documented in the project evaluation report, and must comply with the environmental, resettlement, and social standards specified by the Tamil Nadu Urban Development Fund. Moreover, it must adopt technology and technical norms that are appropriate, proven, and the most cost effective. In addition, projects with quantifiable benefits are required to have an economic rate of return of at least 12 percent (rate of return calculations are not required for projects of less than \$500,000; World Bank 2002).

Borrowers also must meet eligibility requirements: they must maintain a ratio of total expenditures to total revenues of less than 1, and a ratio of debt service (interest and principal payments) to total revenues of less than 30 percent. Security mechanisms include escrow accounts of revenues from such sources as property taxes and water charges. Pledges of movable assets provide another source of security. The lending terms of the Tamil Nadu Urban Development Fund vary depending on the type of borrower and project (table 24.7).

The loans can be given in conjunction with grants from the grant fund, operated by the Tamil Nadu Urban Development Fund and owned by the government of Tamil Nadu. The grant fund seeks to do the following:

- Strengthen and upgrade the financial, technical, managerial, and service delivery capabilities of localities through training and through computerization of municipal accounts and basic records such as births and deaths.
- Finance projects that directly benefit low-income urban population groups, such as sanitation, water supply, storm drainage, street lighting, and sewerage systems.

Table 24.7. Lending Terms of the Tamil Nadu Urban Development Fund since 1998/99

Interest rate	Overdue interest	Annuity (principal and interest)
Urban local bodies		
16 percent a year for water supply and sewerage	18.5 percent a year on the overdue amount charged from the date of the scheduled payment until the date of actual payment	<i>Service projects</i> ^a One-year moratorium and 15-year repayment
16.5 percent a year for other projects		Water supply and sewerage projects Five-year moratorium and 16-year repayment
Private sector		
Market-determined rates		

a. Service projects are those that do not require initial (lumpy) investments like those needed for water supply and sewerage projects and the like.

Source: Rajivan 1999.

The grant fund covers the cost of preparing projects financed by the Tamil Nadu Urban Development Fund and those that seek private participation, while the Tamil Nadu Urban Development Fund finances the costs of resettlement and rehabilitation.

The Tamil Nadu Urban Development Fund structures its investments on the basis of the debt service capacity of urban local bodies, carrying out elementary budgeting exercises based on demand analyses. When urban local bodies have established clear, direct benefits to the urban poor from proposed projects, the fund has supplemented loans with a grant, reducing the effective interest rate. In the belief that investments in basic infrastructure can be sustained only through better project management performance, the fund has supported capacity building efforts for local bodies, such as the computerization of accounts and training programs to manage environmental and social issues.

Performance of the Fund. By the end of 2001/02 the Tamil Nadu Urban Development Fund had approved 179 projects at a total project cost of Rs 675.02 crore and had disbursed Rs 447.28 crore for 172 projects. These projects encompassed more than 500 subprojects in 90 of the 110 municipalities in Tamil Nadu—such projects as storm drains, sewerage and solid waste management schemes, commercial ventures (such as wholesale markets), and transport infrastructure including roads and bridges (figure 24.1; box 24.1). In 2002/03 the fund proposed approvals of about Rs 50 crore for approximately 20 projects. Figure 24.2 shows the value of capital works executed by municipalities with financing from the fund.

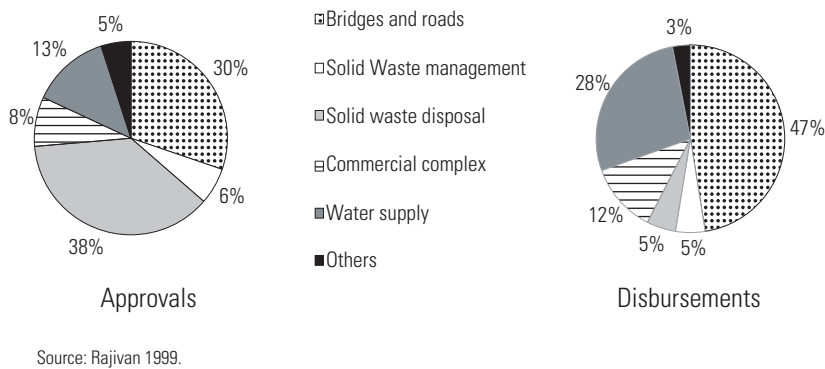


Figure 24.1. Funding Approvals and Disbursements by the Tamil Nadu Urban Development Fund by Sector as of 31 March 1999

