Case 45

AHMEDABAD MUNICIPAL CORPORATION (AMC)

AMC has a history of 180 years—almost two centuries! In the year 1817, a governing committee was formed to administer the city of Ahmedabad. In 1858, this committee was given statutory recognition. In 1873, this body became a city municipality and by 1926, it was made a burrough municipality. The municipality was upgraded into the Ahmedabad Municipal Corporation on July 1, 1950.

The city has seen a tremendous growth over the recent decades and the municipal corporation has been fairly successful in keeping pace with the demands made by such growth. For example, in the past decade, the length of surface roads has increased from 940 km to 1,058 km; the number of street lights and the conservancy staff have doubled. Exhibit I indicates the major parameters of growth.

The head of the municipal corporation's administration is the Municipal Commissioner. The municipal corporation is organized functionally into eight departments—tax, accounts, estate, town planning, engineering, health, project, and octroi—each headed by a Deputy Municipal Commissioner. The administration of the city is being restructured and five zonal offices—north, east, centre, west, and south—each headed by a deputy municipal commissioner are being created. The emerging structure of administration is a matrix structure. The operational responsibility will vest in zonal offices while the policy issues will fall in the domain of the functional heads at the head- quarters.

CHANGING ENVIRONMENT

Growing urbanization is putting pressure on the existing infrastructure of the towns and cities. It has been noticed that choice of locations for corporate investment is governed, among other things, by the facilities offered by the cities. Since the metros have many problems—high real estate cost, high cost of living, high levels of pollution, inadequate transportation facilities—smaller cities such as Ahmedabad are becoming more important as investment locations. This imposes a huge responsibility on the municipal corporation to continuously upgrade the quantity and quality of town services.

Many municipal corporations are reeling under sustained deficit on revenue account. This often results in poor services. The state governments are not in a position to fund municipalities in larger measures. Many state governments are not keen to get involved in the day-to-day administration of these municipalities and municipal corporations. These developments have opened a new set of opportunities for progressive municipal corporations. They have come to realise that financial self-sustainability is the key to survival, independence and progress. AMC realised the need to tackle the problem in a planned manner. Restructuring is an attempt in this direction. It decided to computerise its accounting function using the commercial system of book keeping (unlike the cash based accounting system in government). Experts have been engaged to re-engineer the business process.

AMC'S FINANCIAL POSITION

The municipal corporation has different sources of cash flows. These are octroi, taxes, profits from investments, grants received and made, operational expenditures, and debt servicing. Exhibit II shows the sources and uses of funds of AMC for the year 1995 and 1996. The items that make revenue income are octroi (53%), tax (26%), and profits made on investments (21%).

The revenue expenditure includes establishment charges, energy charges, repairs and maintenance, and others. Capital expenditures involve project implementation costs. These projects deal with solid waste management, drainage, water supply, slum improvement, roads, bridges and flyovers.

It may be noted that revenue account is far in excess of capital account. The single largest head of funds pertain to octroi. Therefore, octroi management holds the key to successful fund management. Octroi collection can be enhanced in two ways: first, collecting from the existing clients more efficiently; second, enhancing the collection pool. The first approach called for the streamlining of the collection process. The second called for increasing the attractiveness of Ahmedabad for trading activity through better infrastructure.

The efforts to improve collection efficiency included:

- Building unloading stations for trucks, so that complete inspection of goods can be made. This reduces dependence on false declaration and random checks.
- Additional check points to cover all incoming routes
- Close liaison with local police to expeditiously handle cases of evasion
- Construction of watch towers
- Increasing the strength of vigilance and inspection staff; creation of flying squads and mobile inspectors
- Reduction of taxes in arrears through follow up and collection

These steps enabled the municipality to wipe out the entire revenue deficit in two years. In fact, the result was a surplus of Rs. 10 crore. The accounts of AMC are presently maintained on cash basis. The past two years (1995 & 1996) have been exceptionally good years as far as revenue collection is concerned. Substantial part of the cash collected pertains to the arrears of the past years.

For the future, AMC has made estimates for project expenditure (Exhibit III). It is evident that the project expenditure will reach a peak in 1999, and will gradually decline thereafter. It is possible to compute the cash balances of the municipal corporation under some assumptions. Two sets of assumptions (best case and worst case) are given below.

