RATING METHODOLOGY
FOR
URBAN INFRASTRUCTURE PROJECTS

The term urban infrastructure projects is used to describe projects to provide water supply, sanitation, solid waste management, bridges and roads, urban transport, bus terminals, public housing, shopping complexes and other public facilities. Urban infrastructure services in India have been traditionally provided by public agencies operating at different levels of government viz., local, state and central. These include municipalities, utility boards, development authorities and government departments. For instance in India, water supply and sanitation, is provided by different institutions in different areas. While generally, municipal corporations are responsible for capital works and maintenance, a few cities have metropolitan utility boards that undertake this function. In smaller cities, project implementation is done by state level utility boards or the state's Public Health Engineering Department whereas the maintenance function is done by the local bodies. The term 'municipal bodies' is used to describe local administrations or statutory undertakings providing civic or infrastructural services.

Urban infrastructure financing has been traditionally done through internally generated resources of municipal bodies, grants and transfers from central and state governments and funds from international organisations and domestic financial institutions like HUDCO and LIC. But as surveys show, most urban infrastructural services are underprovided even according to the norms suggested by the Zakaria Committee in 1963 or the Planning Commission in 1983. For instance, only 81% of urban households are covered by safe drinking water and 69% by sanitation facilities. Only 75% of Class I cities have access to some semblance of a sewerage system. The per capita road length availability ranges between 0.16 to 0.68 in Class I cities indicating congestion. Most Class I cities have street lighting at greater than the recommended 30 metre spacing. Recent estimates show that total investment requirements per annum for urban infrastructure would be in the range of about Rs. 435 billion a year upto the year 2001 whereas only about a maximum of 9% of the required investment would be available through central and state plans.

In the present scenario, budgetary allocations to municipal bodies cannot be expected to increase substantially and may even decrease, with the control of fiscal deficit becoming a critical area of economic management. Concessional funding from financial institutions can be ruled out. Access to multilateral and bilateral funding is also going to be difficult, as there is increasing pressure from the donor countries to bring about greater accountability and market orientation in the projects financed by them. Municipal bodies, therefore need to explore alternatives such as private sector participation and identify new sources of funds, such as municipal bonds, for financing core infrastructure projects.

Financial instruments issued by municipal bodies to raise resources from capital markets are commonly known as municipal bonds. Municipal bonds may be of many types, with varying durations and for different purposes, with fixed or variable interest rates.

There are mainly two types of municipal bonds viz., general obligation bonds and revenue bonds:

a) General Obligation Bonds (GOBs)

These bonds are backed by a pledge of the full faith and revenue raising powers (mainly taxing powers) of the municipal body. The use of General Obligation bonds may be appropriate for financing general municipal functions, where it may not be possible to ensure direct cost recovery from specific projects [like roads, street lighting, public health, etc.] Through a GOB issue, a municipal body with a good financial position can use its overall credit worthiness for raising finance for projects, each of which may not be commercially viable, on its own.

b) Revenue Bonds

These are primarily backed by the user fees or service charges paid by the users of a particular service. Revenue bonds are normally off-balance sheet liabilities of municipal bodies. They are used primarily for funding revenue producing public services such as housing, water supply, toll highways, ports, airports etc.

The municipal bond market is a specialised segment of the debt market. In the US, most urban infrastructural projects like water supply and sewerage are funded through issue of municipal bonds. Also, the secondary market for municipal bonds is active, with sufficient liquidity. Some municipal bonds are tax exempt, thereby lowering the cost of borrowing of the issuer. In India also, some measures have been introduced to attract investments in infrastructural projects which include a five year tax holiday to BOOT operators in infrastructure projects, tax benefits to financial institutions on interest and dividend income earned from financing infrastructure projects and tax benefits on investments in infrastructure. However, until recently, municipal bodies in India did not attempt to tap the capital markets. The reasons for this include poor credit quality of municipal bodies, nature of projects being funded (long gestation period, erratic revenue flows etc.), availability of alternate sources of finance and lack of liquidity in the secondary debt market. This has changed with a number of municipal corporations, irrigation corporations, Special Purpose Vehicles for road projects and Development Boards tapping capital markets.