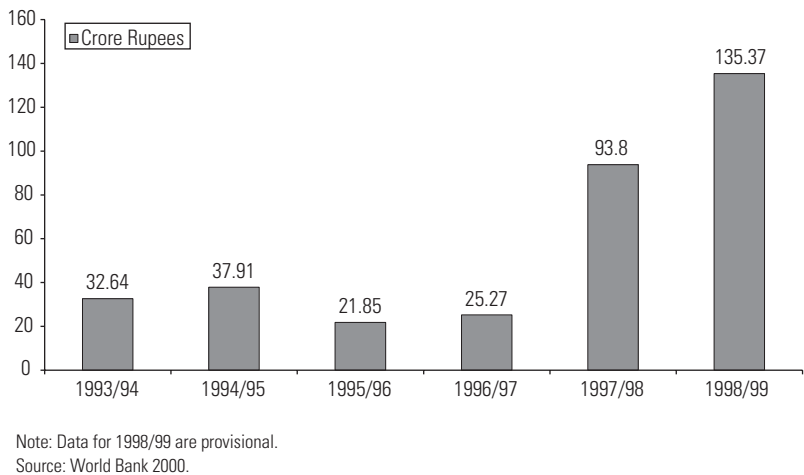


Figure 24.2. Value of Capital Works Executed by Municipalities with Funding from the Tamil Nadu Urban Development Fund, 1993/94 to 1998/99 (crore rupees)

Financial projections for the Tamil Nadu Urban Development Fund indicate that the fund's total annual income will increase from Rs 30.7 crore in 1997/98 to Rs 124.5 crore in 2002/03, that its profits will rise from Rs 23.6 crore to Rs 84.8 crore in the same period, and that its loans outstand-

Box 24.1. Recent Projects Financed by the Tamil Nadu Urban Development Fund

Among the projects being financed by the Tamil Nadu Urban Development Fund are three prototypes—the Karur Municipality Bridge, the Madurai Bypass (Inner Ring) Road (a toll road), and the Alandur Sewerage Project—all involving private participation.

Karur Municipality Bridge. The Karur Municipality Bridge, the first toll bridge to be constructed on a build-operate-transfer (BOT) basis by an urban local body in India, is expected to generate predictable cash flows for the operator, since it will be used by freight drivers with the capacity to pay and will substantially reduce vehicle operating costs and time. The Tamil Nadu State Toll Act has been amended to allow municipalities to enter into BOT contracts, providing a stable regulatory framework for investors. The concession was awarded through competitive bidding for a 14-year term, including the construction period. The Tamil Nadu Urban Development Fund approved a loan of Rs 100 lacs (Rs 1 crore = 100 lacs) to meet part of the project costs. The project financing has helped free municipal resources for pressing investments in core infrastructure services (Tamil Nadu Urban Development Fund 1999).

Madurai Bypass (Inner Ring) Road. The Tamil Nadu Urban Development Fund has also funded the first toll road in Tamil Nadu—the 27-kilometer Madurai Bypass (Inner Ring) Road—at an estimated project cost of Rs 47 crore. The fund provided financing through a 15-year construction loan to the Madurai Municipal Corporation. However, after construction was completed and toll revenues began to come in, the municipal corporation issued 15-year bonds to replace the construction loan. The bonds carry 12.25 percent annual interest, payable semiannually, while the loan carried an interest of 15.5 percent a year. This innovative financing mechanism not only helped reduce loan costs but also freed up fund resources for other projects.

(Box continues on the following page.)

Box 24.1. (*continued*)

The project financing is structured on a nonrecourse basis so that lenders have recourse only to the project revenues, not to the general revenue flows of the Madurai Municipal Corporation. The second and third phases of the project are being developed on a BOT basis, with a pledge of the revenues from the first phase as security to encourage private participation.