	Best case	*Worst scenario*
Cost over-run	0%	50%
Long-term revenue growth rate	12%	11%
Long-term expenditure growth rate	14%	15%
Growth in octroi (1997)	27%	20%
Growth in tax (1997)	50%	25%
Growth in expenditure (1997)	30%	45%
Other revenue (Rs. crore) (1997)	101.96	50.00

One group of analysts opined that the assumptions given in Exhibit IV are more realistic.

FINANCING PLAN

The World Bank has estimated that developing nations require $ 10 billion for funding urban infrastructure projects but the municipal authorities may be able to raise only $ 1 billion on their own. Thus, the gap of $ 9 billion has to be tapped from various other sources.

The projects (for providing infrastructure facilities such as drinking water) envisaged by AMC require Rs. 742 crore during the years 1997–2002 (Exhibit III). It appears that Rs. 450 crore will be available from government loans (Exhibit V). This leaves a gap of Rs. 292 crore. The internal accruals may be inadequate to meet this demand for funds.

There are two approaches to meet the fund gap. The first is to seek new sources of funds. The second alternative is to alter the investment side—reduce investment or change the investment schedule to match the fund availability horizon. AMC chose to opt for the first approach. It decide to tap the capital market on its own for meeting part of the fund requirement. The United States Agency for International Development is expected to provide a loan of $ 25 million with a repayment period of 30 years. AMC is also networking with Housing and Urban Development Corporation for raising funds for urban infrastructure.

AMC had no scope to tap the equity market as it would create fundamental change in ownership, needing major changes in statutes through public debate. Hence, recourse to debt market was the only choice. Municipal bonds are new to India but have been popular in the West. These bonds are structured in a special manner because of the unusual time horizons, cash flow patterns, and risk characteristics. The basic structure is determined by: general vs specific obligation, revenue vs infrastructure financing and private placement vs public issue.

The first item decides the cash flows that will be used to service the bond. In a general obligation bond, the servicing is done from any and all cash flows of the corporation. In a specific obligation bond, the servicing is done from a specific and identified cash flow stream.

Infrastructure projects have revenue streams that are small in each year but spread over a period of years. This calls for skilful matching of bond duration and the asset duration. Thus, infrastructure bonds are somewhat different from other bond issues.

Public issue offers greater liquidity. But, in the absence of active secondary market for debt, this advantage is difficult to realize. Thus, private placement with large institutions is a feasible alternative.

RATING OF AMC AND ITS BOND ISSUE

Unlike business corporations, public bodies such as municipal corporations may issue bonds without approval from the Security and Exchange Board of India (SEBI). However, rating of public debt issues has become a standard practice in India. In April, 1996 AMC sought rating by CRISIL. CRISIL has an alliance with Standard &Poor which helps it access the S & P methodology of municipal-bond rating.

Rating of a debt instrument follows some standard principles and a municipal bond is no exception. The basic idea is to estimate the loan servicing capability of the borrower. This assessment is broken down into many components. This enables the rating agency to understand the importance of different factors in servicing capacity and the sensitivity of the servicing capacity with respect to each such factor. The factors are rank ordered in terms of: contribution of the factor to cash flows and the uncertainty/volatility of the factor.

There are some items which do not directly influence the cash flows but are seen as collateral that protect the downside of the principal. Stronger collateral values result in higher rating.

Standard & Poor rates the municipal bonds based on number of factors. These are:

1. Composition of existing debt (amount, maturity, security, revenue source for debt service)
2. Total assessed value of the assets for the past four years (nature of the asset, assessment procedure)
3. Tax collection statements for the past four years (basis, sources, tax rate, amount collected)
4. Recent estimates about demographic profile
5. Two most recent annual reports and annual budget
6. List of 10 largest tax payers (with valuation of their properties)
7. Description of economic profile of the municipal area
8. School enrolment in the past 10 years
9. Borrowing plans for the next five years
10. Capital improvement plans for the next five years.

This information is arranged into four heads: debt factors; administrative factors; economic factors; and current financial account analysis. Appendix I describes the first three classification in more detail.

AMC chose to issue a general obligation bond. Two things make the issue safe. First, there is the State backing to a municipality. Second, Rs. 100 crore issue is just 30 per cent of the annual revenue receipt. CRISIL, after analysis, accorded A+ rating to the issue in the fall of 1996.