RATING METHODOLOGY

The parameters that are considered in credit rating of municipal bodies may be broadly classified under the following heads :

1) Economic base of the service area

The basis of a community's fiscal health is its economy which affects the municipal body's major revenue sources such as octroi, property taxes or user charges. Economic conditions dictate the quantity and quality of services delivered. The first step is, therefore, a study of the issuer's location, infrastructure, natural assets, liabilities etc. The other factors would include the tax base, its composition and the employment base. Such an analysis would enable CARE to estimate both the service demand and the ability of users to pay for these services.

The ability to repay debt depends on adequate income levels in the local area. Hence, from a rating angle, an area having an economically diverse tax and service base is a positive factor. However, these base strengths need to be tapped through an efficient tax structure. CARE believes a strong service base needs to be reflected in commercially priced urban services to ensure full cost recovery. Generally, those communities with higher income levels and diverse economic bases will not be averse to periodic revision of user charges and will have superior debt repayment capabilities. These are assessed by CARE through examination of the number of industrial units in the area, the contribution to state and central revenues from the service area from various taxes such as income, corporate and sales taxes, stamp duty on property transactions, license fees from boarding and lodging houses, and other indicators of relative economic wealth such as number of cars, telephone connections and bank branches and per capita income levels.

2) Legal factors

Analysis of the Legal framework is done with reference to the relevant Act under which the municipal body is constituted and specifies its functional domain, revenue raising, borrowing and repayment powers. CARE believes a well defined Act is an advantage. The revenue raising powers of a municipal body need to be analysed with reference to the degree of *actual control* over some of these revenues, considering consumer resistance to tax and user charge hikes. This would throw light on the adequacy of revenues and the ability of the municipal body to generate revenues given its functional responsibilities in providing various infrastructural services. Borrowing and repayment powers are studied with reference to the authorisation(s) required for raising debt and the overall limits on borrowing. The presence of a sinking fund for repayment of debt and regularity with which transfers to the fund take place are important in determining the repayment capacity of the municipal body. This is important in assessing the level of flexibility and autonomy available with the municipal body to raise funds for infrastructural projects. Also, the effectiveness of collection enforcement mechanisms of the municipal body need to be studied. CARE views a simple and rational tax and user charge structure favourably as these give lesser scope for disputes and improve compliance thereby improving collection efficiency.

3) Administrative factors

CARE studies the organizational arrangements for provision of infrastructural and other core municipal services. The organisational structure of the municipal body is analysed to evaluate the depth of management and extent of delegation of powers. Track record in project implementation is studied to evaluate project management capability as well as the likelihood of completion of future projects without cost and time overruns.

The ability to revise taxes and user charges and effectiveness in ensuring compliance is also reviewed. The management information systems are studied to evaluate the control and planning processes. CARE views positively a flexible operating structure with adequate checks and balances.

Timeliness of budget adoption is another factor considered since the budget is an expression of administrative capability. Timely adoption reflects cohesiveness in both the administrative and political processes. Late budgets are a hindrance to planning and an indication of political difficulty. The administration is expected to exhibit a willingness to make revenue and expenditure adjustments to ensure a realistic operating budget. Ability to manage the political environment is critical for speedy decision making in matters of rate revision and project execution to ensure projects are completed without time and cost overruns.

4) Debt factors

CARE's analysis of debt focuses on the debt structure, the current debt burden, the future financing needs of the issuer and the nature of any commitment of dedication of cash flows. In CARE's opinion a low debt burden is not necessarily a positive factor as this can indicate underinvestment in infrastructure thereby limiting the municipal body's revenue sources while also impeding economic growth in the area. The analysis includes a study of the current and past trends in the composition of debt, in terms of the cost and maturity. Track record of past debt servicing and debt service capability for future debt are analysed to assess both the ability and the willingness to service debt. The impact of any prior charges on cash flows on future debt servicing is evaluated. Also, any recourse available to lenders in case of default by the issuer, as per the governing municipal Act, will be examined. Any cap on total debt and its impact on financial flexibility will be analysed.