Alandur Sewerage Project. The financing scheme for the Alandur Sewerage Project, now under construction, involves user charges, private equity for the BOT segment of the project, and up-front payments by customers. The proposed tariff rates are designed to cover operation and maintenance expenses, debt service, and payments into a sinking fund. The tariff structure includes cross-subsidies, with tariffs for commercial users three times—and tariffs for industrial users five times—those for households. Deposits of Rs 5,000 have been raised from households and Rs 10,000 from commercial and industrial customers.

Contracts were awarded through competitive bidding consistent with World Bank guidelines. The sewage treatment plant is being constructed under a BOT contract backed by a user-pay mechanism and fixed annual fees to cover operation and maintenance over a five-year period. The works are being supervised by an independent, private project management consultant.

ing on 31 March 2003 will be Rs 908 crore. In addition, its debt-equity ratio will be satisfactory (at 2.86) on that date, and the government of Tamil Nadu will hold 56.5 percent of the paid-up contribution, with the financial institutions holding 43.4 percent.

These financial projections assume the availability of a World Bank credit line of \$80 million as the primary source of long-term finance and that the entire amount drawn in a year from this credit line is disbursed to sub-borrowers in the same year. They further assume that the profits of the government of Tamil Nadu are transferred to the grant fund while the profits of the financial institutions are plowed back into the trust fund (Rajivan 1999).

Assessment of the Tamil Nadu Urban Development Fund

The Tamil Nadu Urban Development Fund has increased private capital flows into the state's urban sector and leveraged the World Bank's resources by issuing bonds and other debt instruments (World Bank 2002). The bond issue of the Madurai Municipal Corporation in November 2000 is a case in point. Facilitated by the fund, the bond issue—the first by an urban local body in Tamil Nadu—raised \$23 million for the Madurai Municipal Corporation's Bypass (Inner Ring) Road Project (table 24.8). The three financial institutions participating in the fund provided guarantees or other credit enhancement or risk participation mechanisms. This support, along with the role of the Tamil Nadu Urban Development Fund, helped garner a rating of AA+ for the bond issue (box 24.2).

The bond issue was oversubscribed, in large part because of its AA+ rating. Investors in the issue included commercial banks (70.5 percent), contributors to the Tamil Nadu Urban Development Fund (11 percent), regional rural banks (9.5 percent), insurance companies (8 percent), cooperative banks (0.95 percent), a private company (0.05 percent), and others (4 percent).

Raising financing through domestic bond issues is in line with one of the fund's main objectives: securing sustainable funding for urban infrastructure investments beyond the World Bank's line of credit. Indeed, a loan covenant with the World Bank for the second phase of the Tamil Nadu Urban Development Project requires that the fund raise \$50 million from private sources.

Table 24.8. Terms of the Bond Issue by the Madurai Municipal Corporation

Issue size	Rs 100 crore (\$23 million), private placement
Instrument	Nonconvertible
Face value	Rs 1,000 at par
Maturity	15 years
Redemption	In five equal annual installments
Interest or coupon rate	11.85 percent a year, payable semiannually
Tax exemption	None
Credit rating	LAA+ (SO) by Investment Information and Credit Rating Agency (Rating is equivalent to AA+, indicating high safety and modest risk.)
Put or call option	After 8 years
Regulation	Securities and Exchange Board of India

Note: SO indicates structured obligation.

Source: Pradhan 2002.

Box 24.2. Basis for the AA+ Rating of the Madurai Municipal Corporation Bond Issue

- The issue is backed by a credit enhancement and structured payment mechanism requiring the Tamil Nadu Urban Development Fund to maintain a bond service fund equivalent to one year's principal and interest payments as collateral throughout the life of the bonds.
- The fund has achieved a high collection efficiency (ratio of collections to total debt service due), thanks to such mechanisms as a no-lien escrow account for the property tax revenues of urban local bodies, and has few nonperforming assets.
- The fund's low gearing ratio (total debt to total net worth), efficient collection mechanisms, and surplus funds provide a comfortable liquidity position.
- The fund's accounting practices, including its asset classification norms, are conservative.
- The fund has no major funding constraints or asset-liability mismatches, and it has access to long-term financing through the World Bank loan.
- The government of Tamil Nadu firmly supports and is committed to the success of the Tamil Nadu Urban Development Project and to urban sector reforms in general.
- The system of financial devolution, based on the recommendations of the state finance commissions, is being implemented successfully and has enhanced the finances of urban local bodies.
- The fund manager has a qualified team of professionals carrying out credit assessments and project appraisals. It also has a well-defined organizational structure and well-defined roles for its officials.