BOND ISSUE

AMC approached the government of Gujarat for permission to mobilize funds through a bond issue. The approval was given in May 1997. The government of Gujarat has sought from the Ministry of Finance (Government of India) tax exemption status for these bonds. The State government has pointed out that in the Western countries municipal bonds are tax-free. This enhances its attractiveness to the investors. The expectation is that such tax exemption will bring more public participation. In the USA, municipal bonds worth $ 1,000 million are in the market and all enjoy tax concessions. The Ministry of Urban Development (Government of India) and the Planning Commission have supported the Gujarat government's suggestion. The bond issue of Rs. 100 crore is expected to hit the market in later part of 1997. The issue will be managed by the Infrastructure Leasing and Finance Services Company. The structure of the proposed bond issue is described below:

Proposed bond issue details

Tenure:	7 years
Issue size:	Rs. 100 crore
Interest payment:	17% p.a. on Rs. 100 crore
Issue date:	1.1.1998
Redemption:	31.12.2004
Payment of Principal to bond trustee:	7 equal instalments starting from 31.12.1998

PUBLIC POLICY ISSUE

Public issue of bonds by AMC raises many questions. The ability of the corporation to service the bond will appear weak if some critical assumptions are altered. CRISIL awarded A+ to AMC's bond issue. Perhaps CRISIL has largely relied on the status of the municipal corporation as a public body. It means that the government has provided an implicit guarantee to the bond-holders. This amounts to an indirect financing by the government and option held by the bondholders. The important issues are: To what extent the government is 'financing' AMC indirectly? What is the value of the option held by the bondholders? How can we justify and evaluate the value shift from government to the corporation?

DISCUSSION QUESTIONS

1. What are key challenges in designing and making a public issue of bonds by organizations such as AMC?
2. Why, credit rating important in bond issues? What are the key assumptions made in credit rating process and what is the criticality of these assumptions? Do you think the ability of the AMC to service the bond will appear weak if some critical assumptions are altered?
3. CRISIL awarded A+ to AMC's bond issue. What are factors CRISIL has largely relied on? Are there any implicit guarantees to the bond-holder?
4. To what extent do you think the government is "financing" AMC indirectly?
5. What is the value of the option held by the bond-holders? How can we justify and evaluate the value shift from government to the corporation?

Exhibit I

Highlights of Ahmedabad

	1981	1991
No. of Election Wards	36	43
No. of Corporators	105	129
Area (City Limits) sq. km.	98.15	190.84
Population	2,059,725	2,876,710
Literacy	71.20%	73.01%
Students	216,903	258,966
Primary Schools	496	570

Source: Statistical Outline of Ahmedabad City

Exhibit II

Details of Actual Cash Flows during 1995 & 1996
Year ending on 31st March

(Rupees in lakh)

	1995	1996
Revenue Account		
Revenue Receipts		
1. Direct service changes		
1.1. Octroi	15,314.01	20,298.19
1.2. Tax	7,313.73	8,002.52
1.3. Sub-total	22,627.74	28,300.71
2. Others (including grants)	5,918.68	7,121.05
3. Total (1 + 2)	28,546.42	35,421.76
Revenue Expenditure		
4.1. Establishment	9,561.03	11,373.90
4.2. Energy charges	2,544.16	2,869.99
4.3. Repairs & maintenance	2,467.32	3,417.19
4.4. Gen. contingency	209.38	258.79
4.5. Spl. contingency	528.16	417.84
4.6. Spl. expenditure	318.74	542.18
4.7. Other expenditure	53.20	23.38
4.8. Grants given	5,845.90	7,056.03
4.9. Sub-total	21,527.89	25,959.30

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Exhibit II Contd . . .

	1995	*1996*
Revenue Surplus	7,018.53	9,462.46
Interest Paid		
5.1. HUDCO loan	90.35	68.91
5.2. Other loans	2,008.92	1,690.39
5.3. Other financial charges	19.29	7.61
5.4. Sub-total	2,118.56	1,867.21
Net Revenue Surplus	4,899.97	7,595.25
Capital Account		
Inflow		
5.1. Capital receipt	3,830.29	3,100.55
Outflow		
6.1. Projects	2,748.28	6,579.43
6.2. HUDCO loan repayment	145.56	145.56
6.3. Other loan repayment	976.28	1,512.83
6.4. Sub-total	3,870.12	8,237.82
Capital Surplus	–39.83	–5,137.27
Net Surplus	4,860.14	2,457.98
Cash Position		
7.1. Opening balance	247.96	5,108.11
7.2. Add net surplus	4,860.14	2,457.98
7.3. Closing balance	5,108.10	7,566.09