5) Financial factors

CARE evaluates the financial condition of the issuer through an analysis of financial statements. The quality and nature of assets and liabilities as well as composition, trends and stability of revenue and expenditure are studied. CARE evaluates the scope of the issuer to maintain buoyancy of revenues through regular increases in taxes and user charges and better collection efficiency. In doing so, CARE examines the tax base, trends in revisions of rates, taxes and user charges(from the standpoint of cost recovery and cross subsidization) and the administrative systems for collection of both current demands raised and arrears. CARE analyses expenditure activity-wise emphasising consistency in these expenditure allocations and comparing the quality of the services provided with other similarly placed municipalities. Further, the ability of the issuer to curtail wasteful expenditure and improve operational efficiency is analysed. The ability of the issuer to maintain a revenue surplus and service current and future debt is evaluated. Municipal bodies that finance capital expenditure out of revenue surpluses are viewed positively by CARE. The prioritisation of past capital expenditure as well as their financial implications are studied to evaluate the financial planning process of the issuer. CARE views positively higher developmental capital expenditure on a consistent basis as these contribute to building the service area's economic and social infrastructure. Also, flexibility of the issuer in raising resources to meet unforeseen contingencies is studied.

CARE examines the budgetary and planning processes while actual performance is measured against each year's budget. Accounting and reporting methods peculiar to municipal bodies are noted.

Budgetary support from the state government in the form of grants form a large component of revenues in some municipal bodies particularly in non octroi levying states. CARE attaches greater importance to formula based grants which do not impose additional functional responsibility on the municipal body. The stability of these revenues would depend on the finances of the respective state government. Hence, for assessing the creditworthiness of these municipal bodies, CARE analyses the finances of the state government. Parameters to be analysed include the economic condition of the state, major sources of revenue and expenditure, stability and trends of major revenue streams, current and past trends of revenue surplus/deficit, tax base, stability and trends of transfers from the centre, current and past debt profile, debt servicing capability, disbursement schedules for grants and their timeliness etc.

6) Project viability

This involves an in-depth study of the project being funded including the Project formulation and implementation schedules and the level of service enhancement being contemplated through the project. CARE believes that a properly formulated project with clear identification of the beneficiaries forms the basis of a viable project. Proper assessment of the demand for the service will increase the willingness to pay for using the service and thereby its commercial viability. It will also influence the choice of technology impacting costs and user charges to be imposed. CARE believes infrastructure projects should be self- financing. Pricing should be based on full cost recovery and must be transparent for administrative ease. However, where the service is deemed as essential but user charges cannot be priced on a full cost recovery basis, CARE realizes the service would have to be supported through the budget or cross-subsidized. At the same time, poorly planned projects resulting in high cost and thereby high user charges may result in poor cost recovery, posing an unnecessary strain on budgetary resources. CARE would examine the committed sources of finance covering capital costs, assumptions behind projected revenue and expenditure over the tenure of the instrument, extent of cost recovery through user charges, availability of general revenues for debt servicing and committed budgetary support, if any, for the project. Since proper maintenance of the created infrastructure will reduce the need for premature replacement capital expenditure, reducing project viability, CARE in its analysis would examine projected maintenance schedules alongwith proposed maintenance expenditures. Credit enhancement measures, if any, are evaluated to assess impact on timely servicing of debt. Also, sensitivity analyses may be conducted for cost and time overruns, cost of borrowing and user charge increases. In the case of a revenue bond, only revenue streams from the project are used for debt servicing.

7) Private Operators

Infrastructural services may be provided by the municipal body by involving the private sector through contracting, leasing or on a BOOT basis. In this case, CARE assesses the concessionaire or the Special Purpose Vehicle in its willingness to design, construct and operate the facility. CARE's rating framework also incorporates an examination of the contractual or concession agreements in addition to an assessment of the project's viability. Such agreements in CARE's opinion must clearly specify the rights and obligations of the concessionaire, the terms of the concession period (fixed or variable), assignability conditions, tenure of exclusivity, recourse available to project lenders in case of default and must provide for equitable distribution of risks between the municipal body and the concessionaire. Particular attention is paid by CARE to the project's cash flows and the flexibility available to the operator to undertake user charge revisions. CARE views a formula based approach for timely revisions in user charges favourably. Delays in project construction can have an unfavourable impact on the revenue generation capacity or the debt servicing ability. Project related construction risks are assessed by CARE by examining the scheduling of construction operations, agreements for timely supply of equipment, covenants for timely construction and the precious track record of the contractors. Various issues that can result in operating risks such as competition from a competing facility or force majuere are also assessed. Projected cash flows are assessed by CARE with reference to their adequacy for meeting operation and maintenance expenses and debt servicing obligations. Sensitivity analysis is undertaken in alternative adverse operating scenarios to study their impact on the operator's debt servicing ability.