Source: World Bank 2001.

Lessons and Conclusions

The Tamil Nadu Urban Development Fund has positioned itself as a strategic intermediary linking capital markets with local urban infrastructure needs. Its performance in achieving lending targets, high repayment rates, and high quality in the infrastructure constructed has enabled it to access the market for resources. Its loan recovery rate of nearly 100 percent is a clear indicator of its success as a financial intermediary (table 24.9). It is hoped that its success as a self-standing financial intermediary will encourage other private financial institutions to enter the new municipal financing market.

One factor instrumental to the success of the fund is that, as an autonomous financial intermediary managed by a private asset management company (unlike the Municipal Urban Development Fund), it is insulated from government interference. Management by a private company has proved to be advantageous. The company has the freedom to recruit the best staff members and to pay market rates to retain them, and private management eliminates the bureaucratic element that plagues most government-run entities.

Table 24.9. Financial Indicators for the Tamil Nadu Urban Development Fund as of March 2002

Indicator		1998/99	1999/2000	2000/01	2001/02
Disbursements (crore rupees)	Benchmark	19.0	92.0	89.0	83.0
	Actual	20.0	56.0	219.0	20.0
Cumulative disbursements (crore rupees)	Benchmark	19.0	111.0	200.0	283.0
	Actual	20.0	76.0	295.0	315.0 ^a
Ratio of net profit to net worth	Benchmark	12.9	13.4	14.8	13.0
	Actual	16.0	15.3	13.4	16.8
Ratio of net profit to average assets	Benchmark	5.4	5.9	5.6	4.7
	Actual	6.1	5.7	4.0	6.0
Loan recovery rate (percent)	Benchmark	78.0	84.0	90.0	90.0
	Actual	99.0	100.0	100.0	99.8
Ratio of debt to equity	Benchmark	1.3	1.5	1.7	1.8
	Actual	1.4	1.3	1.7	2.2
Debt service coverage ratio	Benchmark	3.3	2.4	2.0	1.5
	Actual	1.3	2.9	2.4	1.4

Note: Benchmark values are used to determine the financial viability and efficacy of the fund.

a. Excludes disbursements before 1998/99 because projections were not made until that year.

Source: Rajivan 1999.

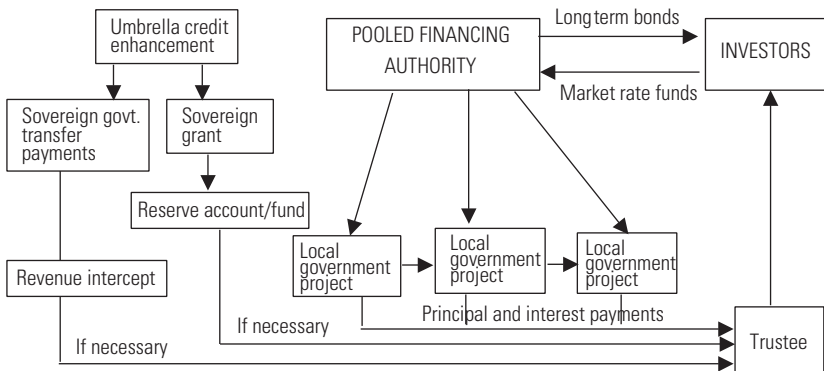
Equity participation by leading Indian financial institutions has also contributed to the fund's successful performance and indicates the private sector's commitment to the fund. Private equity participation is scarce in India, but the three financial institutions participating in the fund have contributed 30 percent of its equity. Private financial institutions' ownership share in the fund was expected to rise to 44 percent by 2003.