Exhibit III

Estimated Expenditure for the Proposed Urban Infrastructure Project

(Rupees in lakh)

Year	*Bridges and flyovers*	*Road*	*Slum network*	*Water Project*	*Drainage Project*	*Water Project Narmada*	*Solid Waste Manage-ment*	*National River Conser-vation*	*Pay and Use*	*Total*	*per cent*
1997	320	2,651	0	1,204	48	5,000	0	0	0	9,223	12.4
1998	1,350	2,479	2,000	2,499	901	5,000	600	1,000	500	16,328	22.0
1999	1,250	1,000	2,000	9,063	2,357	0	600	1,000	500	17,770	23.9
2000	1,484	1,000	2,000	8,954	1,245	0	0	1,000	500	16,183	21.8
2001	1,300	1,000	2,000	4,000	0	0	0	0	0	8,300	11.2
2002	1,000	397	2,000	3,000	0	0	0	0	0	6,397	8.3
Total	6,704	8,527	10,000	28,720	4,552	10,000	1,200	3,000	1,500	74,201	100

Exhibit IV

Assumptions Made by a Group of Analysts

(Figures in per cent)

Cost over-run	0
Long-term Rev. Growth rate	10
Long-term Exp. Growth rate	14
Growth in Octroi in 1997	27
Growth in tax in 1997	50
Growth in other rev in 1997	43

Exhibit V

Loans Expected to be Given by the Government During the years 1997–2002

(Rupees in lakh)

1997	2,956
1998	7,930
1999	12,439
2000	11,328
2001	5,810
2002	4,478
Total	44,941

Exhibit VI

Expenditure for Existing Projects*
Years 1995–2011
Year ending 31st March

(Rupees in lakh)

Year	*Amount*
1995 (actual)	2,478.28
1996 (actual)	6,579.43
1997	1,000.00
1998	1,120.00
1999	1,254.40
2000	1,404.93
2001	1,573.52
2002	1,762.34
2003	1,973.82
2004	2,210.68
2005	2,475.96
2006	2,773.08
2007	3,105.85
2008	3,478.55
2009	3,895.98
2010	4,363.49
2011	4,887.11

* excluding the proposed infrastructure projects

Exhibit VII

Existing HUDCO loan details

Loan outstanding as at 1.4.1994:	Rs. 7.38 crore
Interest rate:	13.5%
Repayment schedule:	Rs. 145.56 lakh in each of the year (1995–1998)
	Rs. 97.96 lakh in year 1999
	Rs. 57.65 lakh in year 2000

Exhibit VIII

Interest Payments and Principal Repayment Schedule of Debts*
1995–2011

(Rupees in lakh)

Year	*Repayment*	*Interest*
1995 (actual)	976.28	2,008.91
1996 (actual)	1,512.83	1,790.69
1997	3,640.00	3,982.64
1998	4,046.90	4,675.08
1999	4,772.11	6,568.59
2000	4,351.41	8,298.08
2001	4,352.48	9,087.90
2002	1,805.87	9,643.26
2003	3,006.22	9,248.43
2004	3,796.49	8,713.64
2005	4,271.05	7,980.45
2006	4,789.13	7,305.14
2007	4,769.10	6,495.39
2008	5,283.33	5,081.97
2009	5,496.15	4,233.52
2010	5,401.15	3,895.52
2011	4,767.12	2,564.12
Total	67,037.62	1,01,573.30

* except HUDCO loan and the proposed bond issue

Exhibit IX

Interest Charges (actual) for the Years Ending March 31, 1995 & 1996

(Rupees in lakh)

HUDCO loan	90.35	68.91
Other loans	2,008.91	1,690.39
Government loans	0	100.30
Other financing charges	19.29	7.61
Total	2,118.55	1,867.21

Exhibit X

Capital Receipts Expected: 1995–2011

(Rupees in lakh)

Year	*Amount*
1995	3,830.29 (actual)
1996	3,100.55 (actual)
1997	250.00
1998	280.00
1999	313.60
2000	351.23
2001	393.38
2002	440.59
2003	493.46
2004	552.67
2005	619.00
2006	693.27
2007	776.46
2008	869.64
2009	974.00
2010	1,090.87
2011	1,221.78
Total	16,250.79

APPENDIX I

STANDARD & POOR FACTORS FOR DEBT RATING OF MUNICIPALITY

Debt Factors

The first matter that S & P looks at under debt factors is the nature of security behind the bond in question. The investment advisory body also checks the bond's indenture and resolution. A key question is whether there are any legal limits to the amount of debt the issuer may incur and how closer is the issuer to it.