8) Credit Enhancements

Credit enhancement measures can have a beneficial impact on the project's stand alone credit quality as these add strength to the debt servicing ability. Such provisions may take various forms such as guarantees, standby facilities, limited recourse to the issuer's assets or escrowing of receivables to be used for the specific purpose of debt servicing. These measures have the ability to reduce credit risk of the issuer and improve its stand alone rating.

The important parameters to be studied in the credit rating of debt issues for urban infrastructure projects would include the following:

A. Economic factors

- Nature of local economy
- Local employment and income characteristics
- Development indicators and current availability of urban services
- Diversity and growth of tax base
- Diversity of service base

B. Legal set-up

- Municipal Body's functional domain
- Borrowing powers and limits
- Pending litigations or disputes
- Powers of taxation
- Powers to levy user charges
- Actual control over revenue sources considering the political implications of tax and user charge hikes
- Collection enforcement powers under the Act
- Powers to repay debt including mechanisms for pledging revenues for debt service

C. Administrative factors

- Organisational structure
- Division of responsibilities between the Administrative and Political wings
- Quality and continuity of management, extent of delegation
- Depth of management ; extent of delegation
- Tax billing, collection and enforcement mechanisms
- Organizational arrangements for provision of infrastructural services
- Track record in project implementation
- Degree of autonomy enjoyed by the local body
- Management Information System
- Industrial relations

D. Accounting and Auditing Practices

- Systems of accounting
- Nature and quality of audit

E. Debt Factors

- Current debt burden
- Composition of current debt burden
- Interest and debt service coverage ratios
- Past debt service performance
- Evaluation of credit enhancement mechanisms, if any
- Commitments/encumbrances on cash flows
- Degree of reliance on short term borrowings
- Maturity matching profile
- Recourse available to lenders, in case of default

F. Financial Indicators

- Fiscal data on the issuer
- Budgetary and planning processes
- Nature of assets and liabilities
- Tax base and past trends
- Composition and timing of revenue and expenditure, past trends
- Trends in tax rates and user charges
- Extent of cost recovery and cross-subsidisation of various urban services
- Financial flexibility to meet unforeseen contingencies
- Trends in revenue surplus/deficit
- Extent of State budgetary support
- Operating and collection efficiency
- Sources and allocation of capital expenditure, trends
- Extent of borrowings, if any, from non- governmental sources and the degree of compliance with the credit discipline imposed by such lenders
- Dependence on state government for grants and fund transfers

G. Finances of state Government

- Economic Structure of the state
- Analysis of finances of the state covering;
- Trends in revenue and expenditure
- Trends in revenue surplus/deficit, gross fiscal deficit, overall deficit
- Interest coverage and debt service ability
- Debt burden and level of outstanding guarantees
- Dependence on the central government for resources
- Economic policies and performance covering
- Ability to control non- development expenditure
- Cost recovery in state provided economic and social services
- Performance of public sector units
- Industrial, infrastructural and agricultural policies
- Performance of the state in attracting investment
- Plan performance

H. Project Specific Issues

- Project formulation and implementation schedules
- Level of present service and improvements envisaged
- Constitution of the project as a departmental project or an SPV
- Analysis of concession agreements involving tenure, exclusivity, assignability, distribution of risks
- Sources and uses of funds for project being financed
- Project related construction risks and their impact on viability
- Operational risks and their impact on project cash flows
- Analysis of projected revenues and expenditure
  for the tenure of the instrument as well as the underlying assumptions
- Revenue flow pattern from the project and extent of cost recovery
- Committed budgetary support and other credit enhancement measures
- Sensitivity analyses to user charge hikes, cost of borrowing etc.
- Recourse available to project lenders
- Evaluation of credit enhancement measures, if any.

For Further details please contact at :

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