Nonetheless, despite several innovative financing mechanisms to mobilize private resources, the fund's debt financing depends mainly on the security provided by the limited operating surplus of municipal borrowers. Small projects can be financed in this way, but large, lumpy, and non-revenue-generating investments cannot be. For example, the fund can provide long-term loans, but its interest rate is unattractive for most sewerage projects sponsored by municipalities. This corporate-bank-style approach can be used to finance only limited types of municipal infrastructure projects. Moreover, while large municipalities can finance their investment needs through direct bond issues backed by project revenues and general revenues—with the fund taking the construction risk, if necessary, by providing an initial loan later replaced by capital market debt, as for the Madurai Bypass (Inner Ring) Road Project—more innovative mechanisms are needed for small municipalities. To provide such a mechanism, in 2001/02 the fund's management company created a pooled financing facility with credit enhancement. This financing scheme pools the infrastructure investment projects of small and medium-size towns to give them access to debt raised in the market. The aim is to reduce the transaction and borrowing costs for essential infrastructure, particularly sewerage projects, which require substantial funds over a long period, often more than 20 years (figure 24.3).

Under this scheme, guarantee funds are put up by the government or an intercept of state transfers to municipalities is used to provide security. The financial institutions participating in the Tamil Nadu Urban Development Fund not only help municipalities raise finance for their projects but also provide advisory services (project structuring and technical assistance) for these projects.

A trust called the Water and Sanitation Pooled Fund has already been registered under this pooled financing scheme, to link municipal financing needs with the capital market (table 24.10). Subscribers to the fund include banks (Rs 30.25 crore) and the Provident Fund Trust (Rs 0.16 crore).

In addition, the Tamil Nadu Urban Development Fund seeks to expand its activities beyond the state of Tamil Nadu. It intends to create a new fi-



Source: Rajivan 2003.

Figure 24.3. Simplified Flow of Funds in the Pooled Financing Scheme

Table 24.10. Terms of Issue of the Water and Sanitation Pooled Fund

Maturity	15 years
Put or call option	After 10 years
Redemption	In 15 equal annual installments
Interest payment	Annually on diminishing balance
Face value of bond	Rs 100,000
Credit rating	AA (SO) by Investment Information and Credit Rating Agency; AA (SO) by Fitch Ratings
Guarantee	50 percent of the principal guaranteed by USAID; the government of Tamil Nadu to top up shortfalls through interception of transfers
Debt service reserve fund	Rs 6.90 crore to be invested in highly secured and liquid investments

Note: SO indicates structured obligation.

Source: Rajivan 2003.

nancing window—similar to a mutual fund—to finance municipal infrastructure projects in other states.

The experience of the Tamil Nadu Urban Development Fund has shown that financing infrastructure investments requires a comprehensive approach—one that includes sector reforms involving decentralization and a symbiotic “division of labor” between the government and the private sector. While the appropriate division of labor varies from one country to an-

other, generally the government (central and state) needs to work on the policy and regulatory fronts in raising finance and building the capacity of local bodies, especially in project management and accounting, while the private sector needs to be involved as a market developer and innovator to attract greater private investment in local infrastructure. Depending on the circumstances and the project, private participation can take the form of direct investment, such as in BOT projects, or financial investment, such as loans and bond purchases.

The Tamil Nadu Urban Development Fund has had good success in its role as a specialized financial intermediary, not only in performing fund supervision and management functions but also in providing advisory and technical assistance to infrastructure projects. The challenge for the fund is to retain its ability to function as an autonomous financial intermediary with adequate freedom and an equity stake. The key to its long-term sustainability lies in its ability to integrate with the financial sector by aligning its interest rates and loan terms with those of the market. The separation of grant finance and debt finance is a step in this direction. The fund's long-term sustainability also will require the government and the private sector to work together on several fronts, including strengthening the financial position of municipalities, building the capacity to develop and implement sound projects, and ensuring high loan recovery rates—all essential for a strong financial performance by the fund.

Notes

1. One crore = 10 million rupees.
2. Established under the SEBI Act in 1988, the Securities and Exchange Board of India is charged with protecting the interests of the investors in the securities markets and regulating and promoting the development of the capital market in the country. It is mandated to check unfair and fraudulent trade practices and impose monetary penalties on erring market players.
3. The oldest and most well-known domestic rating agency in India, the Credit Rating Information Service of India is associated with Standard & Poor's, which holds equity in the rating agency.
4. Most infrastructure projects produce benefits over and above those that accrue to private individuals. These benefits, known as social benefits, often are not measurable. If social benefits are included in cost-benefit analyses done to determine user charges, the charges are bound to be lower than needed to recover the costs of investment and operation.