Another issue is the comparison of issuer's current and proposed debt on three different parameters

- Per capita debt
- Per capita debt in relation to per capita income
- Debt in relation to the total market valuation of taxable property.

There are no fixed norms on what is considered acceptable but its evaluation depends on community characteristics. For instance, communities with high per capita income would have a higher limit of a acceptable per capita debt.

The trend in the issuer's debt, as a percentage of its per capita income and the market valuation of its property, is also considered. The rate of debt retirement is an important matter. Debt with shorter maturity is considered easier to sell by the underwriters. The point is that debt retirement should be evenly spread out with no huge amounts due in any one year.

The investment advisory organization also looks at the issuer's debt service costs in relation to its gross revenues. Once again, a lot depends on the community features. For example, if it is a city, then higher debt service ratios will be acceptable. Debt history is examined to assess whether the issuer has ever defaulted on interest or principal payments before.

Finally, S & P asks what amount will the issuer need to borrow over the next five years.

Thus, the key questions are:

- How does the amount that is required to be borrowed compare with the amount outstanding?
- How does the amount currently outstanding compare with the amount that will be retired?

If the first figure in either case is high, then there is a cause for concern.

Administrative Factors

The important factor is what form of government is involved. S & P first asks whether the government has wide ranging responsibility and authority. Governments which have the authority to levy taxes are certainly considered more creditworthy.

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Next, the investment advisory body considers the form of management, essentially the degree of professionalism in the management. Further, it also inquires about the issuer's capital improvement programme and other long range plans. It studies them for evidence of careful thought or ad hocism. Another administrative factor is any limitations on tax rates. The issuer may be legally barred from levying taxes beyond a certain rate, or it may be forbidden to set aside more than a certain portion if its taxes to pay off principal and interest on debt. Depending on how stringent such limitations are, they can be drawbacks to the issuer's ability to obtain a high rating.

The issuer's tax collection experience is also important. At times munici-palities base their revenue projections on 100 per cent collection rates whereas actually the collection could be far lower.

Finally, the investment advisory organisation looks at the issuer's revenue structure and the elasticity of that structure. In case the issuer is heavily dependent on one form of tax, say income tax, then recession can wreck havoc with both its revenues and its budget. S & P likes to see a reasonable balance in the kind of taxes levied by a municipality.

Economic Factors

The state of an issuer's economy has a direct impact on its ability to service the debt. First, and foremost, S & P looks for economic stability either in the form of diverse tax base or widespread employment opportunities. Stability of employment is measured in relation to nearby/comparable areas or rate of unemployment.

Population data, especially its rate of increase or decrease, is also studied. A rapid increase is indicative of approaching problems in the form of heightened demand for more hospitals, schools and municipal services.

In assessing an issuer's economy S & P also looks into the per capita estimated market values of all taxable properties, the per capita estimated market values of homes, and the per capita volume of wholesale and retail sales.

Finally, the investment advisory organization makes an analysis of the issuer's current account, in particular, its fiscal performance in relation to its budget and its balance sheet. Obviously, the major question is whether the main operating account ended with a surplus or deficit in the most recent year of its operations.

S & P also looks at the issuer's current assets. It is particularly interested in quick assets, i.e., cash and securities that can be quickly marketed. Another point that the investment advisory body keeps in mind is the amount of state financial support the issuer is currently receiving and whether the state is likely to continue its level of support.

Yet another matter that the S & P investigates is whether the issuer's accounts are independently audited. Independent audit is seen as an assu-rance of the quality of an audit.

Finally, S & P tries to ascertain whether the issuer engages in any kind of financial gimmickry. Many municipalities have been found to be indulging in financially imprudent practices like borrowings from its capital fund to meet its operating budget and counting on revenues that might never materialize.